



194KMN522HA

Air Cooled 550 lb. Modular Nugget Ice Machine

Model: _____

Modular Head: 194MN522A

Head & Bin Kits: 194KMN522BA, 194KMN522HA, 194KMN522LA

Note:

Read the manual thoroughly prior to equipment setup, operation, and maintenance. A licensed and insured electrician/plumber or food service technician is required to carry out any servicing on this equipment. Review all hazard statements in the user manual before interacting with or servicing this equipment.

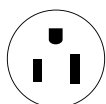


Refrigeration System
WARNING: DANGER
Flammable Refrigerant Used

All EPA, federal, and local guidelines need to be followed when working with refrigeration. Follow all guidelines and safety procedures when working with a flammable refrigerant. All connections where refrigerant travels must be checked for leaks after connections are brazed in place.

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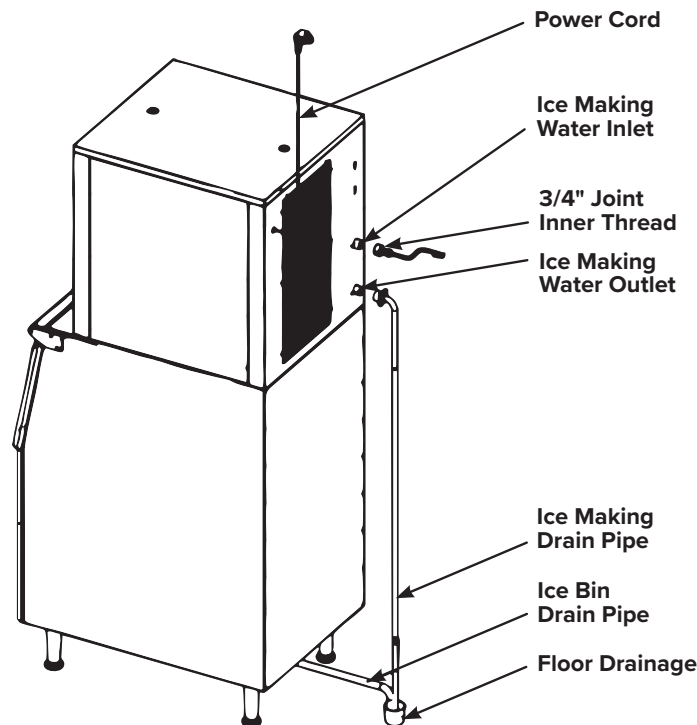
NEMA
5-15P

Installation

The installation location should meet the following conditions:

- Indoors, at an altitude of 2,000 meters or less.
- Ambient temperature: 40-90°F (5-33°C).
- Power supply: Rated voltage on the nameplate $\pm$ 6%.
- Water source: Drinking water source with a pressure of 18.75 PSI to 80 PSI and a temperature of 40-90°F (5-33°C).
- Away from heat sources and not exposed to high or low temperatures or direct sunlight to ensure proper heat dissipation and longevity.

Additionally, sufficient ventilation space should be maintained around the nugget ice maker to ensure smooth ventilation. The spacing should be 12" in the front, 8" in the back, and 2" on the sides. The nugget ice maker must be placed on a surface strong enough to support its weight. A reliably grounded socket with leakage protection should be used. There must also be a suitable floor drain near the installation location.



Operation

The nugget ice machine runs in a continuous process. When plugged in, push the power button to turn the unit on. The display will countdown from 10. When zero is reached, the defrost valve, compressor, and auger motor will come on in sequence. Water is stored in the inner jacket of the auger assembly. As the water freezes, it is pushed to the top of the auger where a cutter chops the ice into nuggets which fall into the bin. When turned off, the compressor turns off instantly while the auger motor and condenser fan run for an additional 60 seconds before shutting down.

NOTE: The following should be checked prior to diagnosing issues:

- With the water supply off, remove the inlet hose from the back of the ice machine and inspect/clean the plastic screen inside the inlet valve. Then, reconnect the hose.
- Ensure water supply line shutoff valve(s) are opened.
- Ensure the filter cartridge has been changed regularly.
- Ensure the ice machine has been cleaned regularly.

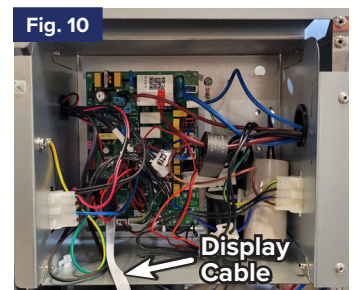
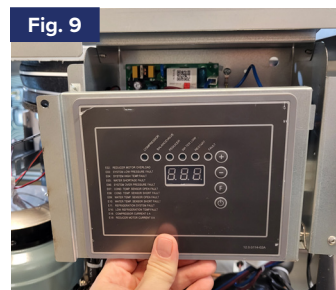
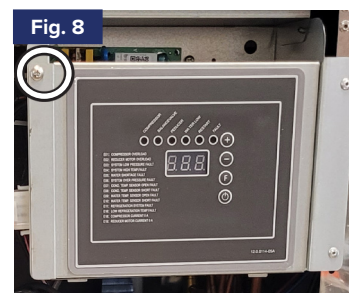
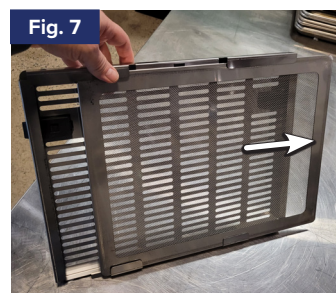
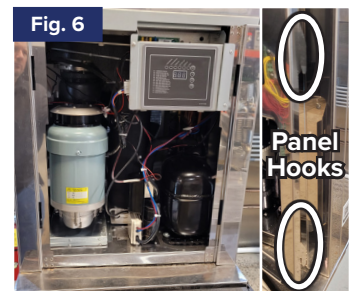
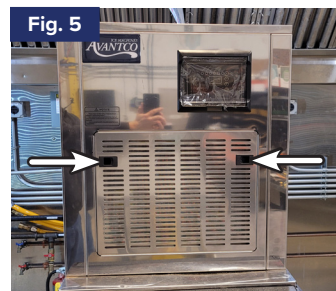
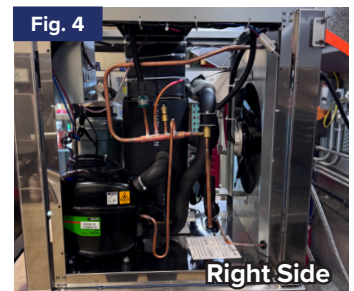
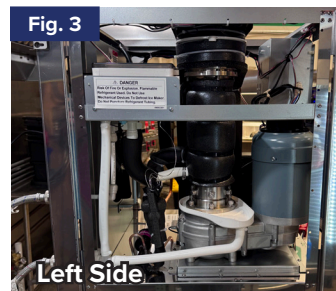
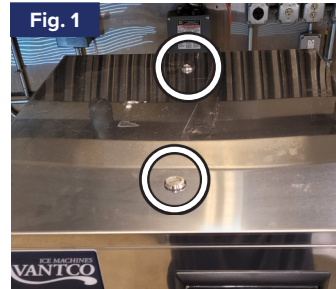
Error Codes

Code	Error Type	Possible Causes	Machine Actions
E01	Compressor Overload	Check the compressor start components and compressor operation.	Shutdown
E02	Reducer Motor Overload	1. Check the auger system for blockages. 2. Check for gear box issues.	Shutdown
E03	System Low Pressure Fault	1. Check if the compressor is faulty. 2. Check for refrigerant leaks.	Shutdown
E04	System High Temperature Fault	1. The air filter screen or condenser is dirty. 2. The cooling fan is not functioning properly.	Shutdown
E05	Water Shortage Fault	1. No or low pressure water supply. Check incoming water pressure and water filter cartridge. 2. Clean the water inlet port strainer screen (back of machine). 3. Check the water level float valve. 4. The water level sensor may be faulty.	Shutdown
E06	High Pressure Fault	1. The cooling fan does not work, causing bad heat dissipation. 2. If the cooling fan is working normally, there may be a problem with the high-pressure switch.	Shutdown
E07	Condenser Temperature Open Fault	1. Check the probe connection to controller board. 2. Check if the condenser probe is faulty.	Does not shut down, error LED light on every 5 seconds
E08	Condenser Temperature Short Fault	1. Check the probe connection to controller board. 2. Check if the condenser probe is faulty.	Does not shut down, error LED light on every 5 seconds
E09	Water Temperature Open Fault	1. Check the probe connection to controller board. 2. Check if the condenser probe is faulty.	Shutdown
E10	Water Temperature Short Fault	1. Check the probe connection to controller board. 2. Check if the condenser probe is faulty.	Shutdown
E11	Refrigeration System Fault	1. Check if the compressor is faulty. 2. Check for refrigerant leaks.	Will not shut down
E12	PC Board	Check for an improper pin jumper installed on controller board. See the controller board section of this manual for instruction. Typically seen when replacing a board.	Shutdown
E16	Low Refrigeration Temperature Fault	1. Verify suction line temperature sensor is functioning normally. 2. Verify refrigeration system function.	Shutdown
E18	Compressor Current 0 Amps	Check if compressor is running. 1. If running, check the compressor current sensor connection to the controller board and the sensor function. 2. If the compressor is not running, check the compressor.	Shutdown
E19	Reducer Motor Current 0 Amps	Check if motor is running. 1. If running, check the reducer motor current sensor connection to the controller board and the sensor function. 2. If the reducer motor is not running, check the reducer motor.	Shutdown

Access Points

Exterior Panels

1. Facing the front of the unit, look for (2) quarter-turn latches on the top panel (Fig. 1). Rotate the latches clockwise with a straight slot screwdriver. Lift and remove the top panel.
2. The side panels are hooked to slots on the frame. Push up on the outside of the panel to release the hooks from the frame, then pull out to remove the panel (Fig. 2).
3. The left side gives access to the auger and motor assembly as well as the water trough assembly (Fig. 3).
4. The right side gives access to the refrigeration system plumbing and compressor, as well as the back side of the control panel box (Fig. 4).
5. To remove the front inset panel, pull in the (2) finger latches and rock the top of the panel out as you lift it out of the frame (Fig. 5). Then, push up on the front frame to disengage the hooks as with the side panels and remove the front frame (Fig. 6).
6. The front inset panel holds the metal dust filter screen (Fig. 7). The front gives extra access to the compressor and auger motor, as well as the display panel (Fig. 8).
7. To remove the display panel to access the control board, remove the Phillips screw in the upper left corner of its mounting bracket (Fig. 8). Lift up on the bracket and pull it to the left to remove it (Fig. 9). Note that the display is still connected to the control panel by a ribbon cable (Fig. 10).



Multimeter Testing

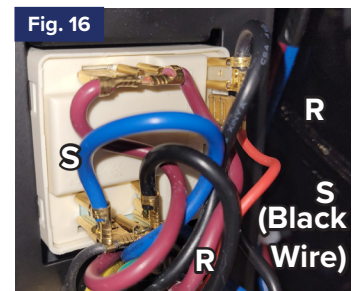
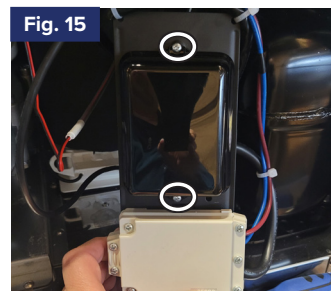
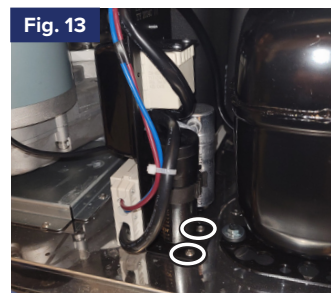
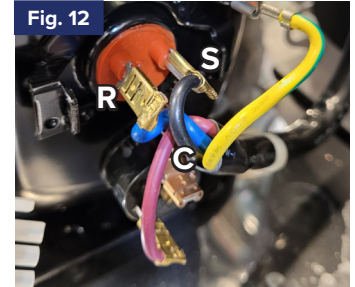
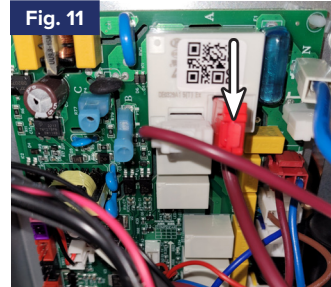
- It is highly recommended the service technician have needle probes on their multimeter for testing this unit, particularly at the controller board.
- Certain tests have restrictive space and needle probes can be used to check voltage/continuity at the connector end.

Part Testing

Compressor and Capacitor

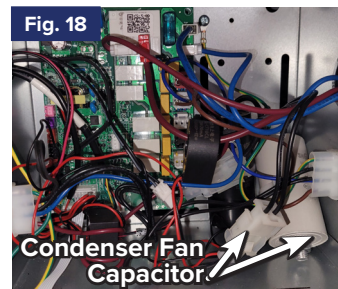
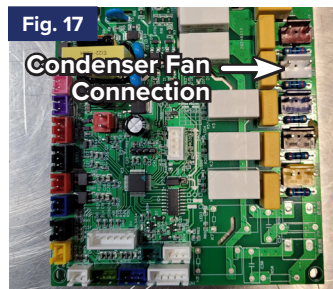
1. Access the control board and right side panels. With the unit ON and controller calling for the compressor to run, check amperage on the compressor wire coming from the controller board (Fig. 11).
 - Maximum Load Amps: 12.2 amps +/- 10%
 - Locked Rotor Amps: 60 amps +/- 10%
2. With the unit unplugged, remove the compressor wire cover and disconnect the compressor leads, noting their location (Fig. 12). Check resistance between the common (C), run (R), and start (S) windings. The resistance may change with temperature, but it should be found that:

$$R-S \Omega = R-C \Omega + S-C \Omega.$$
3. With the unit unplugged, check that the windings are not connected to ground by checking for Ohms from each pin to the shell of the compressor (paint must be removed from case when checking for grounding).
4. For the capacitors: With the unit unplugged, remove the (2) Phillips mounting screws that hold the capacitor bracket to the bottom of the unit (Fig. 13). Visually check for any deformations or leaking oil-like fluids from the capacitors (Fig. 14). Replace if any is found.
5. Remove the (2) Phillips mounting screws holding the wire cover on the back of the capacitor bracket (Fig. 15).
6. With the unit unplugged, discharge the capacitors prior to testing. Use a 20,000 Ω , 2 watt carbon resistor. CAUTION: The resistor will be HOT during discharge.
7. Test the capacitors to the rating listed on the body of the capacitor by removing the wire leads from the terminal block and testing at the wire terminals.
8. The start capacitor rating is 410 μ F and can be tested through the (2) larger black wires (marked "S" in Fig. 16).
9. The run capacitor rating is 23.5 μ F and can be tested through the smaller black wire and smaller red wire (marked "R" in Fig. 16).



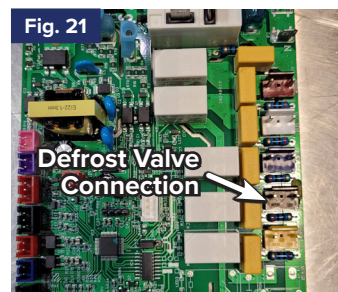
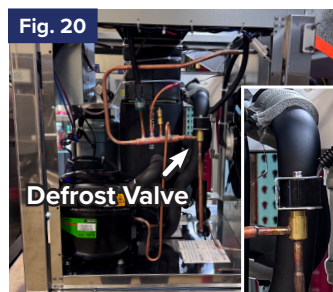
Condenser Fan and Capacitor

1. Access the control board and right side panels. Ensure controller is in the ice-making process.
2. Check for line voltage at the condenser fan connection - the white connector on the right-hand side of the controller board (Fig. 17). Needle probes can be inserted into the wire ports on the back side of the connector without removing it from the board.
3. Check for 0.7 amps +/- 10% on the red wire coming from the white connector on the controller board (Fig. 17). If the fan motor has voltage but is not turning or drawing the amps listed, replace the motor (Fig. 19).
4. Next, check the fan motor capacitor (Fig. 18). The capacitor is located on the right side of the control panel box. Visually check for any deformations or leaking oil-like fluids from the capacitor (Fig. 18). Replace if any are found.
5. With the unit unplugged, disconnect the capacitor connector and discharge the capacitor prior to testing. Use a 20,000 Ω , 2 watt carbon resistor. CAUTION: The resistor will be HOT during discharge.
6. Test the capacitor to the rating listed on the body of the capacitor at the connector. The condenser fan capacitor rating is 10 μ F.



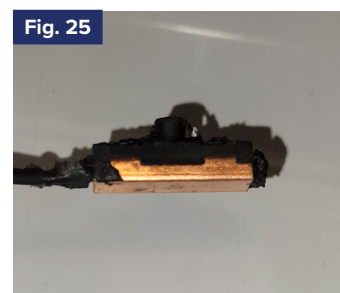
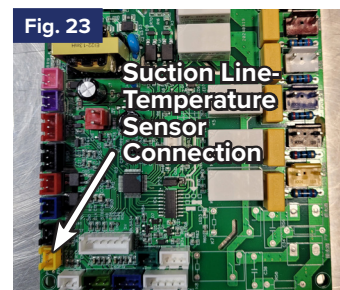
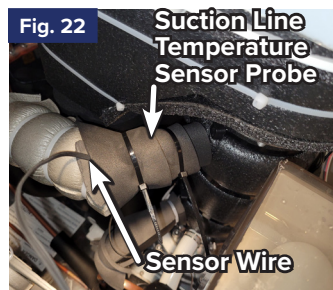
Defrost Valve

1. Access the control board and right side panel. With the power off, disconnect the black connector from the controller board (Fig. 20) and check continuity between the two wire connector leads (not the board leads). If there is no continuity, replace the defrost valve and coil.
2. Plug the harness connector into the controller board. Start the unit and after the first 10 second countdown, check for 115 volts +/-10% at the defrost valve connection on the controller board (Fig. 21). Needle probes can be inserted into the wire ports on the back side of the connector without removing it from the board.
3. If there is voltage but the solenoid does not activate or the valve does not open (Fig. 20), replace the defrost valve.



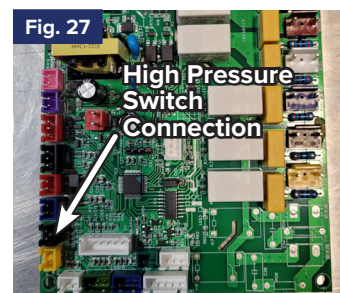
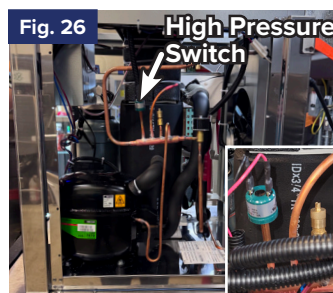
Suction Line Temperature Sensor

1. Access the control board and left side panels. Locate the suction line temperature sensor probe where the refrigerant line goes into the auger assembly (Fig. 22). It will be wrapped in insulation and wire tied to the copper tube (Fig. 24 & 25).
2. With the unit unplugged, remove the sensor probe from the insulation and wire ties. Place the probe in ice water (32°F).
3. At the control board, use a multimeter with needle probes and check resistance at the sensor connector (Fig. 23).
4. When the reading stabilizes at 32°F, the resistance should be approximately $8.96k\Omega$ (+/-10%). If the reading of the probe is not within range, replace the probe.



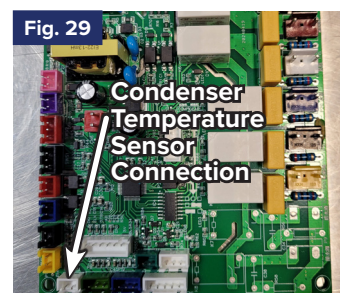
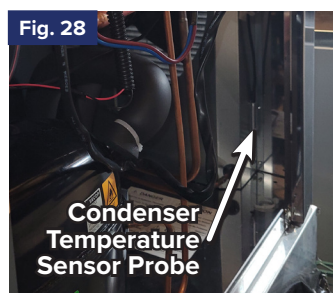
High Pressure Switch

1. Access the control board and right side panel. With the unit off, unplug the wire leads from the switch and check for continuity between the terminals (Fig. 26 & Fig. 27). If there is no continuity when the system is not pressurized, replace the switch.
2. Note the switch will open on occasion during operation to allow pressure to decrease in the system.
3. This is a safety switch for when the refrigeration system pressure is too high. Unplugging the switch or a faulty switch is one of the causes for an E06 error on the control panel. The compressor will not start with a bad (open) pressure switch.



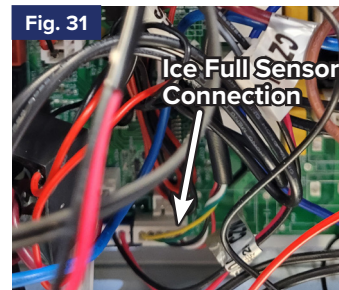
Condenser Temperature Sensor

1. Access the control board and right side panel. Locate the condenser temperature sensor probe on the right-hand side of the machine (Fig. 28).
2. With the unit unplugged, pull the sensor probe from its mounting sleeve. Place the probe in ice water (32°F).
3. At the control board, use a multimeter with needle probes and check resistance at the sensor connector (Fig. 29).
4. When the reading stabilizes at 32°F, the resistance should be approximately $9.24k\Omega$ (+/-10%). If the reading of the probe is not within range, replace the probe.



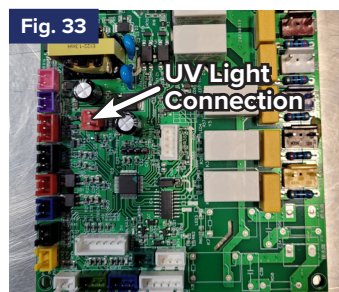
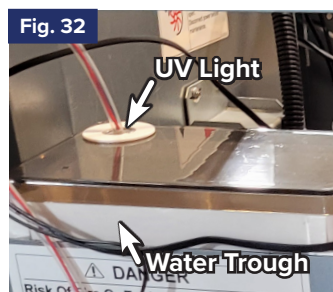
Ice Bin Full Sensor

- **NOTE:** If the display shows "FUL" in the digital panel, ensure that ice is cleared from the sensor area for a minute to allow it to reset. If the "FUL" readout continues, then proceed to test the sensor.
1. The sensor is mounted at the bottom of the ice shoot on the interior of the unit (Fig. 30). The front half is behind the compressor capacitors, the back half is on the opposite side of the chute.
 2. Verify there is voltage to the sensor at the (2) right-hand pins of the sensor connector (Fig. 31). The red wire is negative and the white wire is positive and should output 12 vdc.



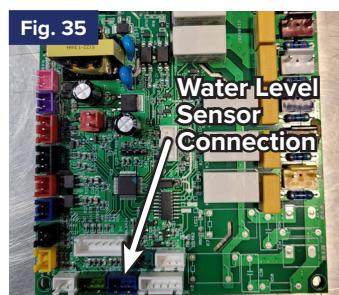
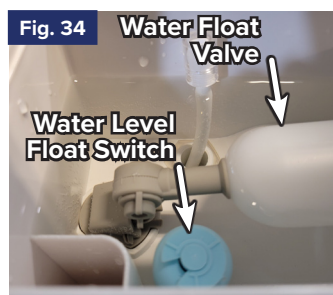
UV Light

1. With the ice machine on, pull the UV light from the plastic bezel in the top of the water trough on the left side of the machine (Fig. 32).
2. If the UV light is not on, check the controller board to ensure the light is plugged in.
3. Using needle probes, check the voltage at the connector from the controller board (Fig. 33). With the unit on, check for 12 vdc $\pm$ 10% at the controller board pins.
4. If there is voltage and the light does not turn on, replace the UV light.



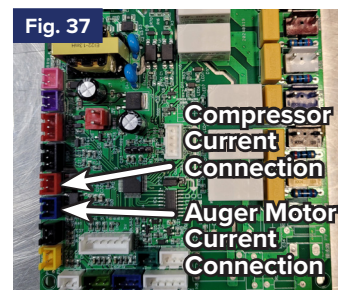
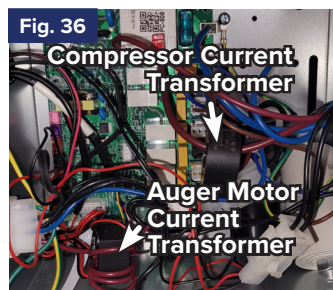
Water Level Sensor and Float Valve

1. Locate the water level float switch inside the water trough on the left-hand side of the machine (Fig. 34).
2. With the unit unplugged, use a multimeter with needle probes and check continuity at the control board connector (Fig. 35). There are only (2) wires in this 3-pin connector.
3. With the level float pushed to the bottom of the trough, there will be continuity. With the float raised, there will be no continuity. The sensor signals when there is no/ low water in the trough. If the continuity does not match this operation, replace the water level switch.
4. If there is no water in the trough, check the water supply and filter cartridge for blockage. Then, check the float valve operation. If the float valve is not allowing water into the trough when the float is down, or not closing when the float is up, replace the float valve.



Auger Motor and Compressor Current Transformers

1. With the unit unplugged, remove the current transformer connector from the control board (Fig. 36).
2. Use a multimeter with needle probes and check resistance at the sensor connector (Fig. 37).
3. Resistance should be approximately 51Ω (+/- 10%). If the resistance is out of range or the coil is open, replace the current transformer.



Auger Motor, Capacitor, and Gearbox

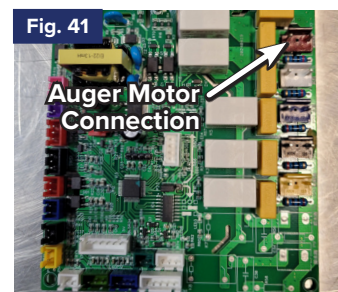
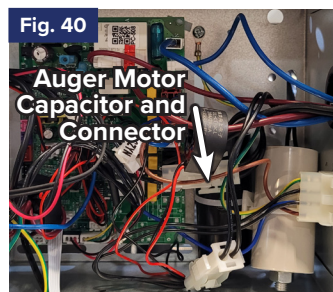
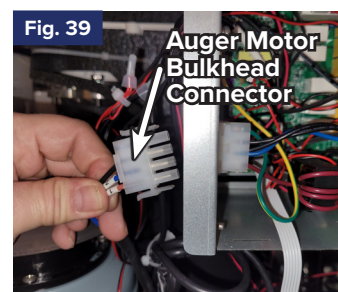
1. Access the control board and left side panel. The auger motor will be toward the front of the unit on the left side (Fig. 38).
2. With the unit unplugged, disconnect the auger motor bulkhead connector (Fig. 39). Check the resistance across the motor windings through the connector.

Red to Black = $9.5\ \Omega$ (+/- 10%)

Red to Blue = $5.0\ \Omega$ (+/- 10%)

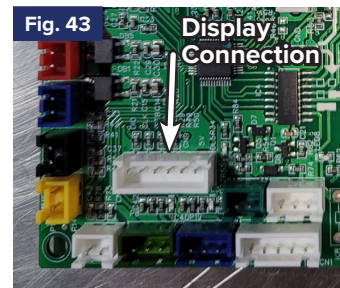
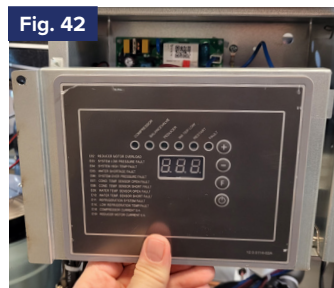
Red to Black = $14.1\ \Omega$ (+/- 10%)

3. With the unit unplugged, discharge the capacitors prior to testing. Use a 20,000 Ω , 2 watt carbon resistor. CAUTION: The resistor will be HOT during discharge.
4. Test the capacitors to the rating listed on the body of the capacitor by disconnecting the capacitor connector and testing at the connector pins (Fig. 40). The capacitor rating is 30 μF (+/- 10%). If the capacitor does not meet the listed rating, replace the capacitor.
5. Plug the unit in and turn it on. Allow the unit to get to the ice making mode. Using a clamp meter, check the current to the auger motor. The motor should pull 3.8 amps when measuring the red wire coming from the bulkhead connector (Fig. 39).
6. Use a multimeter with needle probes and check for voltage at the auger motor connector on the control board (Fig. 41).
7. If the motor is running, note if there is excessive noise coming from the gearbox leading to the auger assembly. If there is excessive noise or the motor is turning but the auger is not, replace the auger motor and gear assembly (comes as an assembly).



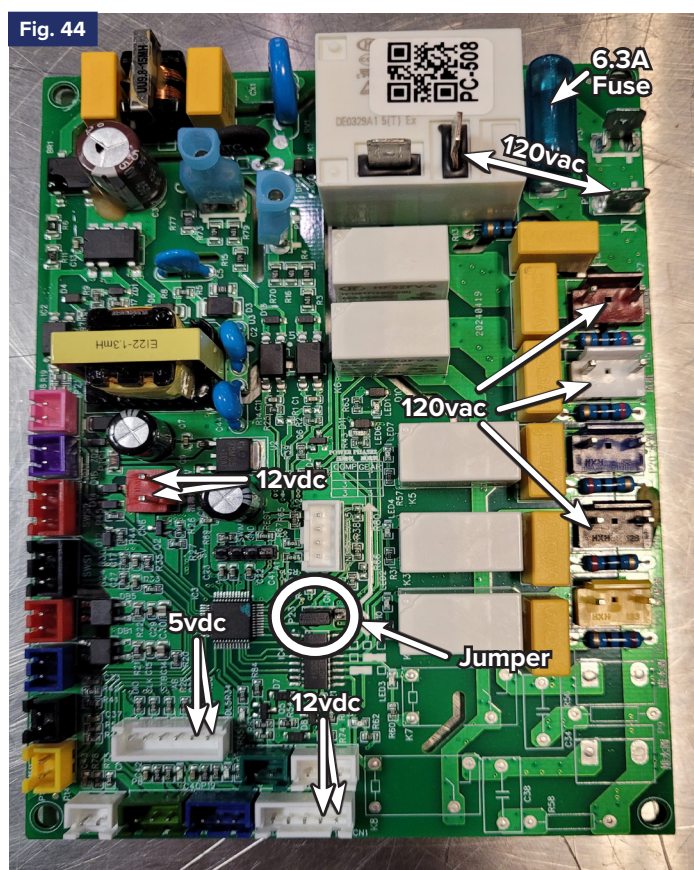
Display Panel

1. If the display panel is not lit when the unit is plugged in, access the control panel behind it (Fig. 42).
2. At the display connection with the unit on, verify there is 5 volts coming from (2) right-hand pins (Fig. 43).
3. If the control board is sending voltage but the display does not light, replace the display panel.



Control Board

1. Access the control panel.
 2. Verify continuity across the 6.3 amp fuse in the upper right corner of the board.
 3. Use the previous tests to verify the output voltages shown (Fig. 44). The connections and voltages are noted at right for reference.
 4. If the fuse is good, all input sensors are functional and incoming power is on, but any output is incorrect or not functioning, replace the control board.
- **NOTE:** The new board may come with a pin jumper (circled, Fig. 44). Remove the jumper, as it is not used in this unit. If the jumper is left in place, upon turning unit on there will be an E12 error code on the display panel.



Part Replacement



Refrigeration System

WARNING: DANGER
Flammable Refrigerant Used

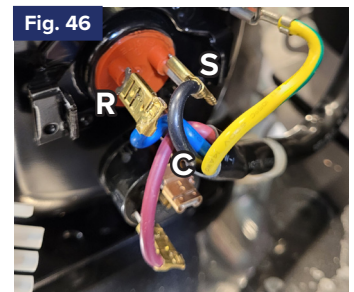


DISCONNECT POWER TO MACHINE

All EPA, federal, and local guidelines need to be followed when working with refrigeration. Follow all guidelines and safety procedures when working with a flammable refrigerant. All connections where refrigerant travels must be checked for leaks after connections are brazed in place.

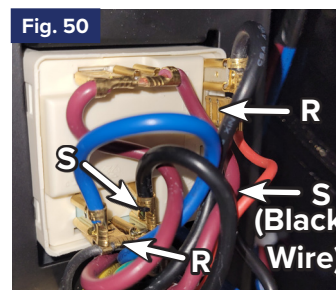
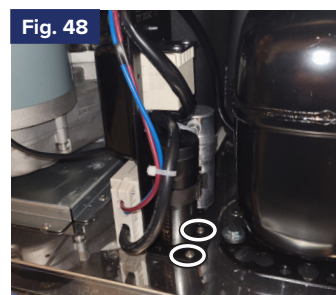
Compressor

1. Access the front and right side panels.
2. Remove discharge and suction lines to compressor.
3. Remove wiring cover cap from compressor by prying off the spring clip (Fig. 45).
4. Remove wiring from compressor by pulling off the connectors, note locations for new compressor (Fig. 46).
5. Remove (4) hex head bolts fastening the compressor to the base of the unit using a 10 mm socket or wrench (Fig. 47).
6. Install the new compressor. Bolt in place and reconnect wires using the components from steps 3 and 4.
7. Reconnect the suction & discharge lines.



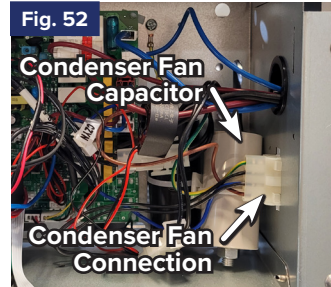
Compressor Capacitor

1. Remove the (2) Phillips screws holding the capacitor bracket to the bottom of the unit (Fig. 48).
2. Turn the bracket over and remove the 2 Phillips screws from the black wire cover (Fig. 49).
3. Ensure capacitors are properly discharged before proceeding. Use a 20,000 OHM, 2 watt carbon resistor. Use caution, as resistor will be HOT during discharge.
4. Remove the wires for the capacitor you are replacing, noting their position (Fig. 50).
5. Install the new capacitor(s) (Fig. 51). Reconnect all wires.
6. Reinstall the wire cover and bracket in their original positions.



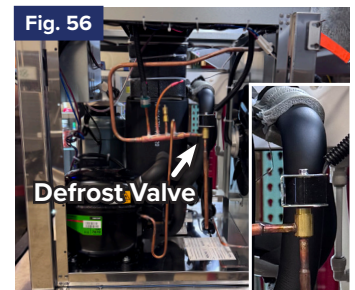
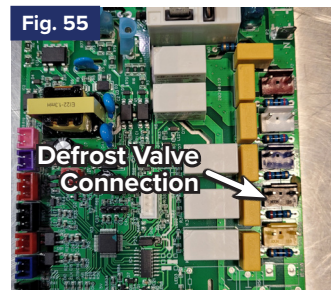
Condenser Fan/Capacitor

1. Access the control board and right side panels.
2. Disconnect the condenser fan connector on the outside of the control panel area (Fig. 52).
3. Cut the wire ties holding the fan wire loom to the frame.
4. Remove the Phillips mounting bracket screws from the bracket, (2) at the top and (2) at the bottom (Fig. 53).
5. Remove the (4) Phillips fan mounting screws from the fan (Fig. 54).
6. Install the new fan assembly to the bracket using the (4) screws from step 5.
7. Mount the bracket to the unit frame using the (4) screws from step 4.
8. Run the new fan wiring through the loom and reconnect to the system.
9. If replacing the capacitor, its 2-pin connector is within the control panel (Fig. 52). Remove the old capacitor and connect the new capacitor to the system.



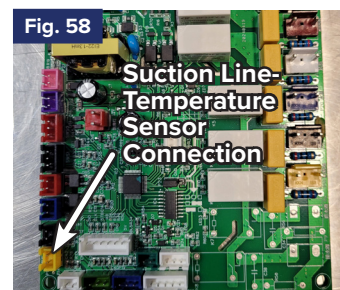
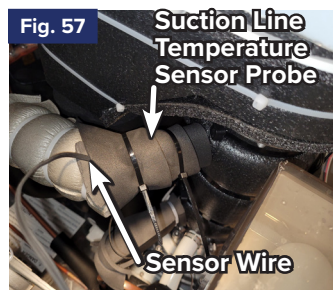
Defrost Valve

1. Disconnect the lower black connector from the controller board (Fig. 55).
2. Unbolt the coil from the top of the copper valve, removing the ground wire as well (Fig. 56).
3. Follow EPA and other guidelines for refrigerant systems. Desolder the valve body from the inlet and outlet tubes.
4. Solder the new valve body in place.
5. Remove the old coil cable and run the new coil cable in its place.
6. Bolt the new coil to the top of the valve body with its ground wire in place.



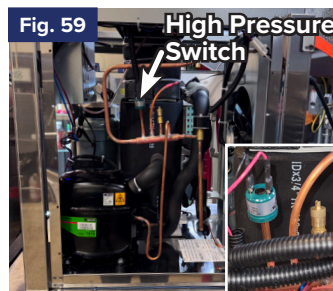
Suction Line Temperature Sensor

1. Access the control board and left side panels.
2. Remove the insulation and wire ties holding the sensor probe to the suction line (Fig. 57).
3. Disconnect the wire connector from the control board (Fig. 58).
4. Install the new probe to the suction line using wire ties and insulating wrap to properly hold the probe and insulate it.
5. Connect the new probe wire connector to the control board.



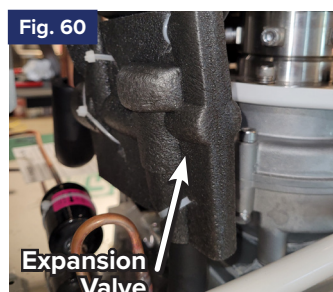
High Pressure Switch

1. Disconnect the terminals from the old switch (Fig. 59).
2. Follow EPA and other guidelines for refrigerant systems. Desolder the pressure switch tube from the manifold tube.
3. Solder the new switch in place.
4. Reconnect the terminals to the switch.



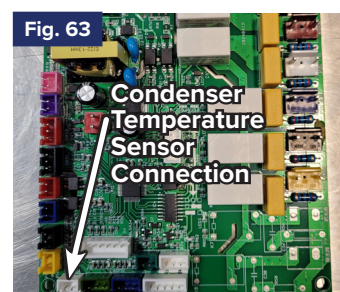
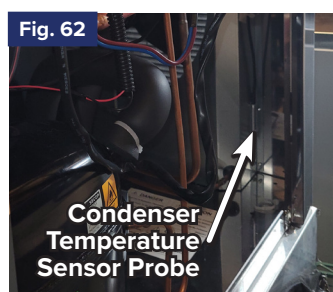
Expansion Valve

1. Remove the insulation wrap around the valve and capillary tube (Fig. 60).
2. Follow EPA and other guidelines for refrigerant systems. Remove the valve and capillary tube. Note the position of the capillary tube and probe end in the unit.
3. Install the new valve and tube (Fig. 61).
4. Re-wrap the valve and tube in insulation.



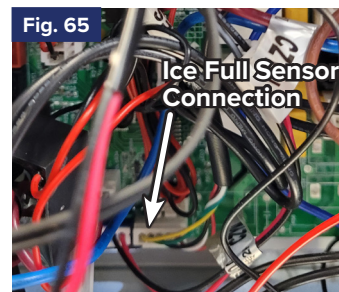
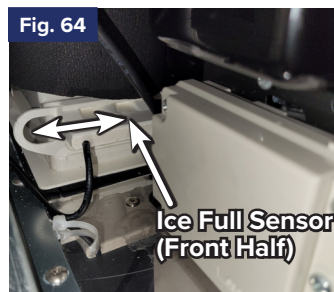
Condenser Temperature Sensor

1. Disconnect the condenser temperature probe from the control board (Fig. 63).
2. Cut the wire ties holding the sensor cable in place.
3. Remove the probe from its mounting sleeve on the compressor side of the condenser coil (Fig. 62). You may need to slightly push in on the fan shroud to pull the probe from the sleeve.
4. Install the new probe in the sleeve.
5. Run the new probe cable following the old cable back through the controller PC board. Plug in the connection. Wire tie the new cable in place where the old cable was tied.



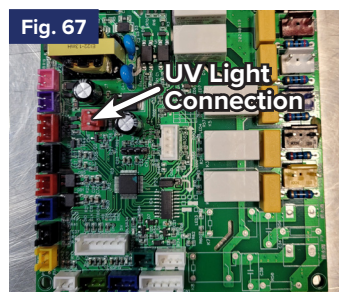
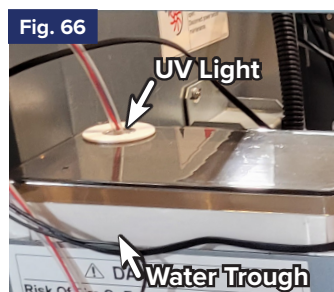
Ice Bin Full Sensor

1. The sensor is mounted at the bottom of the ice chute on the interior of the unit and has two halves (Fig. 64).
2. The front half (shown) has two wires, (1) leading to the back half on the opposite side of the chute, (1) to the control panel.
3. Slide each half of the sensor out of its bracket.
4. Disconnect the sensor connector at the control panel (Fig. 65).
5. Slide the new sensor halves into the brackets on the chute.
6. Reconnect the sensor to the control panel.



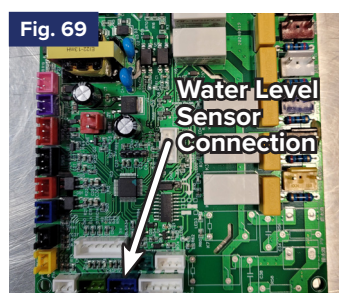
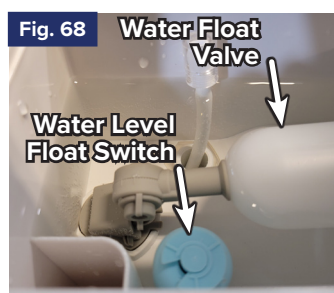
UV Light

1. Remove the UV light head from the bezel in the top of the water trough (Fig. 66).
2. Disconnect the UV light connector from the control board (Fig. 67).
3. Install the new UV light into the bezel on top of the water trough.
4. Install the new connector on the control board.



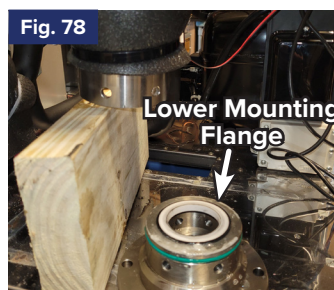
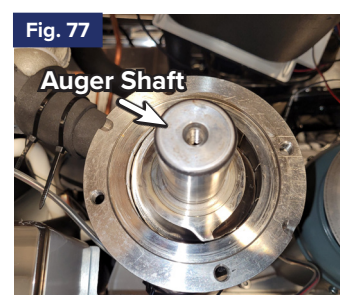
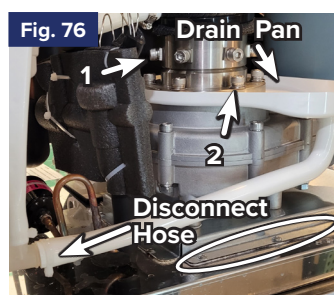
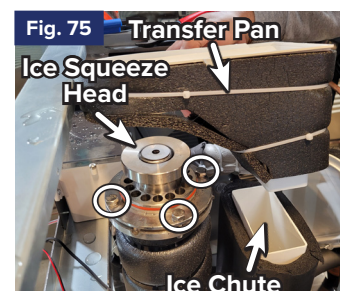
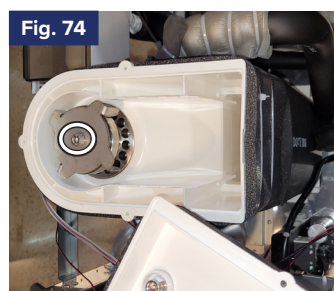
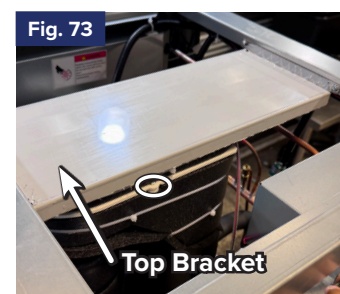
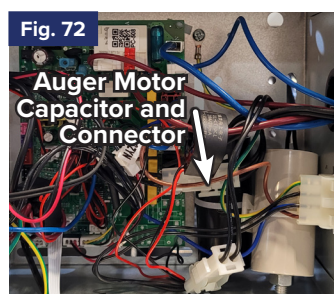
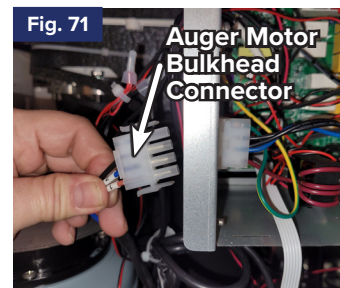
Water Level Sensor and Float Valve

1. Turn the water supply off. Disconnect the inlet hose from the unit. Drain the majority of the water from the water trough by pushing the float valve down to allow water out, holding a container at the inlet port to catch the water (Fig. 68).
2. Disconnect the float switch connector from the control board (Fig. 69).
3. Unscrew the water level float switch nut under the water trough. Pull the switch and wiring up through the trough.
4. Install the new float switch. Be sure to install the seal washers inside and outside of the water trough bottom.
5. If installing a new float valve, follow the same procedure, removing the nut from the bottom of the trough. Reinstall with sealing washer in place as they were removed.



Auger Motor, Capacitor, and Gearbox

1. Access the control board and the top and left side panels. The auger motor will be toward the front of the unit on the left side (Fig. 70).
2. Disconnect the 4-pin auger motor connector at the control panel box (Fig. 71).
3. Remove the Phillips screws holding the top bracket firmly against the top of the auger assembly (Fig. 73). Then, remove the (2) Phillips screws holding the plastic cover over the bin chute and auger.
4. Remove the socket head screw holding the ice blade to the auger using a 6 mm hex wrench (Fig. 74). Note that there is a fender washer under the blade on top of the auger shaft.
5. Remove the transfer pan and ice chute from the unit. They are friction fitted in place without hardware. Use a 13 mm socket to remove the ice squeeze head from the auger shaft (Fig. 75).
6. Before removing the shaft, disconnect the drain pan hose as shown (Fig. 76). Direct this into a bucket. Remove the (6) collar bolts first, using a 6 mm hex wrench. Be sure to save the wedge and lock washers. Next, loosen the flange bolts below the collar bolts using a 6 mm hex wrench.
7. Firmly grip the top of the auger shaft (Fig. 77). Slowly pull the shaft from the assembly. Note that water will come out at the base of the auger, but will drain into the pan and out to the bucket from step 6.
8. Remove the (10) Phillips screws holding the gear motor mounting bracket (Fig. 76).
9. Work the gear motor assembly out from the auger housing. Replace it with a block of wood to avoid flexing the refrigerant lines (Fig. 78). Remove the lower mounting flange from the auger housing.
10. Flip the gear motor and bracket assembly on its side (Fig. 79). Remove the (4) socket head bolts with a 6 mm hex wrench.
11. Install the new gear motor assembly onto the mounting bracket with the bolts from step 10.
12. Before proceeding to reassemble the gear motor and auger components, see the Auger Seal section on the next page for information on installing seals and O-rings.
13. Reassembly will occur in reverse order. Remember to place the drain pan between the lower mounting flange and gear housing before bolting together.



Auger Seals

1. If replacing the auger shaft or gear motor assembly, or if there is a water leak coming from inside of the modular ice machine head, some or all of the seals and O-rings may need to be replaced.
2. Replace the (2) ice squeeze head O-rings at the top of the auger system (Fig. 80). Lubricate these with food-safe grease prior to installation.
3. Inspect and replace the auger shaft spring seal as needed (Fig. 81).
4. If fixing a water leak, replace the lower mounting flange to gear housing O-ring (Fig. 82). If replacing the gear motor assembly, this O-ring may come pre-mounted on the assembly.
5. Inspect the O-ring on the lower mounting flange. The O-ring can be lubricated prior to installation.
6. Inspect the ceramic seal on the lower mounting flange. The ceramic auger shaft seal should not be lubricated prior to installation. Install this by hand or using a piece of clean board to press it into the flange.

Fig. 80

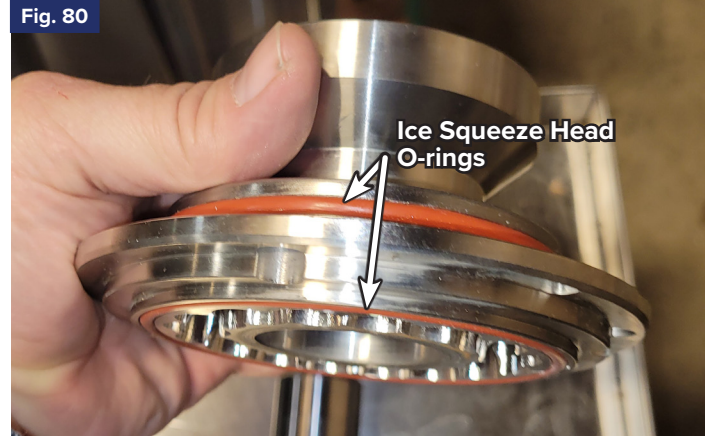


Fig. 81

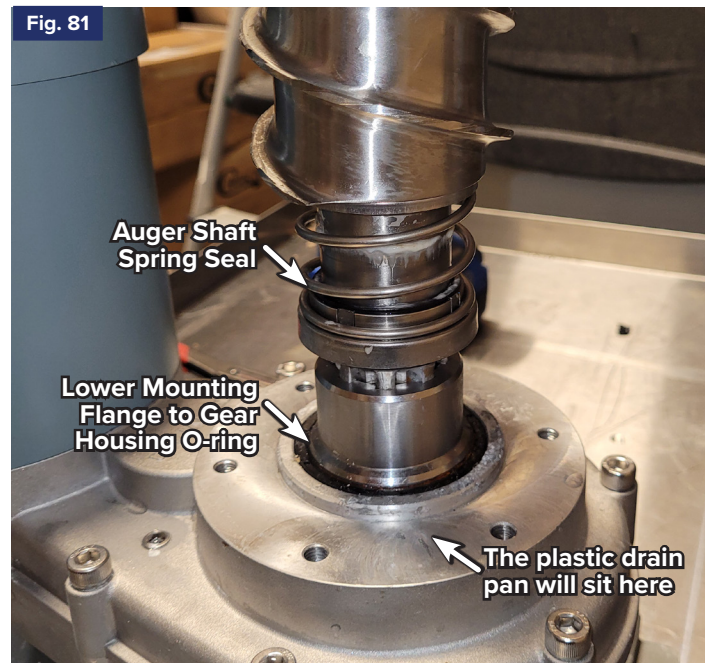
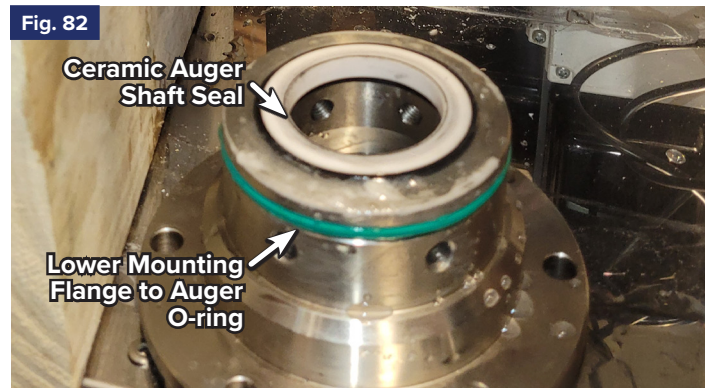
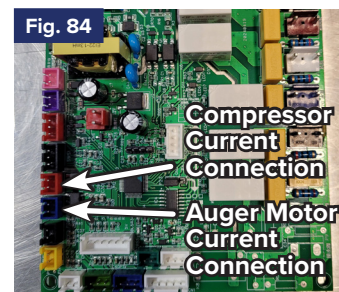
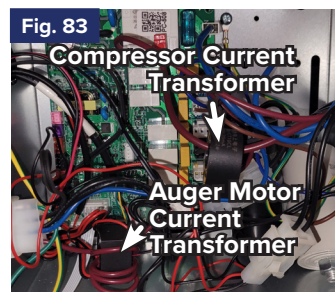


Fig. 82



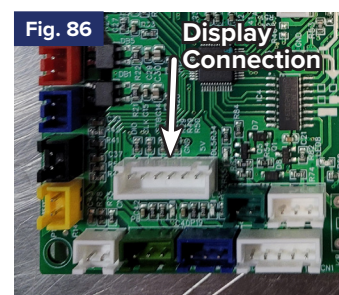
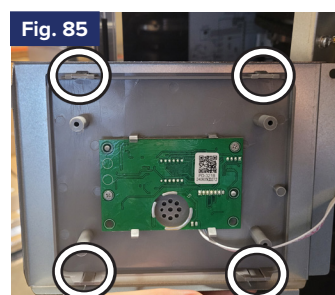
Auger Motor and Compressor CTs

1. Remove the current transformer (CT) connector from the control board (Fig. 84).
2. Count the wire windings on the auger motor CT before removing the wire. It will need reinstalled with the same windings (Fig. 83). The compressor wire goes straight through the transformer.
3. Install the new CT on the appropriate wire.
Auger motor winding should match the original configuration.
4. Reconnect the CT connector to the control board.



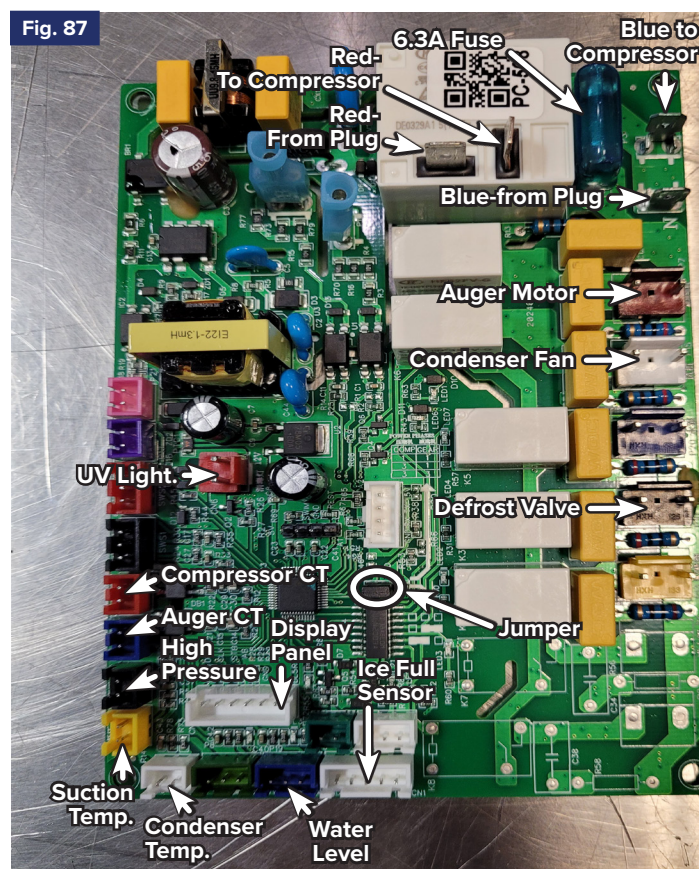
Display Panel

1. Remove the metal bracket from the control area.
2. Disconnect the display connector from the control board (Fig. 86).
3. Push in two tabs on one side of the display panel and push it out of the metal bracket (Fig. 85).
4. Install the new display panel in the same orientation as the old panel.
5. Reconnect the panel to the control board.



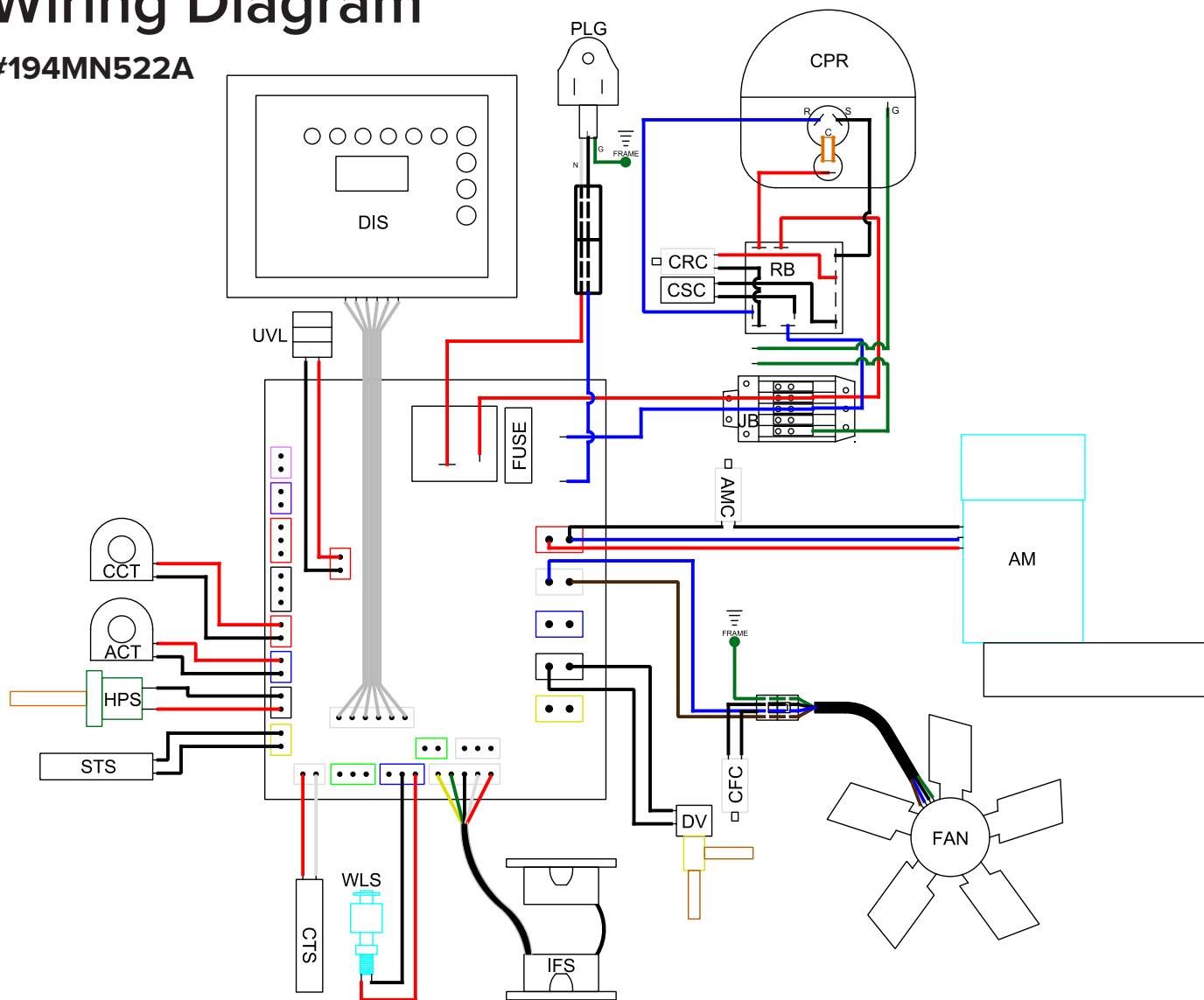
Control Board

1. Access the control panel.
 2. Verify continuity across the 6.3 amp fuse in the upper right corner of the board.
 3. Use the previous tests to verify the output voltages shown (Fig. 87). The connections and voltages are noted at right for reference.
 4. If the fuse is good, all input sensors are functional and incoming power is on, but any output is incorrect or not functioning, replace the control board.
- **NOTE:** The new board may come with a pin jumper (circled, Fig. 87). Remove the jumper as it is not used in this unit. If the jumper is left in place, upon turning unit on there will be an E12 error code on the display panel.



Wiring Diagram

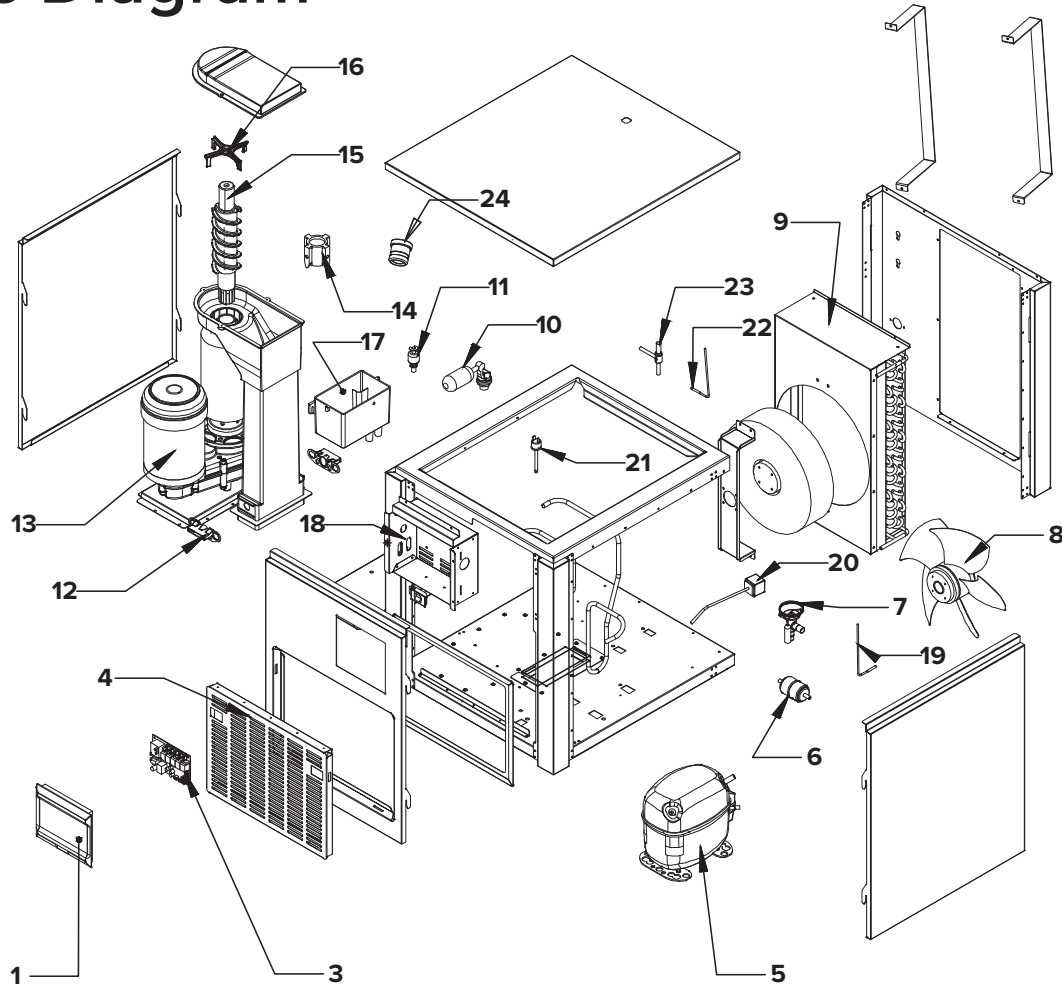
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Part	Description
ACT	Auger Current Transformer
AM	Auger Motor
AMC	Auger Motor Capacitor
CCT	Compressor Current Transformer
CFC	Condenser Fan Capacitor
CPR	Compressor
CRC	Compressor Run Capacitor
CSC	Compressor Start Capacitor
CTS	Condenser Temperature Sensor
DIS	Display

Part	Description
DV	Defrost Valve
FAN	Condenser Fan
FUSE	6.3A Board Fuse
HPS	High Pressure Switch
IFS	Ice Full Sensor
JB	Junction Block
PLG	NEMA 5-15p Plug
RB	Relay Block
STS	Suction Temperature Sensor
UVL	UV Light
WLS	Water Level Sensor

Parts Diagram



#	Description	Item #
1	Display Cover	
2	Display Panel Assembly	19498053
3	Control Panel	19498005
4	Ventilation Panel	
5	Compressor	19490230
6	Dry Filter	19497517
7	Expansion Valve	19499825
8	Condenser Fan Assembly	19494648
9	Condenser Coil	19494321
10	Float Valve	19496002
11	Water Level Sensor	19498002
12	Ice Bin Full Sensor	19498062
13	Auger Motor and Gear Assembly	19498006

#	Description	Item #
14	Ice Mouth	
15	Auger	19497006
16	Ice Blade	19497025
17	Water Trough	19494078
18	Electrical Box	
19	Condenser Temperature Sensor	19498077
20	Defrost Valve Assembly (w/ 23)	19491931
21	High Pressure Switch	19498108
22	Evaporator Temperature Sensor	
23	Defrost Valve Assembly (w/ 20)	19491931
24	UV Light	19498632
	Auger Seal Kit (Not Shown)	