

ELECTRICAL SEQUENCE

Refer the wiring diagram as needed.

The "Power" light on the board glows whenever there is power to the machine (and the master switch is ON).

If the machine is switched off at the master switch, but is otherwise ready to go, switching the master switch to ON does the following:

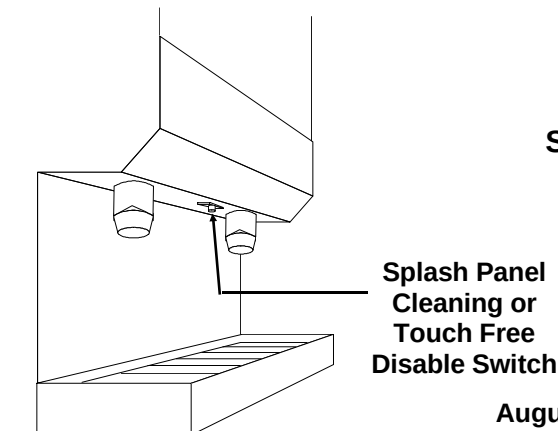
- The bin empty and power lights on the circuit board glow.
- There is a 15 second delay
- If there is enough water in the reservoir, the circuit board will allow the machine to start up.

Start up consists of:

- The compressor contactor coil receives power from the circuit board.
- The contactor is energized, connecting power to the compressor, and the compressor starts.
- The auger motor receives power from the circuit board and starts.
- As ice goes past the ice level sensors, the bin empty light will stay on and the machine will continue to run, unless the ice stays between the sensors for more than 15 seconds (bin full). At that point, the bin empty light goes out, and the machine shuts down.

Other reasons for shut down:

- Low water level (as sensed by the thermistor in the reservoir).
- Excessive auger motor amp draw, measured by the circuit board.
- If the auger motor amp draw becomes excessive twice in an hour, the auger motor is shut down and the circuit board must be manually reset. If this condition occurs it means that the drive train is in need of cleaning, maintenance or repair.



Shut Down consists of:

- The compressor contactor opens
- The compressor stops
- The auger motor is run by the circuit board for 2 more minutes, clearing out ice in the evaporator, and then
- The auger motor no longer receives power from the circuit board, and the auger motor stops.

After a 6 minute delay, If the ice level sensor is clear (bin empty) for more than 15 seconds, the machine will start up again.

Another purpose of the circuit board is to turn the machine off if there is not enough water in the machine.

- When the water level in the reservoir falls below the tip of the water level sensor, the machine will "shut down"

- After a 6 minute delay, if the water refills the reservoir, the machine will start up again.

Separate from the circuit board:

- If the high pressure control (cut out switch) opens, the compressor will stop immediately (through the contactor). It must be manually reset.
- The master switch is the manual control for the complete machine, but it is not a service disconnect.

Ice Vending

- When a user places a container in front of the Touch Free ice sensor and below the ice delivery chute, the circuit board connects power to the bin drive motor and ice is dispensed for as long as the container is present. If the user does not remove the container, ice will be dispensed for 60 seconds and then stop.
- When a user places a container in front of the Touch Free water sensor, and below the water spout, the circuit board connects power to the water solenoid valve and water is dispensed. If the user does not remove the container water will be dispensed for 90 seconds and then stop.

Splash panel cleaning:

- A switch, located next to the water spout, may be pushed to disable the Touch-Free sensors for splash panel cleaning. It automatically resets after 2 minutes, or, if pushed within the 2 minutes, resets the circuit board to enable the Touch Free sensors.

TDE550 & TDE650

CIRCUIT BOARD SERVICE

Printed Circuit Board Handling Precautions

Follow these simple precautions when replacing a Printed Circuit Board

1. Keep the replacement PC Board in the anti-static packaging until it is ready to be installed.
2. Be sure that your hands are clean.
3. Just before touching the board, touch the cabinet of the machine to discharge any possible build up of static electricity.
4. Handle the original and replacement boards only by their outer edges.
5. Place the original board in the anti-static package for return (if in warranty).

LIQUID CHARGING

Instructions for R-404A

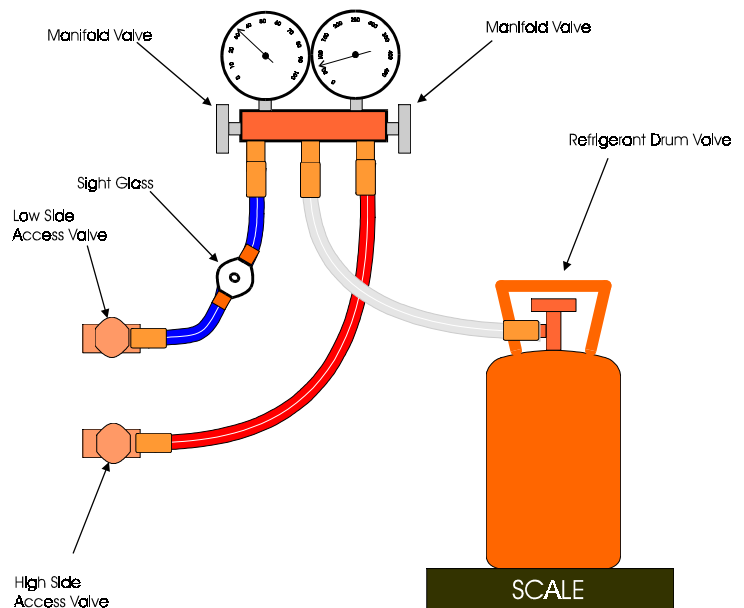
In preparation for charging, the low side hose should have a sight glass, and/or a restrictor device (such as a "Charge Faster") installed in it for metering liquid into the low side of the system.

1. After a thorough evacuation to at least 200 microns, shut off the manifold valves and switch off the vacuum pump.
2. Place a drum of R-404A onto an electronic scale.
3. Attach the charging hose to the drum.
4. Open the valve on the drum and purge the charging hose.
5. Zero out the scale.
6. Shut the low side access valve at the ice machine.
7. Open the discharge manifold valve full open.
8. Watch the scale, when the correct charge is shown, shut the manifold valve.

Note: If all of the charge will not "go in" the discharge side:

- A. Shut the discharge access valve at the ice machine.
- B. Switch the machine on.
- C. Open the low side access valve at the ice machine.
- D. Open the low side manifold valve and observe the sight glass to be certain that only gas is flowing into the system.
- E. When the proper charge is indicated on the scale, shut off the manifold valve(s).

9. Shut off the valve on the refrigerant drum.
10. Re-open the manifold valves until all liquid has flowed out of the hoses.
11. Shut the low side access valve on the ice machine.
12. Remove hoses from ice machine and replace all caps.



Hose Connection Schematic for Liquid Charging