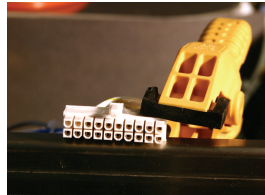




VERIFY SUPPLY VOLTAGE AND COMPONENT INTEGRITY.

These steps will allow you to test for proper voltage at the control module (UCM) and to verify that each component is good.

Note: Clamp UCM connector plug to front top flange as shown to hold connector.



TEST 1. LINE VOLTAGE TEST (Power should be connected)

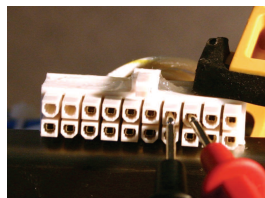


AC Volts

Problem:
UCM will not turn on.

With unit connected and toggle switch on test line (black, 18) to neutral (white, 17), meter should read line voltage (110-125 VAC), if not check connection, harness, high limit, toggle switch and power block connections.

11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10



WARNING:
Due to space on Molex connector, extra caution needs to take place when measuring voltage. If the two probes of the meter are touched, a short circuit will occur which could damage equipment.

TEST 2. SOLID STATE RELAY

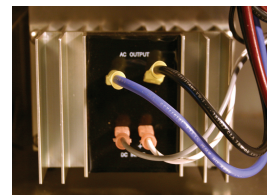
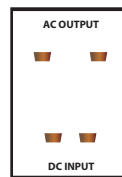


DC Volts

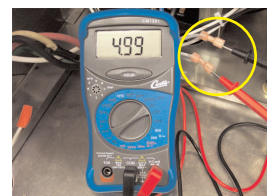
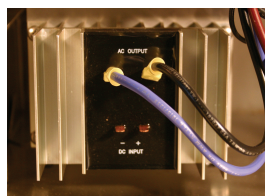
Problem:
Water is cold, No heat.

With unit connected and toggle switch on, disconnect the gray wire (-) and the gray striped wire (+) from the Solid State Relay (DC INPUT). Using your meter set for DC Volts (20 DC Volts or setting read 5 DC Volts), meter should read 5 DC Volts when the unit is calling for heat ("Heating" on the display), and within the set Delta. If not, check the wire connections or the UCM may be bad.

Solid State Relay



WARNING:
If you short these two wires, gray wire (-) and gray stripe wire (+) the board may malfunction and need replacement.



Ohms

CHECKING SOLID STATE RELAY – (power should be disconnected).

Relay can be failed in two conditions: SHORTED (Unit boiling) or OPEN (Water cold/no heat).

Remove all wires connected to Solid State Relay. Using your meter set to OHMS, measure the resistance between the AC terminals. No resistance should be read. If resistance is read, Solid State Relay is bad and needs to be replaced.



CAUTION:
Switching machine toggle to standby does NOT shut off power to unit.



TEST 3. VALVE TESTS – BREW, BYPASS & INLET (Power should NOT be connected)

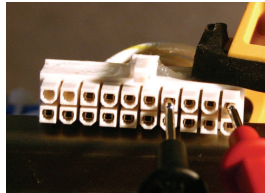


Problem:

Unit will not fill tank or brew

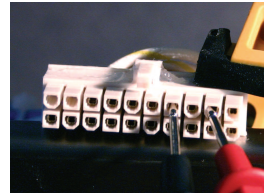
11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10

Brew Valve Left



11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10

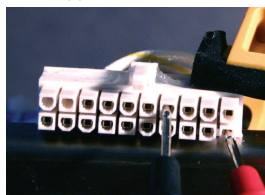
Brew Valve Right



CAUTION:
Switching machine toggle to standby does NOT shut off power to unit.

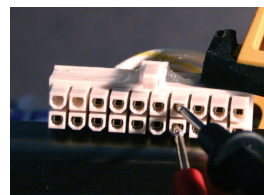
11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10

Bypass Valve Left



11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10

Bypass Valve Right

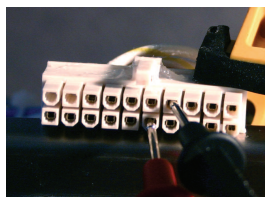


CAUTION:
Switching machine toggle to standby does NOT shut off power to unit.

BREW, BYPASS AND INLET VALVE
With unit disconnected and Digital Multi-Meter set to diode check, place leads as shown. Take reading then reverse leads. If any reading is less than 5 ohms or greater than 1300 ohms or no continuity **both** ways, valve is bad.

11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10

Inlet Valve



CAUTION:
Switching machine toggle to standby does NOT shut off power to unit.

TEST 4. TEMPERATURE SENSOR (Power should NOT be connected)

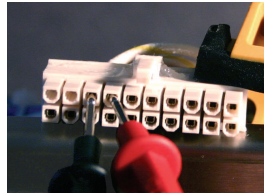


Problem:

*Display shows sensor error
or unit keeps boiling*

With power disconnected, make sure sensor is snug and flat to mounting position on tank with heat transfer paste. Make sure sensor connector is plugged in all the way. Sensor should read anywhere between 5,000 ohms (5K) if tank is hot to 200,000 ohms (200K) if tank is cool.

11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10



CAUTION:
Switching machine toggle to standby does NOT shut off power to unit.

TEST 5. WATER LEVEL PROBE (Power should NOT be connected)

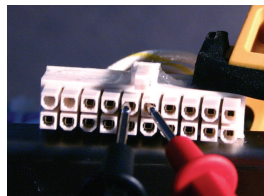


Problem:

*Water level in tank is over
flowing or not filling.*

With power disconnected and water touching the probe the resistance should be 100,000 Ohms (100K) or less. With the probe not touching water and tank lid installed, resistance should be greater than 150,000 ohms (150K).

11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10



CAUTION:
Switching machine toggle to standby does NOT shut off power to unit.

TEST 6. WARMERS – GEMINI ONLY (Power should NOT be connected)



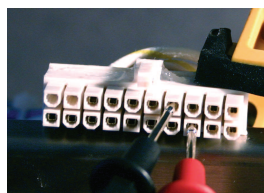
Problem:

Warmers are not heating

With power disconnected, test each warmer separately. Resistance should be 50-500 ohms. Note: Inspect wiring under warmers and ensure it is NOT routed near the warmer as it may burn through.

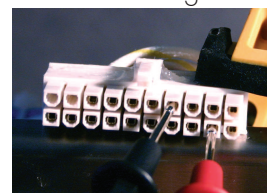
11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10

Warmer Left



11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10

Warmer Right



CAUTION:
Switching machine toggle to standby does NOT shut off power to unit.

Wilbur Curtis Company, Inc.
6913 Acco Street, Montebello, CA 90640-5403
Telephone: 800-421-6150 • 323-837-2300
Fax: 323-837-2406
www.wilburcurtis.com

