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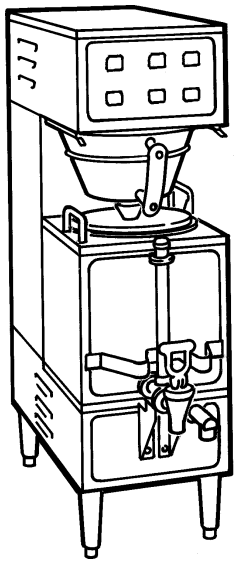
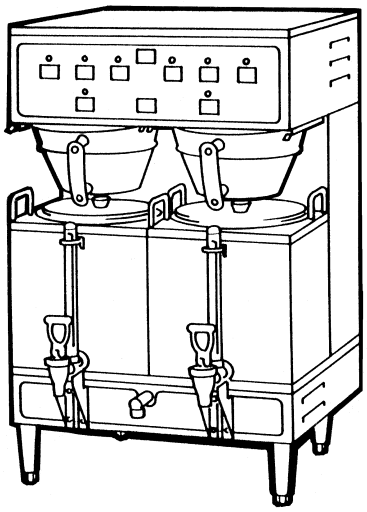
GEM-312IL & -300IL Satellite Brewer Instructions

GEMINI INTERLOCK COFFEE BREWING SYSTEMS



Gemini 300IL



Gemini 312IL

WILBUR CURTIS COMPANY
Montebello, CA 90640

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SHIPPING CARTON CONTENTS

The shipping carton contains the following standard items:

- **GEMINI 312IL**

QTY	ITEM	Part Nº
1	Brewer (Dash Numbers Indicate Variations)	GEM 312IL
2	Brew Cone with Handle	WC-3311
2	Wire Basket	WC-3301
4	Adjustable Legs, 4"	WC-3500
2	Satellite Server with Lid (Less Faucet)	GEM-3
1	3/8 Male X 3/8 Compression Elbow	WC-2805
2	"S" Faucet, Self Closing	WC-1800
70	Paper Filters	GEM-6
2	Satellite Faucet Guard	WC-6417

- **GEMINI 300IL**

QTY	ITEM	Part Nº
1	Brewer(Dash Numbers Indicate Variations)	GEM-3OOIL
1	Brew Cone with Handle	WC-3311
1	Wire Basket	WC-3301
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1	"S" Faucet, Self Closing	WC-1800
35	Paper Filters	GEM-6
1	Satellite Faucet Guard	WC-6417

Index

INSTALLATION INSTRUCTIONS

■ Electrical Data for GEM-312IL

▪ Single Phase, 3 Wire + Ground

Voltage Required: 208/240V (120V to Neutral)
Power Consumption: 29 Amps at 220V 6300 Watts
Circuit Breaker Capacity: 40 Amps (30 Amp Minimum on 220V, 40 Amp if 208V)

▪ Three Phase, 3 Wire + Ground (All Components 220V) and Three Phase, 4 wire + Ground. (All Components 120V Except Heating Elements in Tank)

Voltage Required: 208/240 Volts (120V to Neutral in 4 Wire + Ground)
Power Consumption: 16.6 Amps at 220V 6300 Watts
Circuit Breaker Capacity: 20 Amps Minimum.

▪ Single Phase, 2 Wire + Ground (All Components 220V)

Voltage Required: 208/240 Volts
Power Consumption: 29 Amps at 220V 6300 Watts
Circuit Breaker Capacity: 40 Amps. (30 Amp Minimum on 220V, 40 Amp if 208V)

■ Electrical Data for GEM-300IL (Not Available in Three Phase)

▪ Single Phase, 3 Wire + Ground

Voltage Required: 208/240V (120V to Neutral)
Power Consumption: 19 Amps at 220V 4175 Watts
Circuit Breaker Capacity: 30 Amps (20 Amps Minimum if 220V)

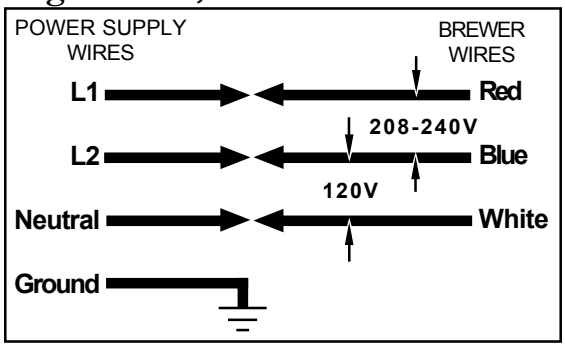
▪ Single Phase, 2 Wire + Ground (All Components 220V)

Voltage Required: 208-240 Volts
Power Consumption: 19 Amps at 220V 4175 Watts
Circuit Breaker Capacity: 30 Amps. (20 Amps Minimum if 220V)

Note: Read Serial Plate for Power Requirements

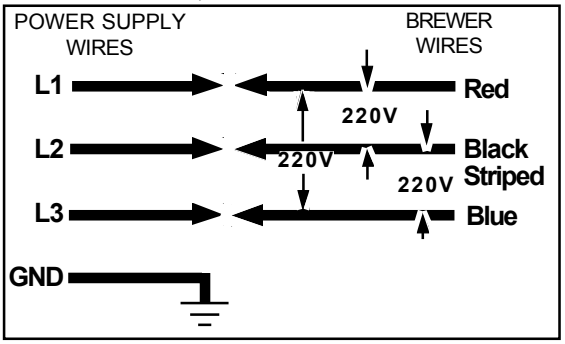
■ POWER SUPPLY CONNECTIONS

Single Phase, 3 Wires* Plus Ground



* Do not use less than #10 AWG

Three Phase, 3 Wires* Plus Ground



* Do not use less than #12 AWG

⚠ WARNING To prevent shock, the body of the brewer must be securely grounded. A GREEN grounding screw, located inside the electrical box is provided for this purpose.

PLUMBING INFORMATION

A 3/8" pipe thread X 3/8" compression 90º elbow is supplied with this brewer for water line connection. Use 3/8" O.D. copper tubing to connect water to the machine.
We recommend using a good water filter in the line before entering the brewer. Some type of water strainer MUST be used to obtain a trouble-free operation. The removable top back panel of the brewer has two 1/4 dia. screws to facilitate mounting the water filter.

CAUTION: DO NOT connect this brewer to hot water. The inlet valve is not rated for hot water.

SET-UP INSTRUCTIONS

After the brewer has been properly installed to comply with all local electrical and plumbing codes, proceed to start the brewing operation as follows:

1. Remove top cover. Locate and remove lid from the heating tank. Make sure the primary thermostat (part no. WC-517) is turned off. The thermostat is item no. 88 in Gemini 312IL parts list and item no. 58 in the Gemini 300IL parts list.

2. Open the water supply valve.

3. Turn main breaker on. Turn toggle switch in back of brewer on. At this time the water will start flow in into the heating tank. Turn On/Off switch in front panel on. This will energize the controls and the switches will light up.

4. Place clean satellite on warmer deck.

5. Push warmer switch to ON position to preheat the satellite.
   NOTE: The satellite must be preheated for ten minutes before brewing coffee. Never brew coffee in a cold satellite. The coffee temperature will drop instantly.

6. When the heating elements are covered with water, turn primary thermostat, WC-517, on.

7. When water shuts off, reinstall the tank lid.

Allow 15 minutes for the water to reach 200°F inside the heating tank. After the initial heat up, the temperature recovery is instantaneous. You may brew continuously.

INSTRUCTIONS FOR CONNECTING TO INTERLOCK GRINDER

1. Place grinder near brewer.
2. With the top cover removed, take out the empty strain relief from hole labeled INTERLOCK in back of brewer. Pass the end of the grinder interlock cable through this hole. On single head brewers plug the cable directly into timer WC-642 or into the interlock cable (if present). On dual head brewers plug the interlock cable into the timer interlock cable.
3. Place strain relief onto cable outside of brewer. Connection to timer cable should be inside brewer for maximum durability. Use a plier to squeeze the strain relief to slip it into the hole. Plug linecord into power outlet.

4. To program the grinder, refer to the manual supplied with the grinder.

PROGRAM SETTING - GEMINI 312IL & GEMINI 300IL BREWER

IMPORTANT: Following the Set-up Instructions, your brewer is ready to brew coffee. This brewer is set-up at the factory to brew 12, 24 or 36 cups of coffee. This will be fine for most brewing requirements. If you would like to adjust this setting, continue with the following programming instructions.

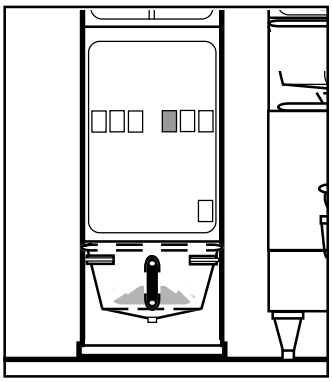
The amount of coffee brewed is controlled by timers that limit the duration of water flow coming from the heating tank. Both brewers have preset switches marked 12 CUPS, 24 CUPS and 36 CUPS. Typically, you would set up the 12 CUP brew switch to brew around twelve cups, the 24 CUP switch to brew about twentyfour cups, etc.. However, the actual quantity of coffee depends on how you program the brewer.

⚠ CAUTION: As with all electrical equipment, caution must be taken to avoid electrical shock. The following steps will also involve working with hot water. Scalding may occur if care is not taken against spilling.

1. Open the top cover (loosen four slotted screws).
2. The Gemini 312IL brewer has two timers (right and left). The Gemini 300IL brewer has only one timer. On the timer there is a small function switch marked **RUN** and **PROGRAM**. Push the switch to the **PROGRAM** position. On the Gemini 312IL, you can program the timers one at a time or together.
3. Push the ON/OFF switch, on the front panel, to the **ON** position. The indicator lights, over the brew switches, will flash on the side that is controlled by the timer(s) that you're working on.
4. Slide an **empty** brew cone into the brew rails, beneath the sprayhead.
5. Place a graduated container under the brew cone to measure the water coming from the sprayhead.
6. Choose the brew switch that you want to set and press once. Hot water will start to spray in the brew cone and into the measuring container. As soon as the amount of water has reached the desired level, press the brew switch again. This stops the brew cycle. This brew switch is now set for the amount of liquid in the container. Repeat this procedure on the other switches until all of them have been programmed.
7. Return to the timer(s) and switch back to the **RUN** position. Replace the top cover on the unit.

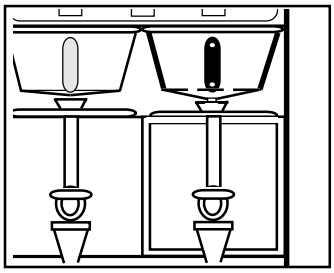
OPERATING THE INTERLOCK SYSTEM

Make sure that the Set-up Instructions, are complete before attempting to operate the Interlock System.

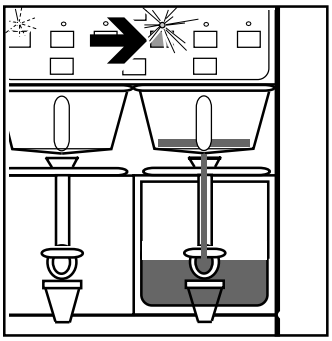


1. Push the Brew Cone into Place on the Grinder.

Decide on Regular or Decaf. Push 12, 24 or 36 Cup Switch. Coffee Will Start to Grind.



2. When the Grinder Stops, Slide the Brew Cone into the Rails on the Brewer. On the 312 you may use either side, as both are interlocked.



3. Push the Lighted Brew Switch with the Lighted Indicator. Coffee Will Start to Brew.

To Interrupt a Brew Cycle, Push the ON/OFF Switch.

⚠ CAUTION: Once the brew cycle has finished be sure the brew cone is completely empty before attempting to lift the satellite server from the brewer. Scalding may occur from hot liquid still in the brew cone. Allow it to drip out a few minutes just to be safe.

NOTE: The brewer and grinder may be operated independently, without Inerlock connection.

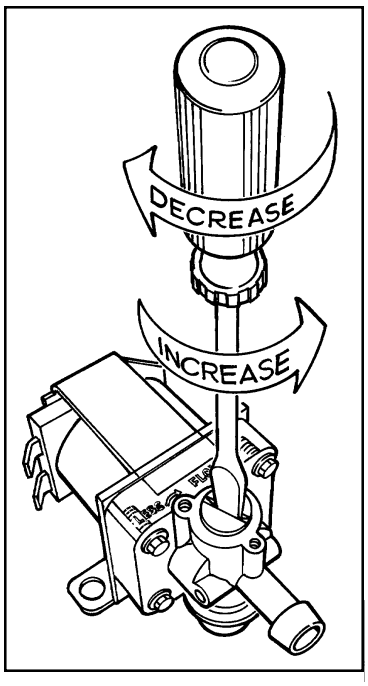
BY-PASS FLOW OPERATION

These brewers are set at the factory to brew 12, 24 or 36 cups of coffee. The 36 cup brew cycle has a by-pass valve that will by-pass up to 40% of the water around the coffee grounds. If you desire to change this setting for any reason, you may do so by adjusting the by-pass valve (part no. WC-844) on the Gemini 312IL (item no. 57*) and on the Gemini 300IL (item no. 56)

BY-PASS FLOW ADJUSTMENT

1. Place satellite, without cover, on the warmer deck.
2. Slide brew cone in just far enough to catch all the water pouring from the sprayhead, but leaving the by-pass outlet exposed.
3. Hold a measuring cup under the by-pass outlet and push brew switch. Count 15 seconds; then push the ON/OFF switch to stop the cycle.
4. Count the number of ounces collected in the measuring cup. Determine the percentage of by-pass by comparing your total with the ounces in the Brew Cycle Chart, below. Total flow in 15 seconds is 6.5 to 8.3 oz.
5. To change the quantity of water that is by-passed, turn the adjustment screw clockwise for less water. Turning it counter clockwise will increase the flow of water. You may have to adjust the brew timer to maintain the total quantity of coffee brewed into the satellite.
6. The last column of the Brew Cycle Chart gives you the approximate timer settings for 36 cups. Make your timer adjustments as detailed on page 3.

7. Check the coffee level in the satellite. The coffee should come up to one inch from the top edge of the satellite liner or measure approximately 1.5 gallons.



BREW CYCLE CHART (36 CUPS ONLY)

BY-PASS SETTING FOR 15 SECONDS	PERCENT OF BY-PASS	PERCENT TO SPRAYHEAD	TOTAL TIME BREW CYCLE
3 oz.	40%	60%	5½ min.
2¼ oz.	30%	70%	6 min.
1½ oz.	20%*	80%	7 min.

The settings in this table are approximate. Variations may occur, requiring finer adjustment before the final setting.

HOT WATER DISPENSING

The hot water spout lets you draw piping hot water for tea, soups, and other profitable "instants" anytime - even during the brew cycle.

To use this feature, place a cup under the hot water spout centered on the lower front panel. Press the HOT WATER switch on the upper front panel and hold it. Hot water will flow from the spout. Releasing the switch stops the flow of hot water.

*Factory setting.

COFFEE REQUIREMENTS

TYPE

These Gemini brewers are designed to brew any type of ground coffee. Instant or concentrated liquid coffee is not recommended. Before attempting to use these coffee products, consult your coffee provider.

QUANTITY

Because so many different grinds of coffee are available today, you should consult your coffee company. Generally 6 to 8 ounces are used to brew 1½ gallons (36 cups). Referring to the by-pass flow adjustment section will show you how to adjust the brew to your tastes.

SATELLITE HOLDING TEMPERATURE

Under normal conditions, brewed coffee sitting in a satellite will maintain it's temperature at approximately 180ºF until consumed when left on the warmer deck of the brewer and the satellite has been pre-heated. The same applies when a satellite is removed from the brewer and placed on an electric warmer stand (GEM-5 or GEM-8). If the satellite is removed from the brewer and placed on a non-electric stand, the coffee will keep it's temperature at 180ºF to 170ºF for an extended period of time depending on surrounding ambient temperature.

CARE AND MAINTENANCE OF BREWER

Regular and preventive maintenance is essential in keeping your Gemini system looking and working like new.

! IMPORTANT

When cleaning your Gemini System, do not use cleansers, bleach liquids, powders or any other substance that contains chlorine. These products promote corrosion and will pit the stainless steel. USE OF THESE PRODUCTS WILL VOID WARRANTY.

PREVENTIVE MAINTENANCE

1. Remove the sprayhead (item no. 25 on the Gemini 312IL or item no. 27 on the Gemini 300IL) from the brewer and clean it once a week or more often in heavy lime areas.
2. Clean the seat cups (item #32 on GEM-3 satellite parts breakdown) in the faucet once a week and replace if cracked or leaking.
3. Remove the hot water spout aerator (item #13, Gemini 312IL and Gemini 300IL); clean it once a week.
4. The inside of the heating tank should be de-limed at least every six months and more often in areas with especially hard water.

CLEANING

Using a daily routine of cleaning the external parts of the Gemini 300IL or Gemini 312IL brewing system should maintain it's new appearance and insure the good flavor of the coffee.

1. Wipe off any spills, dust or debris from the exterior surfaces.
2. Clean the outside of the brewer and satellite with stainless steel polish. Coarser agents may scratch the machine.
3. Slide out brew cone. Rinse thoroughly with clean water.
4. Remove the sprayhead and clean. Clean around the dome area, wiping with a non toxic cleaner.
5. Clean the brew cone rails with a damp cloth or brush. Dry thoroughly with clean cloth.

POWER DISCONNECT

Before removing any panels or starting any repairs, turn off power running to the brewer, from the main circuit breaker panel.

The toggle switch, in back of the coffee brewer, turns on the power up to the contactor only. One half of this relay, (part no. WC-400R) and one line to the heating elements remain electrified. With the toggle switch turned off, the coffee brewer is inoperable.

The ON/OFF switch, on the front panel, turns off the power to all the controls: timers lights, warmer and dump valves. The heating elements and the liquid level controls will remain electrified.

HIGH TEMPERATURE RESET THERMOSTAT

The function of this thermostat, part no. WC-508, is to automatically cut off the power to the heating element in case the water level drops too low. This condition may be caused by failure in the solid state water level control, the probe or the inlet valve. When the water level is so low that the elements are exposed, the very hot temperature will cause the reset button to pop out to prevent the element from burning out. When the low water condition has been corrected, push in the RED button on the thermostat to reset. You will know it has reset by a distinct "click".

! CAUTION

Do not turn off water supply while the brewer is still on. The coil on the water inlet valve will burn.

TROUBLESHOOTING

To help serviceman encountering a problem in the field make a rapid diagnosis, we have separated the three basic functions of these brewers:

1 WATER LEVEL CONTROL	**2** HEAT SUPPLY	**3** BREWING OPERATION

When you are called for service, first find out which one of these three functions are failing and concentrate in checking only the components involved. DO NOT remove any components until you know which is not working.

WATER LEVEL CONTROL OPERATION

These instructions and component part numbers are for 120V control circuits. If you have a 220V unit, see wiring diagram furnished with your unit for part numbers and expect 208-240 where 110-120V is written.

Components involved:

1. Solid State Water Level Control Board	Part No. WC-608
2. Water Inlet Valve	Part No. WC-826 (Gemini 312IL)
	Part No. WC-827 (Gemini 300IL)
3. Water Level Probe	Part No. WC-5502

Under normal conditions and operation the water level in the tank should not drop more than ½" from the probe tip. If the water level is lower than this, the tank is not being refilled fast enough. Check your water line and water filter. Cleaning of the water line or replacing the filter may be necessary.

PROBLEM: NO WATER IS ENTERING THE HEATING TANK

TANK INLET VALVE TEST

TURN POWER OFF. Disconnect wires from the water inlet valve coil and connect a two wire lamp cord to the terminals. Plug it into a 115 volt outlet. This will activate the coil. Water should flow into the tank when you plug it in and stop when you pull out the plug. If it does, the valve is working normally.
If the water inlet valve passes this test, the problem may be with the probe or water level control board.
If the water inlet valve does not pass this test, the solenoid coil may have failed. Replace the coil. The valve may have an obstruction blocking the flow of water. Disassemble and clean it out or replace the valve.

PROBE TEST

If the valve is okay yet you are still not getting water flow into the tank, check the probe: Turn on the power to the brewer. Check inside the heating tank to make sure the water is not touching the probe. Pull the wire terminal off the probe rod. If water starts flowing into the tank, the probe may be grounded due to excessive liming or condensation. Remove it, clean and wrap it tight with Teflon tape. Leave only 1/8" of the tip exposed. If water still does not flow in after pulling the terminal off the probe, the problem may be in the solid state liquid level control (LLC) board.

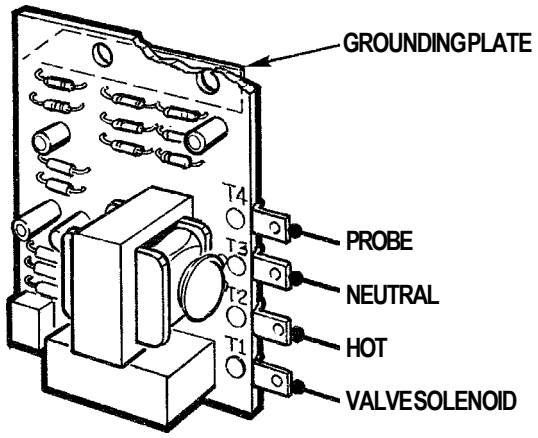
LIQUID LEVEL CONTROL TEST

Check the board as follows:

A. Make sure there is power input to the LLC board at the terminals 2 & 3. Your voltmeter should read 115 volts. It should read the same at terminals 1 & 3. This is the output power to electrify the coil of the solenoid valve.
The lack of voltage at terminals 1 & 3 will indicate that the L.L.C. board is not working properly.

B. Make sure all wire connections to the L.L.C. board are tight.

C. The grounding plate, behind the board, should make contact with the L.L.C. mounting bracket.
The board will not work or will work erratically if it is not grounded properly.



PROBLEM: WATER WON'T STOP FLOWING INTO THE HEATING TANK.
You must follow the same procedure to check the 3 components but in reverse.

WATER INLET VALVE TEST

Turn off all power to the brewer. Observe water level inside the heating tank. If it rises, the water inlet valve is leaking. Clean it out or replace it.

PROBE TEST

At the time the tank is overflowing pull the wire terminal off the probe rod and touch the metal top of the tank. If the water stops flowing, the probe circuit lost continuity due to extreme liming condition, lack of minerals in the water (very soft water), or loose connection.

A. Remove the probe and clean it.

B. Disconnect ORANGE wire from T4 of water level board and check for continuity from the terminal of this wire to the tip of the probe inside the heating tank. If there is no continuity, find the point where continuity is broken and correct it.
C. If the tank is full but water continues to flow in, check for voltage at the water inlet valve coil. If there is voltage, the water level control board is not working properly. Check it for loose ground connection (see top of page, step B & C *Liquid Level Control Test* for lack of water). Replace board if test shows the water level control is defective.

HEAT SUPPLY OPERATION

Components Involved:

1. **High Temp. Cut-off Thermostat** (WC-508)
2. **Primary Thermostat** (WC-517)
3. **Power Relay, Contactor** (WC-400R)
4. **Heating Elements** (WC-906),
5. **Toggle Switch** (WC-102)
6. **Fuse** (WC-1500)

PROBLEM: WATER STAYS COLD

HIGH TEMPERATURE RESET THERMOSTAT TEST

A. Make sure there is power at terminals 2 and 4 (points A) of high temperature reset thermostat. Volt meter should read 220V between these two terminals. You should also read 220V at terminals 1 and 3 (points B) of the high temperature reset thermostat. Lack of voltage at these terminals will indicate the thermostat is open. Push in the red reset button. If terminals 1 and 3 still lack voltage, check the primary thermostat and contactor (steps B, C and D). The contacts of both must be closed to allow current flow to terminals 2 and 1 of the high temperature reset thermostat. If the contacts of the primary thermostat or the high temperature reset thermostat are open, check toggle switch.

TOGGLE SWITCH AND FUSE TEST

B. Clamp one leg of your meter on terminal 1, point D, of the contactor.

C. Keep one leg of the meter on terminal 1 at point D on contactor. Make sure primary thermostat dial is turned all the way clockwise. With the other leg of the voltmeter, take a reading at points I and J of the thermostat. Your meter should read 110 to 120 volts. If no voltage is present at point J replace this thermostat (WC-517). It is not closing the contacts that allow current to flow to the contactor coil.

CONTACTOR TEST

D. Keep one leg of the meter on terminal 1 at point D of contactor and with the other leg touch the screw, terminal no. 2, of same contactor at point K. If the primary thermostat is working properly, the meter should read 110 to 120 volts: the thermostat is open.

If you do not read 110 to 120V the contactor coil may be burned, remaining open and interrupting the flow of current to heating elements. The contactor may need to be replaced.

PROBLEM: WATER IS NOT HOT ENOUGH

Components to test:

1. Heating Elements . . . . . Part No. WC-906
2. Primary Thermostat . . . . . Part No. WC-517

A. On the Gemini 312IL, to verify if all three heating elements are working at full capacity, place a clamp of your ammeter around the BROWN wire L. The dial should display approximately 29 amps if all three elements are working. A reading of 19 amps means only two elements are working. Disconnect the wires from the elements terminals and check each one for continuity. This will determine which one is open or burned and if they need replacing.
A method of determining which element is burned; clamp an ammeter at each jumper between the elements.
With the Gemini 300IL, you have only two heating elements in the heating tank, therefore a reading of 19 amps is normal. Place a clamp of your ammeter around the BLACK wire L. You should read 19 amps. If not, disconnect the wires from the element terminals and check each one for continuity. This will determine which is open or burned and if they need replacing.
A method of determining which element is burned; clamp an ammeter at each jumper between the elements.

B. The primary thermostat should be in the ON position (rotated fully clockwise).

PROBLEM: WATER DOES NOT COME FROM THE SPRAYHEAD WHEN THE BREW SWITCH IS PRESSED

Components Involved:

1. On/Off Switch . . . . . Part No. WC-121
2. Brew Switch . . . . . Part No. WC-122
3. Timer . . . . . Part No. WC-642
4. Dump Valves . . . . . Part Nos. WC-820 & WC-821

All problems in the brewing function of these brewers are easily located and corrected due to the simplicity of the components. Just follow the current flow from point to point as indicated in the wiring diagram.
We assume that the automatic refill and heat supply functions are working correctly.

A. Be sure the heating tank is full of water up to the probe tip, if it is not, find the problem and correct it. See "Water Level Control Operation".

B. Pushing the ON/OFF switch to the ON position will send power to the two brew timers

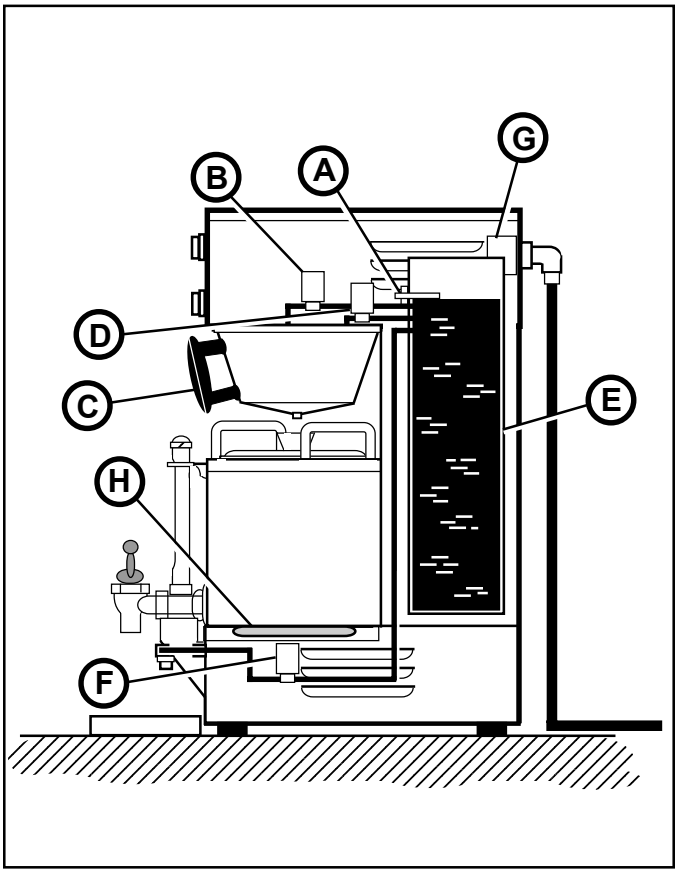
(through terminals 4B and 5B of the switch). With the switch in the ON position, check for voltage between any of the above mentioned terminals and any neutral terminal (WHITE wire). You should read 110 to 120 volts. If not, the ON/OFF switch is defective. Replace it.

C. Pushing any of the 12 cup, 24 cup, or 36 cup brew switches will open the dump valve, sending hot water to the sprayhead. If the valve fails to open; check the coil for continuity. If the coil checks out okay, then the brew timer is the likely cause of the problem. The brew timer energizes the coil on the valve, opening the valve for whatever brew switch you've selected.

PROBLEM: WATER IS COMING FROM THE AREA AROUND THE SPRAYHEAD WITHOUT THE BREW SWITCH BEING PRESSED.

1. Determine if the water is flowing from the sprayhead or the overflow hole.
   A. If water is leaking from the sprayhead, then the dump valve is the problem. Clean the inside of the valve. Check the diaphragm for holes or tears in the rubber cup. Look for any solid particles that may be preventing the valve from closing. You may have to replace the valve.
   B. If water is leaking from the overflow hole, then the tank is overflowing. Refer to the trouble shooting section, "PROBLEM: WATER WILL NOT STOP FLOWING INTO THE HEATING TANK."

FUNCTION OF THE GEMINI



The water in the hot water tank is maintained at the same level at all times by a sensor called the water level probe **A**. This controls the water inlet valve **G**.

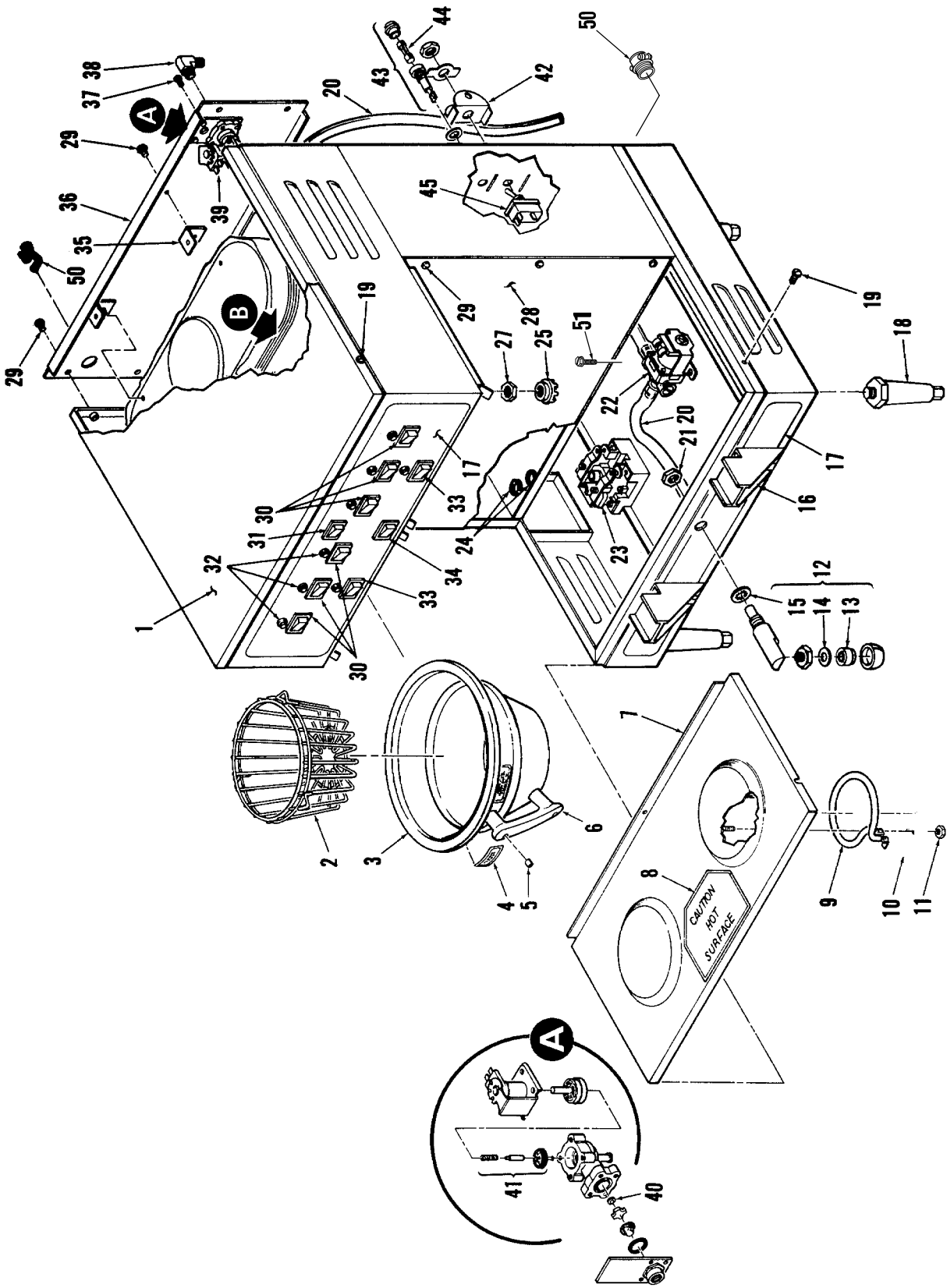
When a brew switch is pushed, the brew cycle is started: The dump valve **B**, is opened by the brew timer, allowing hot water to be sprayed over the ground coffee in the brew basket **C**.

During the brew cycle, part of the water coming from the tank is diverted away from the ground coffee as by-pass; eventually mixing with the brewed coffee in the Satellite. The by-pass is adjustable at the by-pass valve **D**. By-pass is important because it allows the user to control the "balance" of the coffee, thereby optimizing the flavor of the coffee.

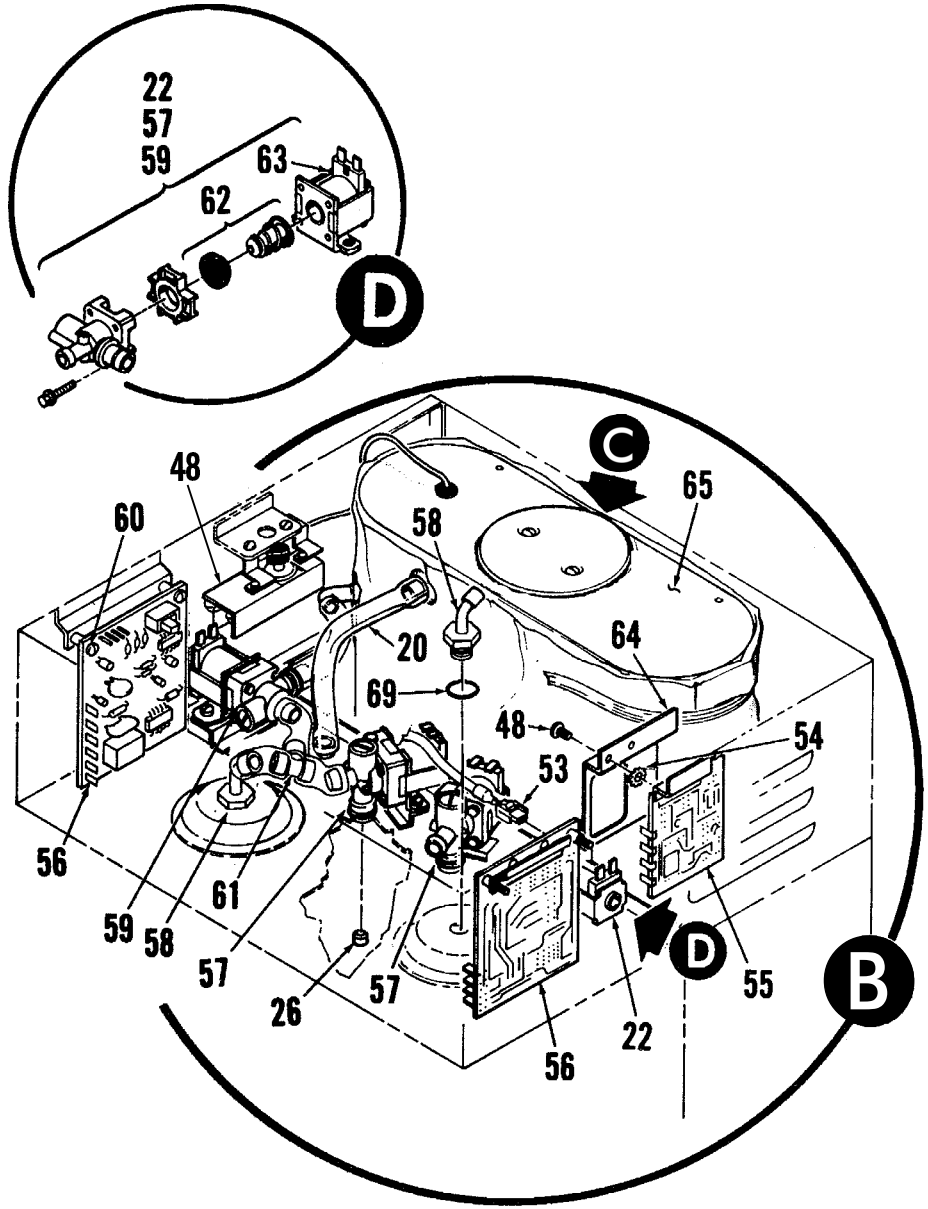
The hot water valve **F**, dispenses hot water for tea, instant beverages, or soups.

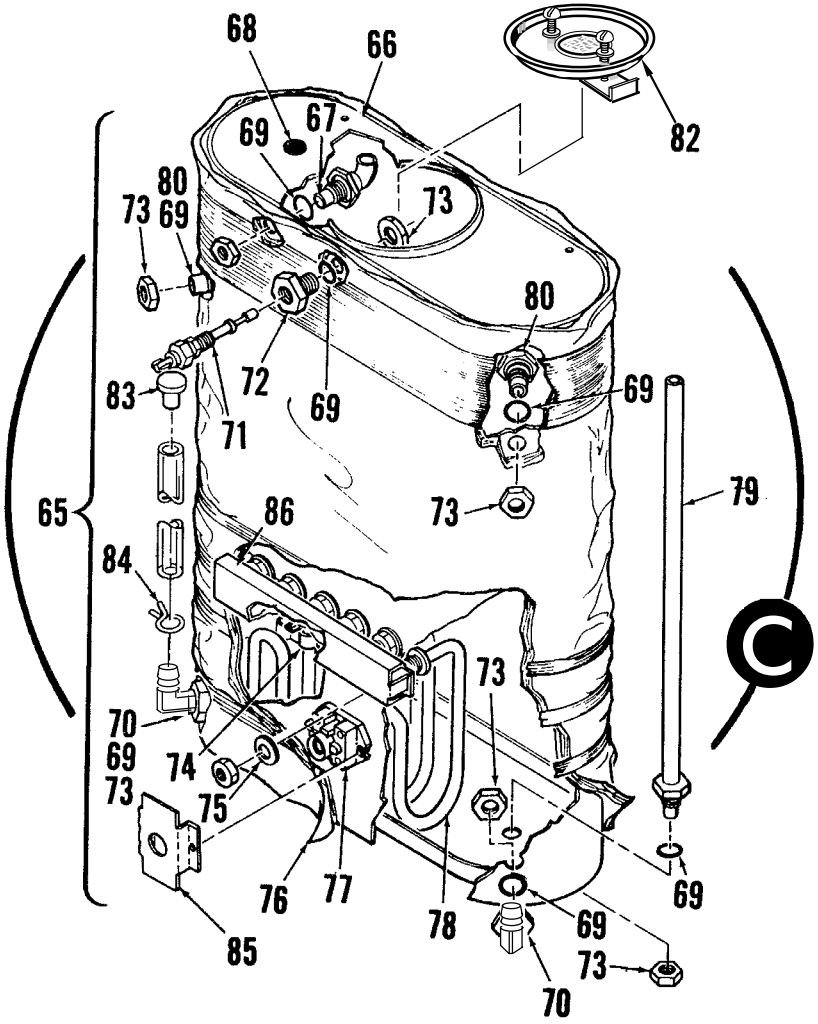
A warmer element, **H**, keeps the coffee in the Satellite at the proper temperature.

GEMINI 312IL PARTS BREAKDOWN



GEMINI 312IL PARTS BREAKDOWN





Gemini 312IL - Parts List

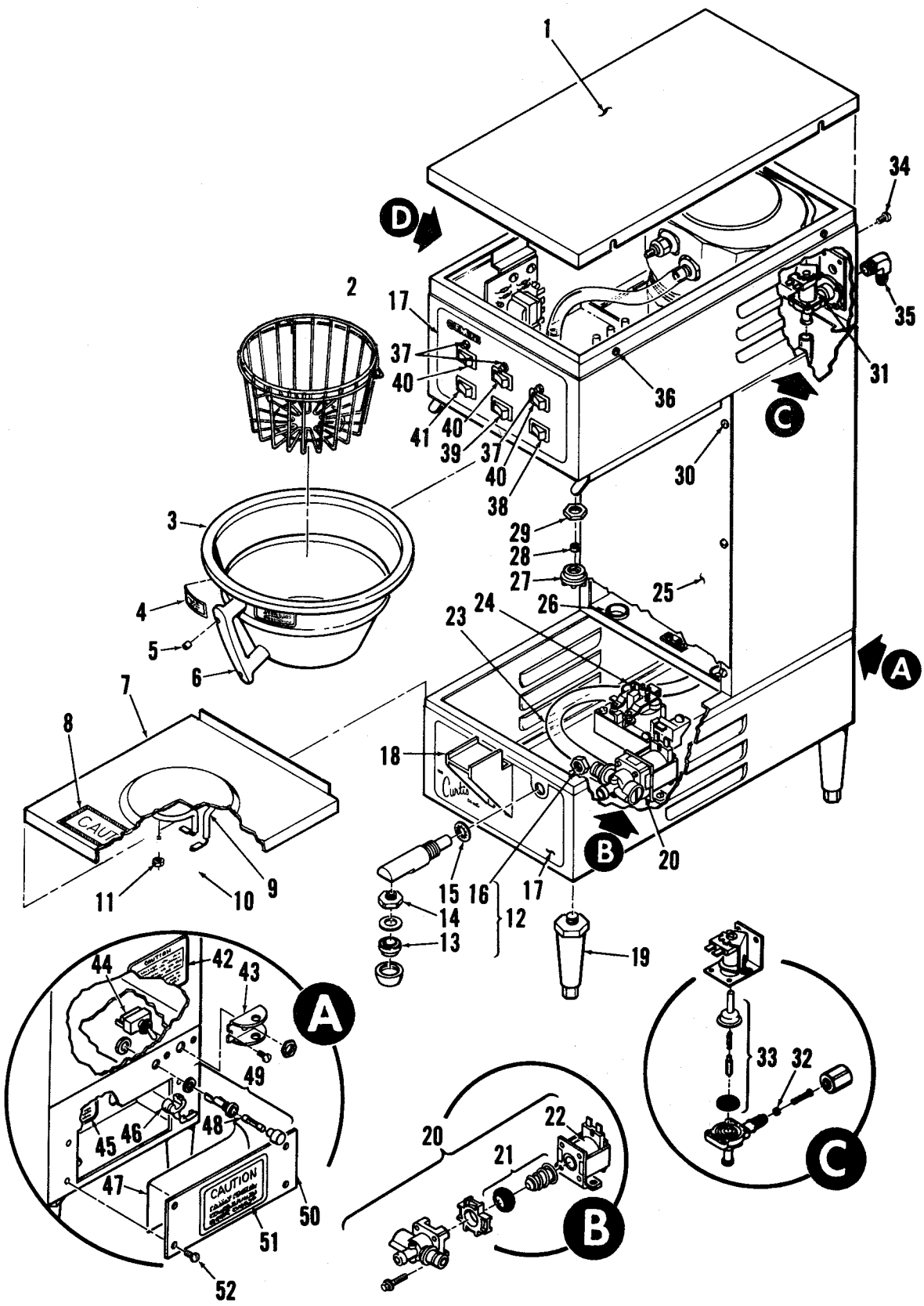
INDEX Nº	PART Nº	DESCRIPTION
1	WC-5421	TOP COVER
2	WC-3301	WIRE BASKET, PB-2
3	WC-3311	BREW CONE WITH HANDLE
4	WC-3963	LABEL, *REMOVE BASKET SLOWLY*
5	WC-4003	RETAINER NUT
6	WC-3201	HANDLE FOR BREW CONE
7	WC-5423	WARMER DECK, NO ELEMENTS
8	WC-38310	LABEL, CAREFUL HOT SURFACE
9	WC-37102	KIT, WARMER ELEMENT 100W 120V
10	WC-6732-1	STRAP, WARMER ELEMENT GEMS
11	WC-4201	NUT, HEX KEP, 8-32
12	WC-2912BK	SPOUT, HOT WATER, *NO SPLASH* (OPTIONAL)
13	WC-2946	AERATOR, FEMALE, CHROME PLT'D
14	WC-2947	ADAPTOR, MALE AERATOR
15	WC-4308	WASHER, ½" I.D. INTERNAL LOCK
16	WC-5424	BRACKET, FAUCET SUPPORT
17	WC-3965	PANEL, TOP AND BOTTOM
17A	WC-3965-01	LABEL, SWITCH PANEL W/O HOT WATER
18	WC-3500	LEG, 4" ADJUSTABLE COUNTER
19	WC-4439	SCREW, 6-32x¼ PHIL PAN HD SS
20	WC-5310	TUBING, 5/16" I. D., SILICONE
21	WC-4205	NUT, ¼" NPS, BRASS
22	WC-37122	KIT, DUMP VALVE RIGHT
23	WC- 400R	POWER RELAY, 120V, 50 AMP
24	WC-1411	BUSHING, SNAP IN, 5/8"
25	WC-2936	SPRAY HEAD (RED PLASTIC)
26	WC-2945	FLOW RESTRICTOR
27	WC-4213	NUT, LOCK 5\8"
28	WC-5829	COVER, FRONT W/A GEM-312
29	WC-4503	SCREW, 8-32 x ½"
30	WC- 122	ROCKER SWITCH, BREW, 125V
31	WC- 121	ROCKER SWITCH, ON/OFF, 125V
32	WC- 200	INDICATOR LIGHT, 115V
33	WC- 123	ROCKER SWITCH, WARMER, 125V
34	WC- 124	ROCKER SWITCH, HOT WATER, 125V
35	WC-6301	BRACKET, UPPER TANK SUPPORT
36	WC-5482	PANEL, BACK TOP WRAP
37	WC-4616	SCREW, 1/4-20x½ PHILLIPS PAN HEAD SS
38	WC-2805	ELBOW, COMPRESSION, 3/8" x 3/8"
39	WC- 847	VALVE, INLET 2 GPM 120V 10W
40	WC- 830	WASHER, FLOW, 1.0 GMP
41	WC-3765	KIT, REBIULD FOR WATER INLET VALVE
42	WC-3249	GUARD, SWITCH
43	WC-1501	FUSE HOLDER
44	WC-1500	FUSE, 5 AMP
45	WC- 102	SWITCH, TOGGLE, 125V, 20 AMPS
46	WC-3810	LABEL, *CAUTION DO NOT TURN ON POWER...*
48	WC- 517	THERMOSTAT
49	WC-38149	LABEL, *WARNING DO NOT INSTALL...*
50	WC-1412	CORD GRIP, 3/4" FOR METAL CORD
51	WC-4509	SCREW, 10-32 x 5/8" GRN
53	WC- 647	CABLE, INTERLOCK TIMER
54	WC-4329	WASHER, EXTERNAL LOCK #8

Gemini 312IL - Parts List

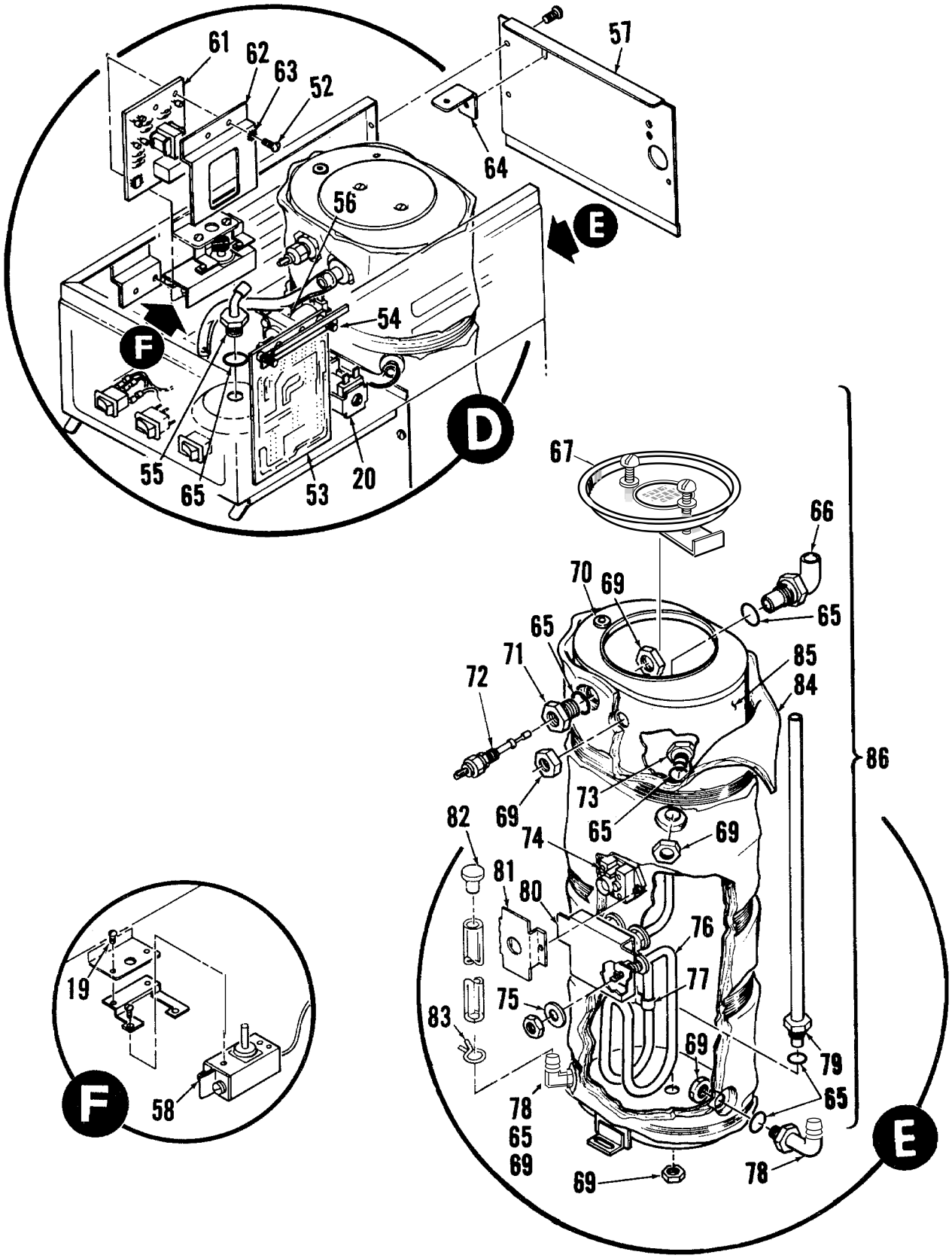
INDEX Nº	PART Nº	DESCRIPTION
55	WC- 608	LIQUID LEVEL CONTROL BOARD, LLC
56	WC- 642	TIMER, TRI-BREW, 120V
57	WC-37130	KIT, VALVE BY-PASS
58	WC-2977	FITTING, SPRAYHEAD
59	WC-37121	KIT, DUMP VALVE LEFT
60	WC-4405	SCREW, PAN HEAD, 6-32 x 7/8"
61	WC-2215	TEE 1/4" WROT TEE
62	WC-3766	KIT, REPAIR FOR VALVE WC-821
63	WC- 419	COIL FOR EATON VALVE, 115V
64	WC-4380	SHOCK GUARD FOR LLC
65	WC-5432	HEATING TANK COMPLETE
66	WC-5431	HEATING TANK WITH BRASS FITTINGS ONLY
67	WC-2948	FITTING, OVERFLOW
68	WC-4314	GROMMET, SILICONE
69	WC-4320	O' RING
70	WC-29009	FITTING, INLET
71	WC-5502	PROBE, WATER LEVEL
72	WC-2938	FITTING, HEX PROBE
73	WC-4212	NUT, 5/8" JAM
74	WC-5409	CLIP, THERMOSTAT BULB TO HEATING ELEMENT
75	WC-4306	WASHER, TEFLON 9/16" I.D.
76	WC-3689	INSULATION, WRAP TANK
77	WC- 522	THERMOSTAT, RESET
78	WC- 906	HEATING ELEMENT, 2000W, 220V
79	WC-2956	FITTING, TUBE, HOT WATER OUTLET
80	WC-2935	FITTING TANK OUTLET
82	WC-5661	LID ASSEMBLY FOR HEATING TANK, INCLUDING GASKET
83	WC-43058	PLUG, DRAIN PP RED
84	WC-4319	CLAMP, HOSE S/S
85	WC-4381	SHOCK GUARD, RESET THERMOSTAT
86	WC-43801	SHOCK GUARD, HEATING ELEMENT TERMINALS

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

GEMINI 300IL PARTS BREAKDOWN



GEMINI 300IL PARTS BREAKDOWN



Gemini 300IL - Parts List

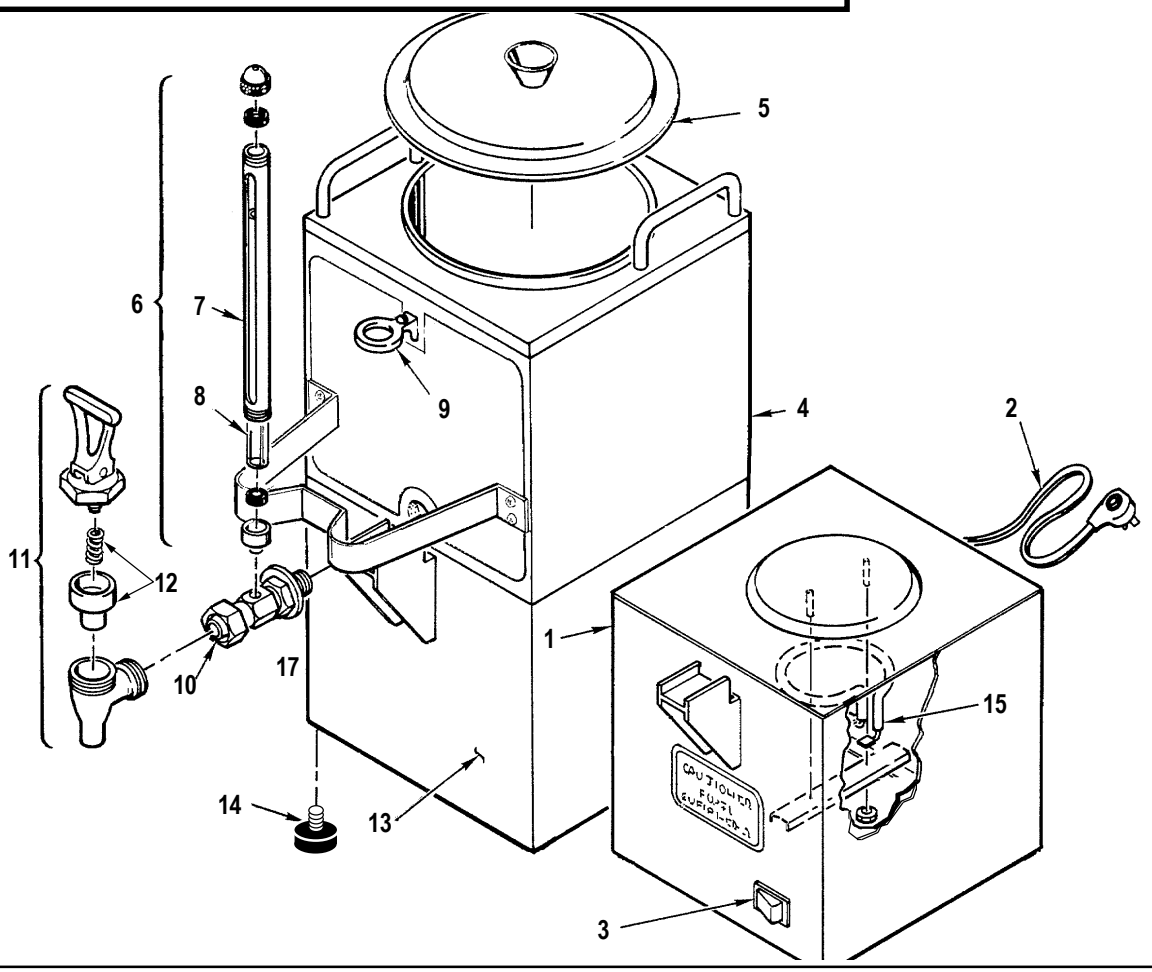
INDEX Nº	PART Nº	DESCRIPTION
1	WC-5450	TOP COVER
2	WC-3301	WIRE BASKET, PB-2
3	WC-3311	BREW CONE WITH HANDLE
4	WC-3963	LABEL, *REMOVE BASKET SLOWLY*
5	WC-4003	NUT, RETAINER
6	WC-3201	HANDLE FOR BREW CONE
7	WC-5451	WARMER DECK, NO ELEMENTS
8	WC-3831	LABEL, *CAUTION HOT SURFACE*
9	WC-37102	KIT, WARMER ELEMENT 120V, 100W
10	WC-6732-1	STRAP FOR WARMER ELEMENT
11	WC-4201	NUT, KEP, 8-32
12	WC-2912BK	HOT WATER SPOUT ASSEMBLY (OPTIONAL)
13	WC-2946	AERATOR, FEMALE
14	WC-2947	ADAPTER, MALE
15	WC-4308	WASHER, INTERNAL LOCK, 1/2" I.D.
16	WC-4205	NUT, LOCK, NPS, 1/4"
17	WC-39009	PANELS TOP AND BOTTOM
17A	WC-39009-01	LABEL, SWITCH PANEL W/O HOT WATER GEM300IL
18	WC-5424	BRACKET FAUCET SUPPORT
19	WC-3500	LEG, ADJUSTABLE 4"
20	WC-37122	KIT, DUMP VALVE RIGHT
21	WC-3766	KIT, REPAIR USE ON WC-820, WC-821,WC-844,WC-880E
22	WC- 419	COIL, 115V, FOR EATON VALVE
23	WC-5310	TUBING, SILICONE, 5/16" I.D.
24	WC- 400R	POWER RELAY, 115V, 50A
25	WC-5452	COVER, FRONT
26	WC-1411	BUSHING, SNAP-IN, 5/8"
27	WC-2936	SPRAYHEAD, RED
28	WC-2945	RESTRICTOR, FLOW
29	WC-4213	NUT, LOCK 5/8"
30	WC-4503	SCREW, PAN HEAD, 8-32 x 1/2"
31	WC- 827	VALVE, WATER INLET
32	WC- 848	WASHER, FLOW, 1 GPM FOR WC- 827
33	WC-3700	KIT, REPAIR, FOR WC- 827 VALVE
34	WC-4616	SCREW, 1/4-20x½ PHILLIPS PAN HEAD SS
35	WC-2805	FITTING, ELBOW, COMPRESSOR, 3/8" x 3/8"
36	WC-4439	SCREW, 6-32x¼ PHIL PAN HD SS
37	WC- 200	LIGHT, INDICATOR, 115V
38	WC- 124	SWITCH, ROCKER, HOT WATER, 115V
39	WC- 121	SWITCH, ROCKER, ON/OFF, 115V
40	WC- 122	SWITCH, ROCKER, BREW, 115V
41	WC- 123	SWITCH, ROCKER, WARMER, 115V
42	WC-38149	LABEL, WARNING
43	WC-3234	GUARD, SWITCH
44	WC- 102	SWITCH, TOGGLE, 125V, 80A
45	WC-3812	LABEL, GROUND
46	WC-1408	GRIP, CORD, 7/8"
47	WC-3820	LABEL, WIRING WARRANTY
48	WC-1500	FUSE, 5 AMP
49	WC-1501	FUSE HOLDER
50	WC-5840	COVER, ELECTRIC BOX
51	WC-3810	LABEL, CAUTION
52	WC-4501	SCREW, 8-32 x 1/4
53	WC- 642	TIMER, TRI-BREW
54	WC-4405	SCREW, PAN HEAD, 6-32 x 7/8

Gemini 300IL - Parts List

INDEX Nº	PART Nº	DESCRIPTION
55	WC-2977	FITTING, SPRAYHEAD
56	WC-37130	KIT, VALVE BY-PASS
57	WC-6556	PANEL, TOP WRAP BACK G300IL
58	WC- 517	THERMOSTAT
61	WC- 608	CIRCUIT BOARD, LIQUID LEVEL CONTROL
62	WC-4380	GUARD, SHOCK FOR L.L.C.
63	WC-4329	WASHER, LOCK, EXTERNAL #8
64	WC-6301	BRACKET, UPPER TANK SUPPORT
65	WC-4320	O' RING, 1/2"
66	WC-2948	FITTING, TANK OVERFLOW
67	WC-5661	LID ASSEMBLY FOR HEATING TANK
69	WC-4212	NUT, JAM, 5/8" BRASS
70	WC-4314	GROMMET, RUBBER, FDA (9101)
71	WC-2938	FITTING, HEX PROBE
72	WC-5502	PROBE, WATER LEVEL
73	WC-2935	FITTING, TANK OUTLET
74	WC- 508	THERMOSTAT, RESET, MR-4
75	WC-4306	WASHER, TEFLON, 9/16" I.D.
76	WC- 906	HEATING ELEMENT, 2000W, 220V
77	WC-5409	CLIP, THERMOSTAT TO HEATING ELEMENT
78	WC-29009	FITTING, INLET
79	WC-2956	TUBE ASSEMBLY, HOT WATER TANK
80	WC-43801	SHOCK GUARD FOR HEATING ELEMENT TERMINALS
81	WC-4381	SHOCK GUARD FOR RESET THERMOSTAT
82	WC-4398	PLUG, DRAIN, TEFLON
83	WC-4319	CLAMP, HOSE, S/S
84	WC-3691	INSULATION, GEM-230A/300IL
85	WC-5453	HEATING TANK WITH FITTINGS ONLY
86	WC-5454	HEATING TANK COMPLETE
87	WC- 648	CABLE, INTERLOCK TIMER

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

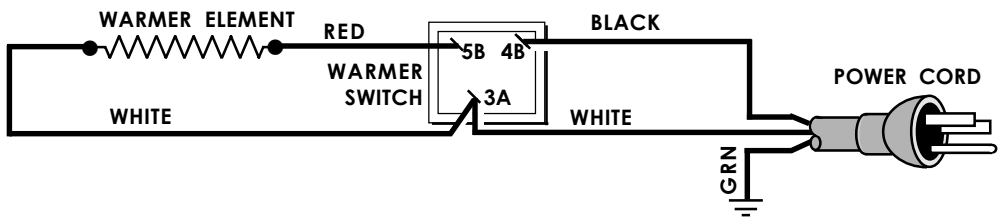
ILLUSTRATED PARTS BREAKDOWN GEM-3, -5, -8



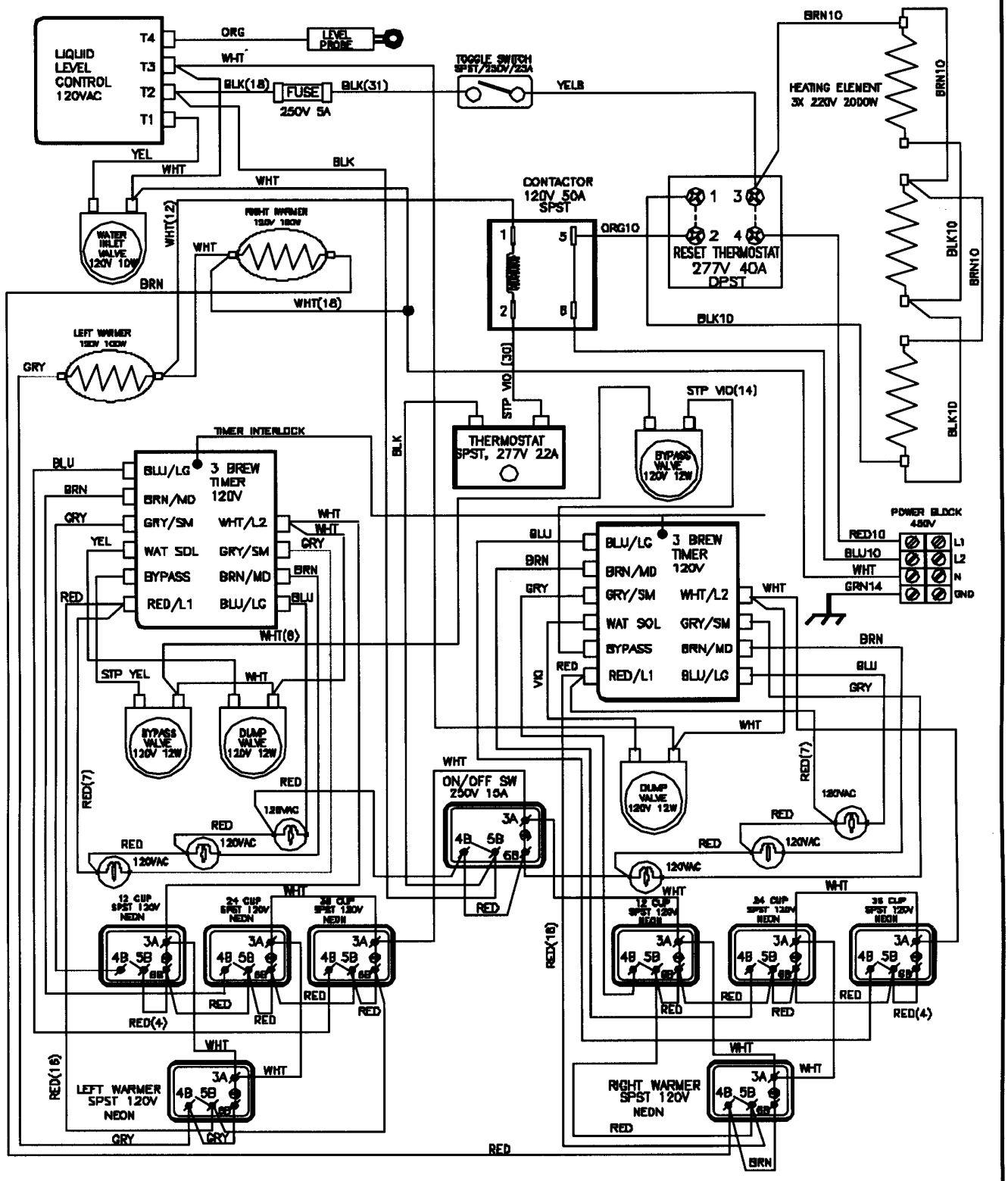
INDEX Nº	PART Nº	DESCRIPTION
1	GEM-5	SATELLITE WARMER STAND,115V . . . . .
2	WC-1201	POWER CORD 6' 18/3 BLK . . . . .
3	WC- 114R	SWITCH, ROCKER 120V RED . . . . .
4	GEM 3	SATELLITE SERVER 1½ GAL . . . . .
5	WC-3307	LID GEMINI SATELLITE . . . . .
5A	WC-5622	LID, SATELLITE PLASTIC GEM3 (OPTIONAL)
6	WC-2102	GAUGE GLASS ASSEMBLY, 8" C . . . . .
7	WC-2010C	SHIELD, 8 INCH GAUGE GLASS . . . . .
8	WC-2025	GAUGE GLASS, 8 INCH . . . . .

INDEX Nº	PART Nº	DESCRIPTION
9	WC-2007	BRACKET, GAUGE GLASS FORMED . . . . .
10	WC-1901	SHANK, FAUCET D&T CHROME . . . . .
11	WC-1800	FAUCET S' NONLOCKING . . . . .
11A	WC-1841	FAUCET, "ESP" BLACK NONLOCKING (OPTNL)
12	WC-3705	KIT FAUCET **S'** SERIES . . . . .
13	GEM 4	SATELLITE STAND . . . . .
14	WC-3503	LEG, SCREW BUMPER 3/8"-16 STD . . . .
15	WC-37102	KIT, WARMER ELEMENT 100W 120VAC . . .

Wiring Diagram Gem -5 & -8 120 Volts, 90 Watts



EDR/ECN	REV.	DESCRIPTION	DATE	DR BY:	CK. BY:	APPR. BY
4801	J	SEE ECN-4801 FOR REVISIONS	3/12/02	SB	SB	
5485	K	SEE ECN-5485 FOR REVISIONS	1/30/03	FM		



4. ( ) DENOTES LENGTH OF WIRE SHOWN AS REFERENCE POINT WIRING CABLE HARNESS.
3. USE SWITCH GUARD P/N: WC-2229 AS REQUIRED BY UL.
2. DO NOT CHANGE NOR SUBSTITUTE WIRE COLORS.
1. ALL WIRES SHALL BE 22 AWG TEFLON PER UL1330.

NOTE: UNLESS OTHERWISE SPECIFIED

REVIEWED: Digitally signed by MANUEL AVILA. DN: cn=MANUEL AVILA, o=MILLER CURTIS, ou=ENGINEERING, c=US. Date: 2006.04.06 14:23:36 -08'00'. Reason: I have reviewed this document

APPROVED: Digitally signed by Yeung T. Date: 2003.03.31 15:29:41 -08'00'. Reason: I have reviewed this document

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. REMOVE ALL BURRS AND SHARP EDGES. TOLERANCES: XX ±.03, XXX ±.010, ANGLES ±1°

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VOLTAGE:	220
WATTAGE:	6300
AMPERAGE:	29
HERTZ:	60
WIRES:	3+GND
PHASE:	1 PHASE

NEW ITEM: FINAL
MODEL NUMBER: SEM-312IL-10 INTERLOCK DUAL BREWER
DRAWN BY: V. WONG DATE: 6/12/01
ENG. BY: DATE:
APPROVED: DATE:

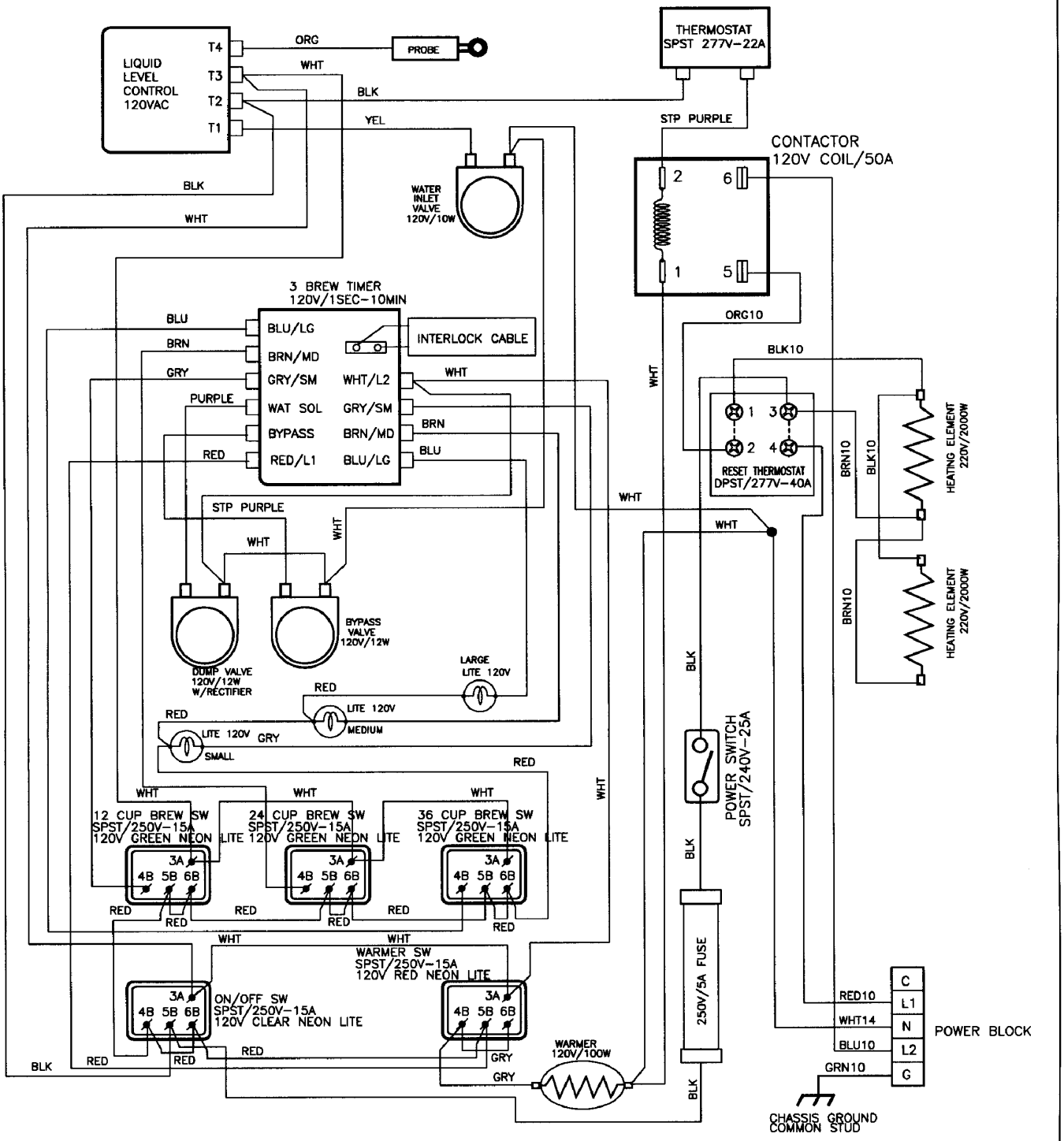
Miller Curtis Company, Inc. Oakland, CA 94601 www.millercurtis.com

TITLE: WIRING DIAGRAM

PART NUMBER: WD-G312IL-10 DRAWING SIZE: A

SCALE: NTS SHEET 1 OF 1 REVISION: K

EDR/ECN	REV.	DESCRIPTION	DATE	DR BY:	CK. BY:	APPR. BY
5476	H	SEE ECN-5476 FOR REVISIONS	1/23/03	HR		



2 DO NOT CHANGE NOR SUBSTITUTE WIRE COLORS.

1 ALL WIRES SHALL BE 18 AWG.

NOTE: UNLESS OTHERWISE SPECIFIED

③ USE THIS DIAGRAM FOR ALL OTHER MODELS WITH ADDED PREFIX LETTERS AND/OR DIFFERENT DASH NUMBER ON THEIR PART NUMBERS HAVING THE SAME ELECTRICAL RATINGS.
Ex.: SCGEM-300IL-10 and/or GEM-300IL-10-01.

VOLTAGE:	220VAC
WATTAGE:	4175W
AMPERAGE:	19A
HERTZ:	60HZ
WIRES:	3W+G
PHASE:	1-PHASE

NEXT ASSY:	FINAL	
MODEL NUMBER:	GEM-300IL-10	
DRAWN BY:	SB	DATE: 12/13/01
CHK. BY:		DATE:
APPR.BY:		DATE:

Wilbur Curtis Company, INC
6913 Acco St.
Montebello, CA 90640
Phone-323-837-230
Fax-323-837-2402
WWW.WILBURCURTIS.COM

TITLE: WIRING DIAGRAM

PART NUMBER: ③WD-G300IL-10

DRAWING SIZE: A

SCALE: NTS

SHEET 1 OF 1

REVISION: H

WARRANTY

We hereby certify that the products manufactured by the Wilbur Curtis Company, Inc., are, to thebest of our knowledge, free from all defects and faulty workmanship.

The following warranties and conditions are applicable:

1. ***1 Year Parts & Labor from Date of Purchase from Factory:*** *This warranty covers all electrical parts, fittings and tubing.*
2. ***40 Months or 40, 000 Pounds of Coffee on a set of Grinding Burrs. (ADS Grinders)***
3. ***3 Years from Date of Purchase:*** *This warranty covers electronic control boards and leaking or pitting of a stainless steel body of a Brewer or Urn.*
4. ***90 Days from Date of Purchase:*** *On replacement parts that have been installed on out of warranty equipment*

All in-warranty service calls must have prior authorization from the manufacturer. For an RMA (Return Merchandise Authorization) number, call the Technical Service Department at 1-800-995-0417. The Wilbur Curtis Company will allow up to 100 miles, round trip, per in-warranty service call.

CONDITIONS & EXCEPTIONS

The warranty covers original equipment at time of purchase only. The Wilbur Curtis Company, Inc., assumes no responsibility for substitute replacement parts installed on Curtis equipment that have not been purchased from the Wilbur Curtis Company. Inc The Wilbur Curtis Company will not accept any responsibility if the following conditions are not met. The warranty does not cover and is void under these circumstances:

1) ***Improper operation of equipment. The equipment must be used for its designed and intended purpose and function.***
2) ***Improper installation of equipment. This equipment must be installed by a professional, certified technician and must comply with all local electrical, mechanical and plumbing codes.***
3) ***Wilbur Curtis Company will not be responsible for the operation of equipment at other than the stated voltages on the serial plate.***
4) ***Abuse or neglect (including failure to periodically clean or remove lime accumulations). Manufacturer is not responsible for variation in equipment operation due to excessive lime or local water conditions.***
5) ***Replacement of items subject to normal use and wear. This shall include, but is not limited to, light bulbs, shear disks, "0" rings, gaskets, canister assemblies. whipper chambers and plates, mixing bowls, agitation assemblies and whipper propellers.***
6) ***Any faults resulting from inadequate water supply. This includes, but is not limited to, excessive or low water pressure, and inadequate or fluctuating water flow rate.***
7) ***All repairs and/or replacements are subject to our decision that the workmanship or parts were faulty and the defects showed up under normal use.***
8) ***All labor shall be performed during regular working hours. Overtime charges are the responsibility of the owner.***
9) ***Charges incurred by delays, waiting time, or operating restrictions that hinder the service technician's ability to perform service is the responsibility of the owner of the equipment. This includes institutional and correctional facilities.***
10) ***All claims under this warranty must be submitted to the Wilbur Curtis Company Technical Service Department before return of the unit to the factory.***
11) ***All equipment returned to us must be repackaged properly in the original carton. No units will be accepted if they are damaged in transit due to improper packaging.***
12) ***Damaged in transit.***
13) ***The resetting of safety thermostats and circuit breakers, programming and temperature adjustments are the responsibility of the equipment owner.***

NO UNITS OR PARTS WILL BE ACCEPTED WITHOUT A RETURN MERCHANDISE AUTHORIZATION (RMA). RMA NUMBER MUST BE MARKED ON THE CARTON OR SHIPPING LABEL.

All in-warranty service calls must be performed by an authorized service center, where service is available. Call the factory for location near you.

WILBUR CURTIS CO., INC.
6913 Acco St., Montebello, CA 90640-5403 USA
Phone: 800/421-6150 ◆ Fax: 323-837-2410
◆ *Technical Support Phone: 800/995-0417 (M-F 5:30A - 4:00P PST)* ◆ *E-Mail: techsupport@wilburcurtis.com*
◆ *Web Site: www.wilburcurtis.com*

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