

## MODELS INCLUDED

- RU-150
- RU-225
- RU-300
- RU-600
- RU-1000



**CAUTION:** Please use this setup procedure before attempting to use this brewer. Failure to follow the instructions can result in injury or the voiding of the warranty.



**WARNING:** DO NOT place this urn closer than six [6] inches from wall. Urn must have adequate cross-ventilation.



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



**WARNING** When you hookup an electric urn, use the proper wire gauge, plus 25%. Never use fuses or breakers larger than needed. The body of the urn must be securely grounded with a separate grounding conductor and never with the neutral conductor of a single phase, 3 wire system. Refer to the wiring diagram included with each urn for wire gauge.



ISO 9001 REGISTERED

WILBUR CURTIS CO.  
Montebello, CA 90640

# WILBUR CURTIS COMPANY, INC.

## RU Series Automatic Urns – Service Manual

### Important Safeguards/Conventions

This appliance is designed for commercial use. Any servicing other than cleaning and maintenance should be performed by an authorized Wilbur Curtis service center.

- To reduce the risk of fire or electric shock, do NOT open side or bottom panel. No user serviceable parts inside. Repair should be performed only by authorized service personnel.
- Keep hands and other items away from hot parts of unit during operation.
- Never clean with scouring powders, bleach or harsh implements.

### Conventions



**WARNINGS** – To help avoid personal injury



**Important Notes/Cautions** – from the factory



**Sanitation Requirements**

**The RU Automatic Urn is Factory Pre-Set and Ready to Go... Right from the Carton.**

### Factory Settings:

- Brew Temperature = 200°F • Brew Volume = Set to requirements of coffee liner

### System Requirements

- Water Source: 20 – 100PSI (Min Flow Rate of 1 GPM) • Electrical: See attached schematic for standard model or visit [www.wilburcurtis.com](http://www.wilburcurtis.com) for your model.

Equipment to be installed to comply with applicable federal, state, or local plumbing/electrical codes having jurisdiction.

## SETUP STEPS

1. Place unit at counter height, on a firm, level base, in such a way that it can be connected to water and power supply.
2. Install the water and coffee faucet.
3. Connect water line to inlet fitting on valve. It is recommended that some type of water mineral reducing filter be used in the water line before entering the unit. Water pressure entering brewer is required to be stable and must provide minimum of 1 gallon per minute. Use water regulator for constant pressure. Required water pressures, 20 to 100 psi. Turn on water valve.
4. If setting up a gas urn, connect gas line with 3/8" O.D. flex tube from urn to gas valve in the facility. Check for leaks.
5. Hook-up power to the unit (refer to schematic for power requirements). If gas or steam, 120V circuit is required.
6. Turn on power switch running to unit. Hot water liner will start filling (you may increase the speed of the filling by using the emergency refill valve). When the water jacket has filled turn on thermostat.
7. Heating tank will require 50 to 60 minutes to attain operating temperature. Thermostat indicator will light at this time.



The National Sanitation Foundation requires the following water connection:

1. A quick disconnect or additional coiled tubing (at least 2x the depth of the unit) so that the machine can be moved for cleaning underneath.
2. In some areas an approved backflow prevention device may be required between the brewer and the water supply.

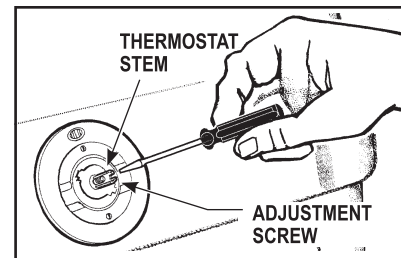
## HEAT SUPPLY

Read the serial plate to determine the energy source of the urn (electric, gas, steam).

### ELECTRIC THERMOSTAT ADJUSTMENT

On electric urns, thermostats are set at the factory to cut off at 200°F. We do not recommend changing this. If necessary, adjustment is as follows:

1. Rotate the thermostat knob to the right to the BOIL position. Remove the knob by pulling off from the stem.
2. Locate the tiny adjustment screw, inside the stem (see figure 1). Using a small screwdriver, adjust the temperature up or down:
  - a. By turning the screw ¼ turn to the left will increase the temperature about 20°F.
  - b. Turning ¼ to the right will decrease the temperature by 20°F.
  - c. To set the thermostat precisely at 200°F, insert a thermometer probe into the water jacket through the steam hole (just under the sprayhead). Turn the screw ½ turn to the left. When the thermometer reaches 200°F, slowly turn the adjustment screw to the right until the pilot light turns off.



## GAS URN INSTALLATION

The urn must be away from wall no less than 6" and must have plenty of cross ventilation.

The water supply connection is the same in all RU models. All that is needed is 1/4" copper tubing with a 1/4" flare nut and some sort of water filter in the line before water enters the unit. Once the water connection is complete, open the water line, then plug in the power cord into an 115V outlet. To facilitate the filling of the water jacket, you can open the emergency refill faucet (red knob) behind the unit, to increase the speed of filling the urn. Water must be above the base of the center gauge glass before turning on the heat.

**IMPORTANT** Be sure to shut off the emergency refill valve after filling to prevent overflow!

## GAS CONNECTION

All RU automatic urns are supplied with a 3/8" pressure connector at the end of the gas valve. This valve is connected to the thermostat. Use 3/8" O.D. stainless steel flex tubing to make the connection from the urn to the gas valve in your facility. When the connections are complete, turn the gas on. Check the line for leaks.

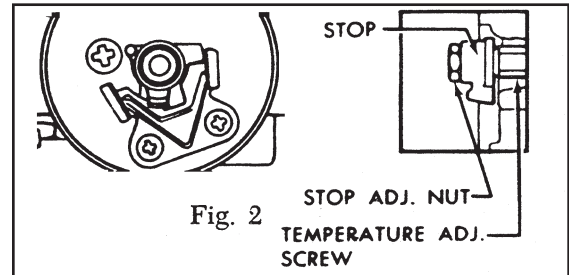
## MAIN BURNER ADJUSTMENT (GAS INPUT)

To adjust the main burner flame, turn the screw under the gas cock handle in either direction to regulate the flow of gas to the main burner.

## TO RE-CALIBRATE THE THERMOSTAT

The Unifrol thermostat is built to the most exacting standards and is a precision instrument which should never need re-calibration. However because of tampering, misuse or other reason, if the thermostat is found to be more than 10° from normal, a re-calibration may be performed by a qualified service technician. The following are the steps for this procedure:

1. Turn the thermostat to OFF to allow the unit to cool down.
2. When the water temperature is room temperature, turn the thermostat dial until the main burner ignites.
3. Slowly, turn the thermostat dial counterclockwise until the flame on the burner goes out.
4. Place a thermometer into the water jacket to determine the temperature of the water.
5. Pull off the thermostat dial and lift off the outside cover.
6. Turn the temperature stop to correspond to the actual water temperature. Mark the location of the stop for reference.
7. Turn the stop slowly until the control snaps off. Holding the stop to prevent rotation, carefully loosen the stop adjustment nut (see figure 2).
8. Taking care not to move the temperature adjusting screw, turn the stop until it lines up with the tick mark (see step 6).
9. Hold the stop in place and tighten the stop adjustment nut.
10. Recheck the OFF temperature.
11. Replace the outside cover and thermostat dial.



## THERMOCOUPLE CONNECTION

Poor contact between the thermocouple lead and the magnet assembly may cause the valve to be inoperative even when the pilot is in proper adjustment and position. If this is the problem, clean and tighten the contact points. Remove the thermocouple and carefully clean the parts that make contact with the magnet assembly.

## PROCEDURE FOR LIGHTING OR RELIGHTING PILOT

1. Turn GAS COCK handle to "OFF" position, and DIAL ASSEMBLY to lowest temperature position.
2. Wait sufficient length of time to allow gas which may have accumulated in burner compartment to escape.
3. Turn GAS COCK handle to "Pilot" position.
4. Fully depress SET button, and light pilot burner (adjust if necessary, refer to "Pilot Burner Adjustment").
5. Allow pilot to burn approximately ½ minute before releasing SET button. If pilot flame does not remain lit, repeat operation allowing longer period before releasing SET button.
6. Turn GAS COCK handle to "ON" position and turn dial assembly to desired position.. The main burner should now ignite.

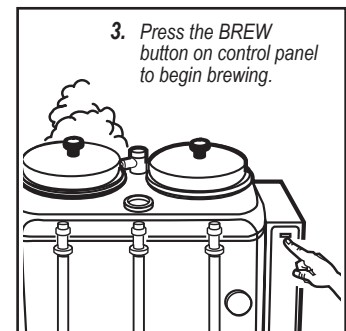
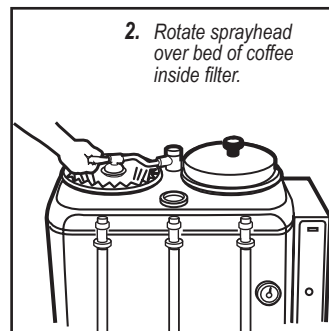
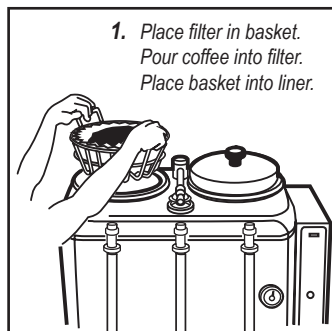
## PROCEDURE FOR ADJUSTING PILOT

1. Remove pilot adjustment cap. Adjust pilot key, allowing flame to completely envelop the end ( 1/8") of the thermocouple.
2. Adjust pilot burner air shutter (if provided) to obtain a soft blue flame.

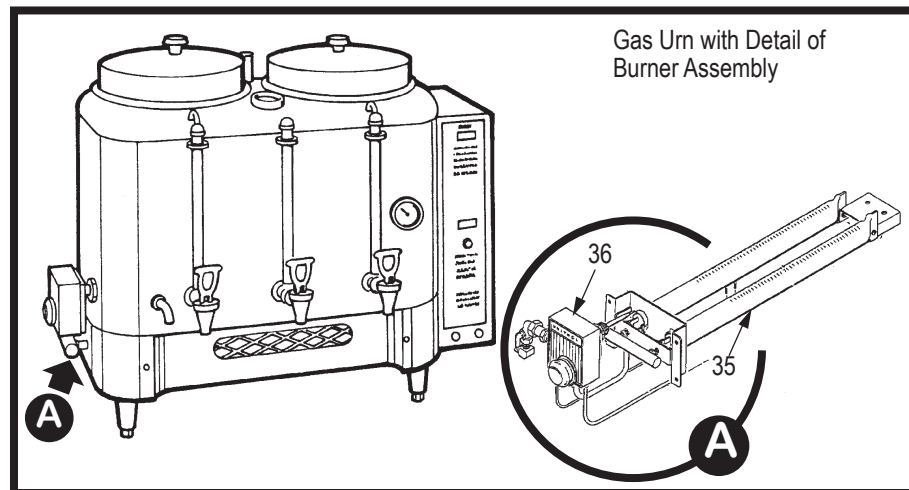
## BREWING INSTRUCTIONS



**WARNING HOT LIQUID,**  
Scalding may occur.  
Avoid splashing.

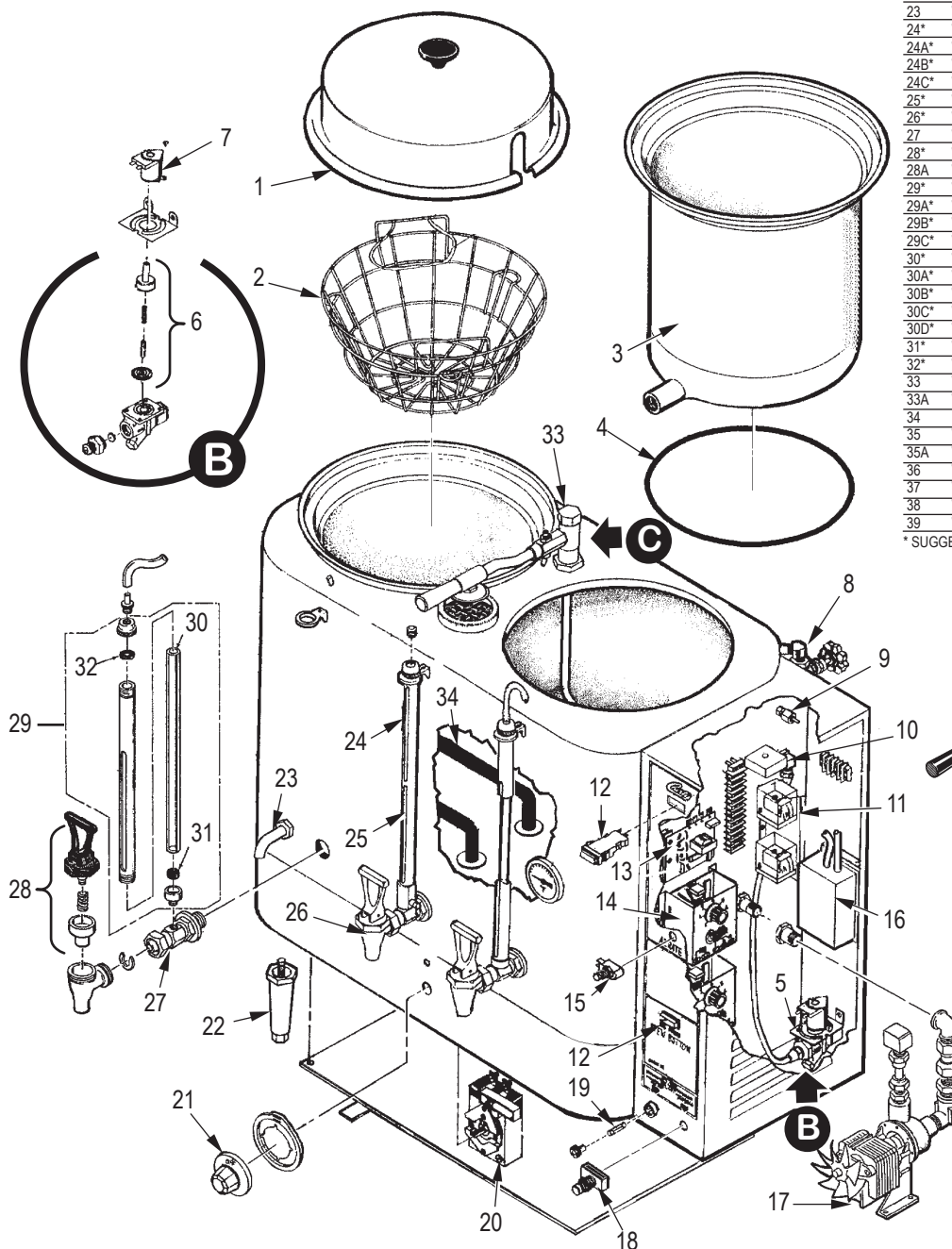


# Illustrated Parts List - RU Automatic Urns

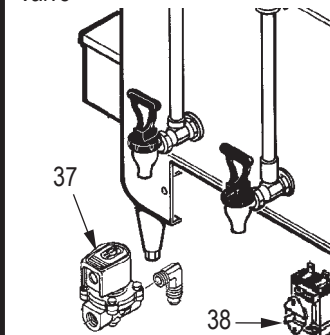


ITEM	PART N°	DESCRIPTION
1	WC-5601	LID ASSY, LINER RU-150, RU-300
1A	WC-5603	LID ASSY, LINER RU-225, RU-600, RU-1000
2	WC-3302	BASKET, WIRE W/FLAPS RU-300
2A	WC-3303	BASKET, WIRE W/FLAPS RU-600
2B	WC-3304	BASKET, WIRE W/FLAPS RU-1000
3	WC-5700	LINER, 3 GALLON RU-150
3A	WC-5702	LINER, 6 GALLON RU-225
3B	WC-5706	LINER, 6 GALLON RU-600
3C	WC-5704	LINER, 3 GALLON RU-300
3D	WC-5708	LINER, 10 GALLON RU-1000
4*	WC-4303	O' RING LINER ALL RUs
5*	WC-890	VALVE, INLET 1.09 GPM 120V 10W
6*	WC-3700	KIT, INLET VALVE REPAIR
7	WC-409	COIL, 120V S45 VALVE
8*	WC-806	VALVE 1/2" EMERGENCY REFILL
9*	WC-5502-01	PROBE ASSY, WATER LEVEL W/HEX, O'RING & NUT
10*	WC-405R	TIMER, AGITATION 120V 50/60HZ W/WIRES
11*	WC-402	RELAY, HOLDING 120V COIL 10A (RU-150-600)
11A	WC-403	RELAY, 120V 3 POLE 6.6A RES @ 240V (RU-1000)
12*	WC-3737	KIT, SWITCH/INDICATOR LIGHT 120V
13*	WC-608	LEVEL CONTROL, WATER 120V
14*	WC-600	TIMER, BREW 8 MINUTE
15*	WC-101	SWITCH, ON/OFF NON-LIT SPST MOMENTARY 3/16A
16*	WC-1002	PUMP, AGITATION 120V
17*	WC-1037	WATER PUMP W/FITTINGS 120VAC
18*	WC-100	SWITCH, RESET/STOP NC NON-LIT S.P. MOMENT
19*	WC-1500	FUSE, 5 AMP 5/PKG
20*	WC-501	THERMOSTAT, DPST CAPILLARY 277V 30A, 1 PH
21	WC-3217	KNOB, THERMOSTAT
22	WC-3500	LEG, 4" ADJUSTABLE 3/8-16 THRD
23	WC-2913	SPOUT, OVERFLOW
24*	WC-2104	GAUGE GLASS ASSY, 10" WATER RU-150
24A*	WC-2105	GAUGE GLASS ASSY, 11" WATER RU-300
24B*	WC-2108	GAUGE GLASS ASSY, 13" WATER RU-225/600
24C*	WC-2113	GAUGE GLASS ASSY, 19" WATER RU-1000
25*	WC-2030	GLASS GAUGE, 13" WATER
26*	WC-1800L	FAUCET, SC SERIES LOCKING 1-1/32-4 UNS
27	WC-1901	SHANK, FAUCET D & T CHROME
28*	WC-3705	KIT, FAUCET S SERIES NON-LOCK USE ON WC-1800
28A	WC-3705L	KIT, FAUCET S SERIES LOCKING
29*	WC-2105	GAUGE GLASS ASSY, 11" COFFEE RU-150
29A*	WC-2107	GAUGE GLASS ASSY, 12" COFFEE RU-300
29B*	WC-2109	GAUGE GLASS ASSY, 14" COFFEE RU-225 & RU-600
29C*	WC-2114	GAUGE GLASS ASSY, 20" COFFEE RU-1000
30*	WC-2027	GLASS GAUGE, 10"
30A*	WC-2028	GLASS GAUGE, 11" COFFEE RU-150
30B*	WC-2029	GLASS GAUGE, 12" COFFEE RU-300
30C*	WC-2031	GLASS GAUGE, 14" COFFEE RU-225 & RU-600
30D*	WC-2037	GLASS GAUGE, 20" COFFEE RU-1000
31*	WC-2006	WASHER, .062 ID X .188 TH BOTTOM GAUGE GLASS
32*	WC-2005	WASHER, 1/8" SHIELD CAP
33	WC-2908	SPRAYARM ASSY, RU-150 & RU-300
33A	WC-2909	SPRAYARM ASSY, RU-225, RU-600 & RU-1000
34		HEATING ELEMENT - SEE ELECTRICAL DATA, P4
35	WC-1109N	GAS BURNER ASSY, 23" TWIN URNS NATURAL GAS
35A	WC-1110N	GAS BURNER ASSY, 16" SINGLE URNS NATURAL GAS
36	WC-8875	KIT, CONTROL GAS URN
37	WC-513	VALVE, STEAM 120V, 60Hz
38	WC-512	THERMOSTAT, ELECT STEAM URN/LOW TEMP UNITS
39	WC-3760	KIT, VALVE CORE RPLC W/O O'RING

\* SUGGESTED PARTS



## Steam Urn with Thermostat and Valve



# ELECTRICAL DATA

MODEL	VOLTS	PHASE	WIRES	WATTS	AMPS	ELEMENTS	
RU-150 -12	220	1	3W + GND	5 KW	23	1 - WC-913 -01	220V, 5 KW
RU-150 -20	208/220	3	3W OR 4W + GND	5.25 KW	15	1 - WC-907 -01	220V, 1.75 KW
						1 - WC-907 -02	220V, 1.75 KW
						1 - WC-907 -03	220V, 1.75 KW
RU-225 -12	220	1	3W + GND	7 KW	32	1 - WC-911 -01	220V, 3.5 KW
						1 - WC-911 -02	220V, 3.5 KW
RU-225 -20	208/220	3	3W OR 4W + GND	7.5 KW	21	1 - WC-908 -01	220V, 2.5 KW
						1 - WC-908 -02	220V, 2.5 KW
						1 - WC-908 -03	220V, 2.5 KW
RU-300 -12	220	1	3W + GND	6 KW	27	1 - WC-910	220V, 3 KW
RU-300 -28	220	1	3W + GND	8 KW	36	2 - WC-912	220V, 4 KW EA.
RU-300 -20	208/220	3	3W OR 4W + GND	7.5 KW	21	3 - WC-908	220V, 2.5 KW EA.
RU-600 -12	220	1	3W + GND	10 KW	46	2 - WC-913	220V, 5 KW EA.
RU-600 -28	208/220	1	3W + GND	8 KW	38	2 - WC-912	220V, 4 KW EA.
RU-600 -20	208/220	3	3W OR 4W + GND	10.5 KW	29	3 - WC-911	220V, 3.5 KW EA.
RU-1000 -12	220	1	3W + GND	10 KW	46	2 - WC-913	220V, 5 KW EA.
RU-1000 -20	208/220	3	3W OR 4W + GND	10.5 KW	29	3 - WC-911	220V, 5 KW EA.

## WARRANTY

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

The following warranties and conditions are applicable:

- **90 Days for Labor and 1 Year Parts from Date of Purchase from Factory:** This warranty covers all electrical parts, fittings and tubing.
- **40 Months or 40,000 Pounds of Coffee on a set of Grinding Burrs. (ADS Grinders)**
- **2 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.
- **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, "O" 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)

♦ Web Site: [www.wilburcurtis.com](http://www.wilburcurtis.com)

♦ E-Mail: [techsupport@wilburcurtis.com](mailto:techsupport@wilburcurtis.com)

**FOR THE LATEST SPECIFICATION INFORMATION GO TO [WWW.WILBURCURTIS.COM](http://WWW.WILBURCURTIS.COM)**