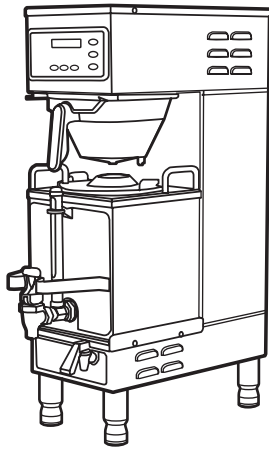




WILBUR CURTIS COMPANY, INC.

Service Manual – GEMSS



Models
■ GEMSS



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.



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



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



ISO 9001:2008

Wilbur Curtis Company
Montebello, CA 90640
Tel: (323) 837-2300
www.wilburcurtis.com

Important Safeguards

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

- DO NOT immerse the unit in water or any other liquid
- To reduce the risk of fire or electric shock, DO NOT open service panels. No user serviceable parts inside.
- Keep hands and other items away from hot surfaces of unit during operation.
- Never clean with scouring powders, bleach or harsh chemicals.

Symbols



WARNINGS – To help avoid personal injury



Important Notes/Cautions – from the factory



Sanitation Requirements

Your Curtis Gemini is Factory Pre-Set and Ready to Go... Right from the Box.

Following are the Factory Settings for your GEMSS Coffee Brewing System:

- Brew Temperature = 200°F
- Water Bypass = On LARGE & MEDIUM brew only
- Brew Volume = Large set to vessel requirements.
- Energy Save Mode = Off

System Requirements:

- Water Source 20 – 90 PSI (Minimum Flow Rate of 1 GPM)
- Electrical: See attached schematic for standard model or visit www.wilburcurtis.com for your model.

Setup Steps

The unit should be located on a solid counter top and leveled (left to right and front to back). Connect a water line from the water filter to the brewer.

NOTE: A water filtration system must be installed to maintain a trouble-free operation. (In areas with extremely hard water, we suggest that a sedimentary and taste & odor filter be installed.) This will prolong the life of your brewing system and enhance coffee quality.



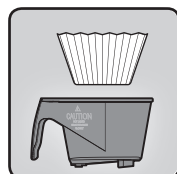
NSF International requires the following water connection:

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 the unit.
2. This equipment is to be installed with adequate back flow protection to comply with applicable federal, state and local codes.
3. Water pipe connections and fixtures directly connected to a potable water supply shall be sized, installed and maintained in accordance with federal, state, and local codes.

1. A 3/8" Flare x 3/8" Male pipe elbow is supplied with the brewer for water line connection. Use tubing sized sufficiently to provide a minimum of 1.0 GPM.
2. Connect the unit to an appropriate electrical power circuit.
3. Turn on the toggle (STANDBY/ON) switch behind the unit. The heating tank will start to fill. When the water level in the tank rises to the correct volume, the heating elements will energize automatically.
4. The heating tank will require 20 to 30 minutes to reach operating temperature (200°F), indicated when READY TO BREW is displayed on the LCD screen.
5. Prior to brewing, dispense 12 ounces of hot water through the hot water faucet.
6. Brew a cycle of at least 12 ounces, to purge the water lines of any air that may be trapped after filling.

Brewing Instructions

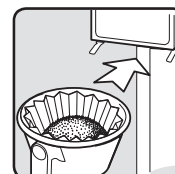
1. Brewer should be ON (Confirm at rear toggle switch, then press the ON/OFF button). Ready-to-Brew should be on the display. If the brewer is connected to an InterLock grinder, the grinder should be on. When Interlock connection is made, grind coffee at this time.
2. Place an empty Satellite under the brewcone and press the warmer switch to pre-heat the Satellite.



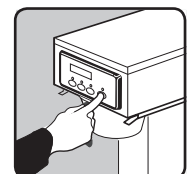
3. Place a clean filter into the brewcone.



4. Fill brewcone with proper amount of ground coffee.



5. Transfer filled brew cone to brewer.



6. Press Brew button. Brewing will begin immediately.



WARNING: TO AVOID SCALDING, Do not remove brewcone while brew light is flashing.

Quick Start

GEM SS

Your Curtis Brewing System is Factory Pre-Set for Optimum Performance.

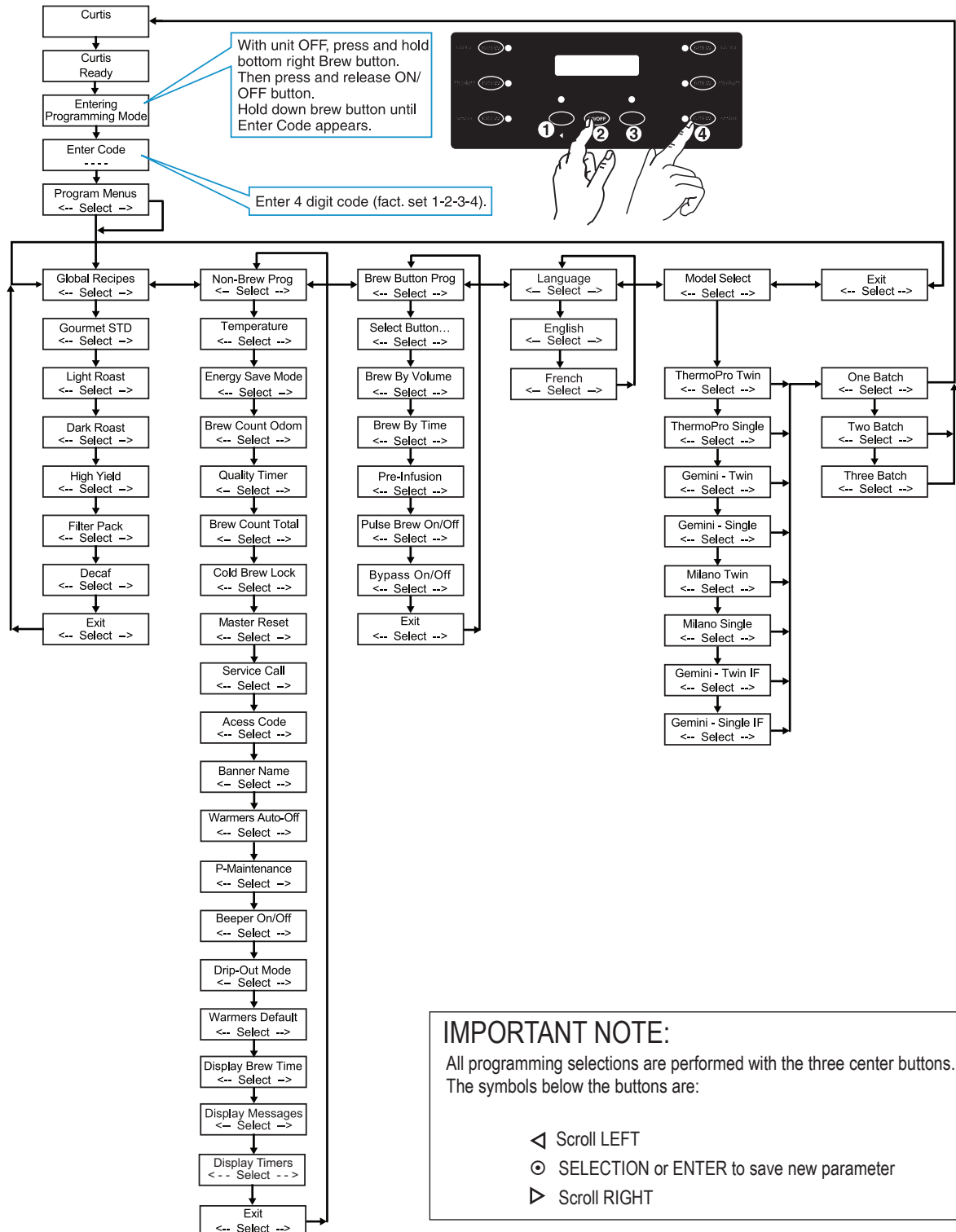
After connection to water and power; the rear toggle switch must be on. You will hear a beep sound, indicating power is available to the controller.

The control displays **CURTIS**. Press ON/OFF button and the screen will display **<GEMINI TWIN> WILBUR CURTIS**. After three seconds, **CURTIS FILLING** is displayed.

Water will fill the tank (approximately 2-3 minutes depending on water flow rate). When the proper level is reached **CURTIS HEATING** will appear on the screen. It takes approximately 20 minutes to reach setpoint temperature of 200°F.

Control will display **CURTIS READY TO BREW** when temperature reaches the setpoint (200°F). Unit is now ready to brew.

Program Menu Tree



Program Menus GEMSS Brewer

Program Menus

From **Program Menus** press > display will show the next feature Global Recipes.

GLOBAL RECIPES

Global Recipes (Factory set to Gourmet STD)

Global Recipes

Press \odot to select. If selected, press < or > to choose a recipe based on the type of coffee being brewed. Selections are Gourmet STD, Light Roast, Dark Roast, High Yield, Filter Pack, or Decaf. Press \odot to select the desired recipe.

NON-BREW PROGRAMMING

Temperature (Factory set to 200°F)

Temperature

Press \odot to Select. Press < or > to move to desired temperature and then \odot to set. Temperature is programmable from 170°F to 206°F in 2-degree increments.

Energy Save Mode (Factory set to OFF)

Energy Save Mode

Press \odot to Select, < or > ON, OFF or ON 140°F, \odot to set. When in ON, unit will automatically shut off 4 hours from last brew. When feature is OFF, unit does not utilize the energy saving mode. In the ON 140°F position, temperature lowers to 140°F, if unit has not brewed in 4 hours. This feature will save energy by maintaining a lower temperature in the tank in periods of non-operation.

Brew Count Odom

Brew Count Odom

Press \odot to display total brew cycles. Press EX or Reset.

Quality Timer (Factory set to 120 Minutes)

Quality Timer

Press \odot to select, press < or > to choose desired setting. Range 20 min. to 240 min. The timer is intended to notify the user when the coffee loses its freshness. The indicator light (LED) on the satellite will remain solid until the Quality Timer expires (Factory Set to 120 minutes). At expiration the LED will flash and remain flashing at the factory setting for an additional 8 hours. The additional 8 hours is controlled by the Warmer Auto-Off setting.

NOTE: LED solid means fresh coffee. LED flashing means freshness expired. LED off means warmer off.

Brew Count Total

Brew Count Total

Press \odot to Select, Shows total gallons and total brew cycles on the unit. Cannot be reset.

Cold Brew Lock . . . (Factory set to 5°)

Cold Brew Lock

Press \odot to select, < or > to select desired setting (CBL 5, 15 or OFF), \odot to set.

The Cold Brew Lock feature allows the brewer to brew at three different temperature levels from the actual set point. The first setting is within 5 degrees of set point, next is within 15 degrees of set point, OFF is within 30 degrees of set point for the Ready to Brew message, however, it will brew at any temperature.

Master Reset

Master Reset

Press \odot to display Are You Sure?

Then < for Yes, > for No. Brewer factory defaults are then reset.

Service Call (Phone number Factory set to 1-800-000-0000 X0000)

Service Call

Press \odot to display number and change number or < to move place and EX to exit when complete. This number will be displayed during a Heating system SENSOR ERROR or during a WATER ERROR.

Access Code (Factory set to 1-2-3-4)

Access Code

Press \odot to display number and change number, (the number can be changed 1 to 4) or < to move place and EX to exit when complete.

Banner Name (Factory set to CURTIS)

Banner Name

Press \odot to display letters and change letters or < to move place and EX to exit when complete

This feature allows up to 14 letters to be programmed for company name or regional name. Programming all blanks disables Banner Name. If programmed, Banner Name is displayed every 5 sec. on and off.

Warmers Auto – Off (Factory set to 10 Hrs.)

Warmers Auto-Off

Press \odot to select < or > to adjust from 1-12 hours. This feature has higher priority than the Quality Timer. It shuts off the warmers after a pre-determined time factory set at 10 hours starting when the Brew Button is pushed. The Quality Timer does not affect this function.

Program Menus GEMSS Brewer

P-Maintenance

P-Maintenance (Factory set to OFF)

Press **⊙** to Select, Set gallons brewed to indicate P-Maintenance. Press < or > to adjust from Off to 9500 gallons. This feature advances in 100 gallon increments. Press **⊙** to exit.

Beeper On/Off

Beeper On/Off (Factory set to ON)

Press **⊙** to display ON or OFF. Pressing either < or > toggles between on and off. **⊙** to set. When ON, this feature allows you to hear a short beep each time a button is pressed.

Drip-out Mode

Drip-out Mode (Factory set to 2 minutes)

Press **⊙** to Select. Press < or > to move to desired time. Settings are OFF, 1, 2, 3, 4 and 5 minutes. Press **⊙** to Select time.

Warmers Default

Warmers Default (Factory setting - MED)

Press **⊙** to Select. Press < or > to adjust from OFF, HIGH (185°F), MED (182°F) or LOW (178°F). These temperatures are $\pm 3^\circ\text{F}$.

Displ. Brew Time

Displ. Brew Time (Factory set to ON)

Press **⊙** to display ON or OFF. Pressing either < or > toggles between on and off. After Display Brew Time an EXIT screen will return you to Non-Brew Prog.

Display Messages

Display Messages (Factory set to On)

Display Messages allows the operator to change the screen display to read "Rinse Server Before Brewing" or to turn it off. Press **⊙** to display ON or OFF. Pressing either < or > toggles between on and off. **⊙** to set.

Display Timers

Display Timers (Factory set to OFF)

Press **⊙** to display ON or OFF. Pressing either < or > toggles between on and off. This feature allows the operator to turn off or on the display for the Quality Timer count-down. At the same time, it also turns off or on the audible alarm. Press **⊙** to set and exit.

BREW BUTTON PROGRAMMING

Brew By Volume

Brew by Volume (Factory settings: LARGE 200oz $\pm 8\text{oz}$. MEDIUM 132oz $\pm 4\text{oz}$. SMALL 64oz $\pm 4\text{oz}$.)

Press **⊙** to Select. Display will ask you to select a brew button, Large, Medium or Small. Press the desired brew button to begin... when desired volume is reached press the same brew button to stop the flow. Now the volume has been set.

Brew By Time

Brew by Time (Factory settings: LARGE 5min-25sec. MEDIUM 3min-32sec. SMALL 1min-52sec.)

Next item in the sequence is Brew by Time. Press **⊙** to Select to change the brew time. Display will now show the current time. By pressing < or > you can toggle back and forth from minutes to seconds to exit (ex). Change the time or set and exit by pressing the **⊙** button.

Pre-infusion

Pre-Infusion (Factory Disabled)

Press **⊙** to Select. Current setting in seconds is displayed < to decrease or select > to increase (range from OFF to 10 through 60 seconds), **⊙** to set.

If Pre-infusion is selected (ON), Cold Brew Lock is set within 5°F of set point and Cold Brew Lock disappears from the list of program selections. When Pre-infusion is ON, Pulse Brew disappears from the list of program selections.

Pulse Brew

Pulse Brew (Factory setting C)

Press **⊙** to select, < or > to select OFF or one of five pulse patterns (A to E). The five Pulse Brew options help "tune" or change the coffee flavor.

Guidelines for Pulse Brew:

Filter Pack type coffees typically extract better with the **A** and **B** pulse setting.

Decaf coffees typically extract better with the **B** pulse setting.

High-Yield coffees typically extract better with the **C** pulse setting. Of course, any of the **A**, **B** or **C** settings may be used to suit your taste profile.

Settings **D** and **E** are manual pulse counts.

To exit from the Pulse Brew mode, select **0** for the time.

If Pulse Brew is on, Cold Brew Lock is set within 5°F of set point and Cold Brew Lock disappears from the list of program selections. When Pulse Brew is on, Pre-infusion disappears from the list of program selections.

Program Menus GEMSS Brewer

By-Pass

By-Pass (Factory settings: LARGE 35%. MEDIUM 10%. SMALL Off.)

The By-Pass option helps with controlling extraction with larger brews. Contact time that is too long will extract undesirable bitter, harsh flavor compounds. By-passing some of the brew water around the coffee bed will balance the extraction. Press **⊙** to display current setting. Press < or > to change settings; OFF, 5% to 50%, in 5% increments. Press **⊙** to set.

Language

Language (Factory set to English)

Press **⊙** to Select. Press < or > to move to English or French. This feature is programmable for changing and adding languages.

Model Select

Model Select (Factory set to Gemini-Twin IF)

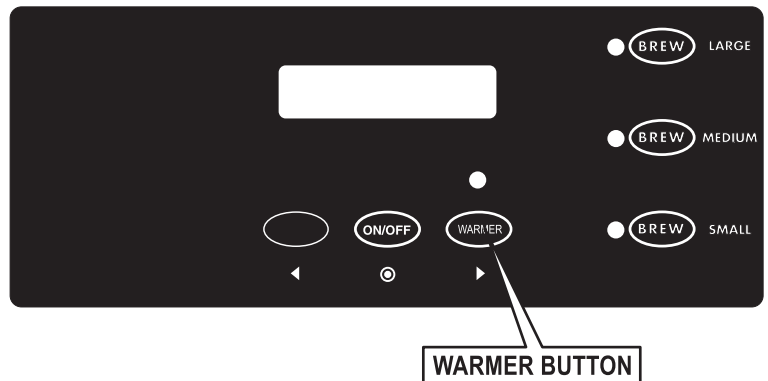
Press **⊙** to select, < or > to select model. The selections are: ThermoPro-Twin, ThermoPro-Single, Gemini-Twin, Gemini-Single, Milano-Twin, Milano-Single, Gemini-Twin IF, and Gemini-Single IF. Press **⊙** to set. When the Model Select feature is changed, all settings are reset to the defaults of the newly selected model. Also, the next feature Batch Select appears.

Batch Select (Factory set to One Batch)

Press **⊙** to select, < or > to select One Batch, Two Batch or Three Batch. Press **⊙** to set. Display exits programming mode and returns to normal operation.

Warmers

The warmer plate, on the deck below the brew cone, will turn on automatically whenever a coffee brew cycle is started. The warmers may be switched on and off using the WARMER buttons on the control panel.



Error Message

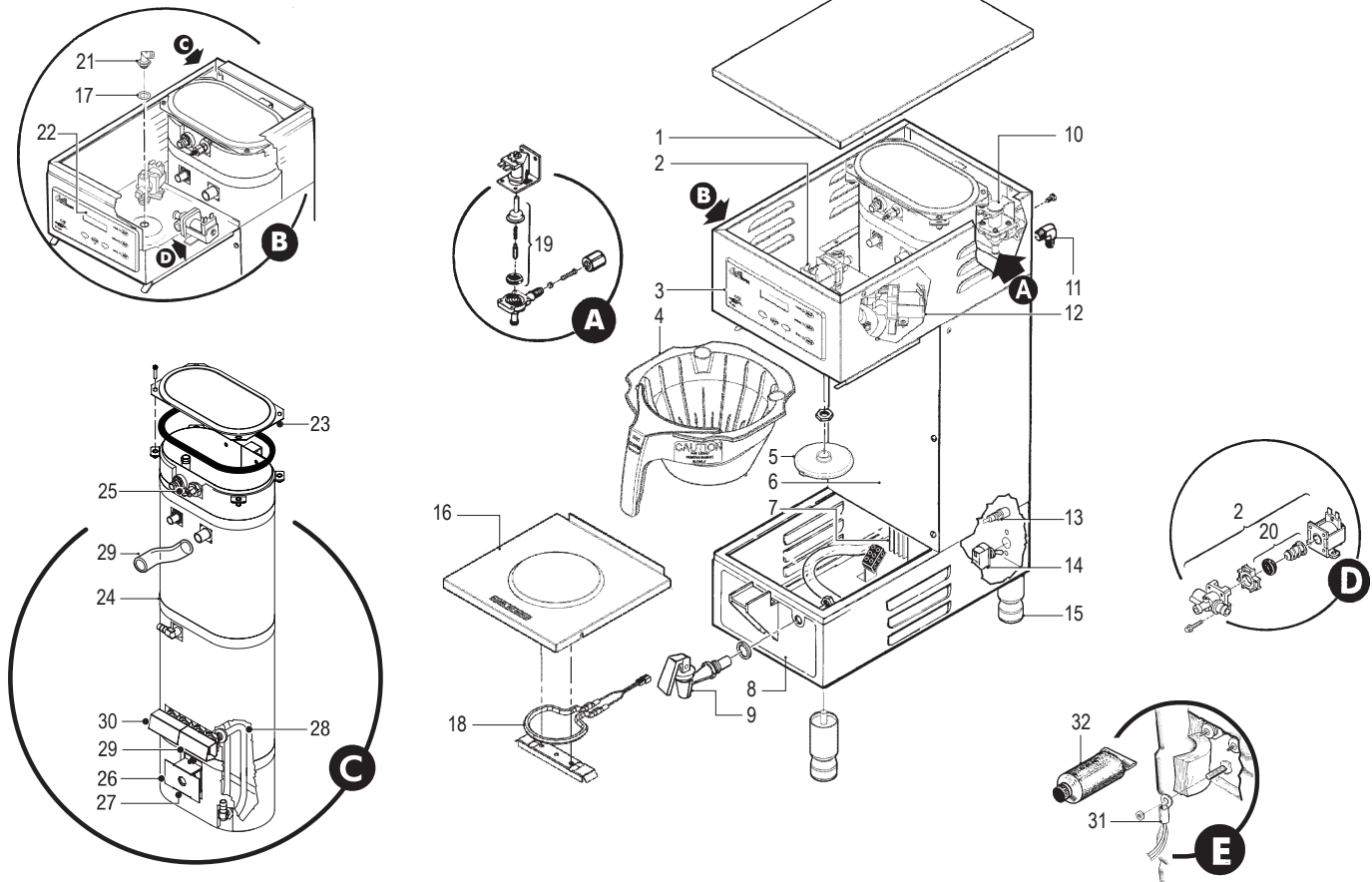
An error message will appear on the screen in the event of a malfunction under the following conditions:

1. Water Level Overflow.
2. Break in Temperature Control Circuit
3. Excess Temperature in Heating Tank

To turn off an error message, press the **⊙** button for five seconds.

ERROR CODES		
ERROR MESSAGE	DESCRIPTION	CAUSE
Water Level Error 1-(800)-000-0000	Fill run error / Overflow	The fill solenoid has either run for more than 10 minutes on the initial tank fill or 2.0 minutes in normal operation
Sensor Error 1-(800)-000-0000	Open Probe	Break in the temperature thermistor circuit.
Over Temp. Error 1-(800)-000-0000	Excess Temperature	The sensor is reading that temperature in the heating tank has risen above 210°F.
Scale Warning	Scale Starting to Build Up on Water Level Probe	Water level probe resistance above warning threshold (test value 80kOhm)
Scale Error 1-(800)-000-0000	Scale Build up on Water Level Probe	Water level probe resistance above error threshold (test value 180kOhm)

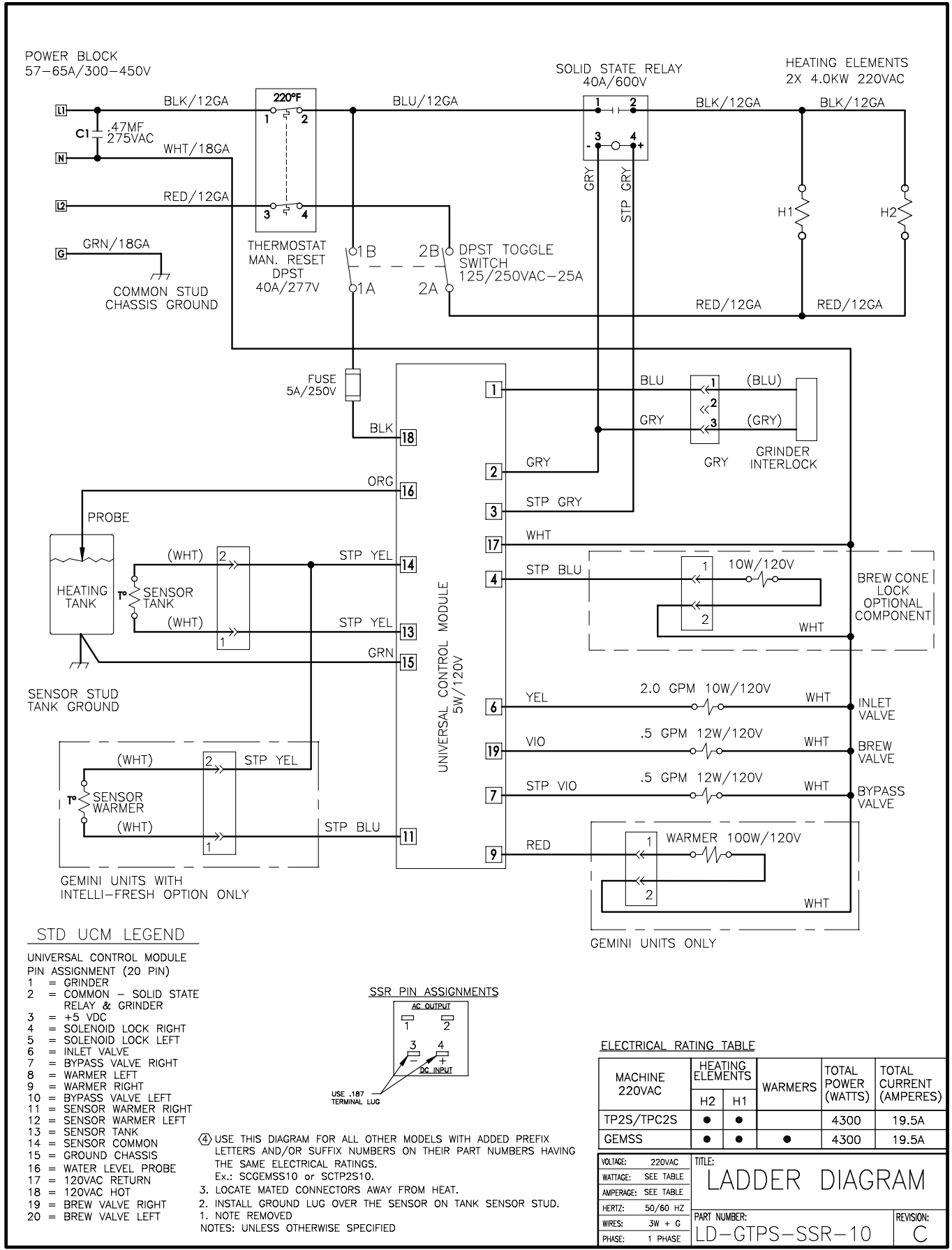
Illustrated Parts List – GEMSS



ITEM №	PART №	DESCRIPTION	ITEM №	PART №	DESCRIPTION
1	WC-58117	COVER, TOP	16	WC-5451	WARMER DECK - NO HTG ELMTS
1A	WC-5450	COVER, TOP (OLDER UNITS)	17	WC-43089	GASKET, 1.00 OD x .625 ID X .03 THK
2	WC-37122*	KIT, DUMP VALVE RIGHT	18	WC-37102*	WARMER ELEMENT
3	WC-39436	LABEL, CONTROL PANEL 3 BATCH	19	WC-3765L*	KIT, VALVE REPAIR
3A	WC-39432	LABEL, CONTROL PANEL 1 BATCH	20	WC-37132*	KIT, VALVE REPAIR
3B	WC-39434	LABEL, CONTROL PANEL 2 BATCH	21	WC-2977-101K	KIT, SPRAYHEAD FITTING
4	WC-3417	BREW CONE, ASSY W/SPLASH POCKET	22	WC-37176*	KIT, UCM & LABEL INSTRUCTIONS
5	WC-29050*	SPRAYHEAD, AFS-AMBER	23	WC-5853-102	COVER, TOP HEATING TANK GEN USE
6	WC-61396	COVER, FRONT GEMSS TALL	24	WC-62035	TANK, COMPLETE GEMSS W/ULTEM
6A	WC-5452	COVER, FRONT (5/2010 AND EARLIER)	24A	WC-62034	TANK, COMPLETE GEMSS DV ULTEM
7	WC-8559 *	RELAY, SOLID ST W/INTGRD HT SNK	25	WC-5502-01*	KIT, LIQUID LEVEL PROBE
8	WC-39448	LABEL, BOTTOM WRAP GEMSS	26	WC- 522*	THERMOSTAT, RESET
9	WC-1809 *	FAUCET, HOT WATER	27	WC-43055	SHOCK GUARD, RESET THERMOSTAT
10	WC- 847 *	VALVE, INLET 2GPM 120V 10W	28	WC- 906-04*	HEATING ELEMENT, 2000W 220V
11	WC-2402P	ELBOW, 3/8NPT x 3/8FLARE PIPE PLTD	28A	WC- 904-04	ELEMENT, HEATING 1.6KW 120V
12	WC-37130*	KIT, VALVE BYPASS	29	WC-5350	TUBE, 1/2" ID x 1/8W SILICONE
13	WC-1501	FUSE HOLDER ASSY W/5A FUSE	30	WC-43801	SHOCK GUARD, HEATING ELEMENTS
14	WC- 103 *	SWITCH, TOGGLE NON-LIT DPST 25A	31	WC-1438-101*	SENSOR, TEMP HEATING TANK
15	WC-3528	LEG, 4" ADJUST 3/8-16 THREAD	32	WC-5231 *	COMPOUND, SILICONE 3/4 OZ TUBE

* Recommended parts to stock.

Electrical Schematic – GEM SS

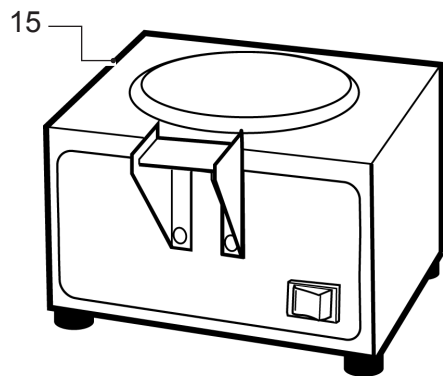
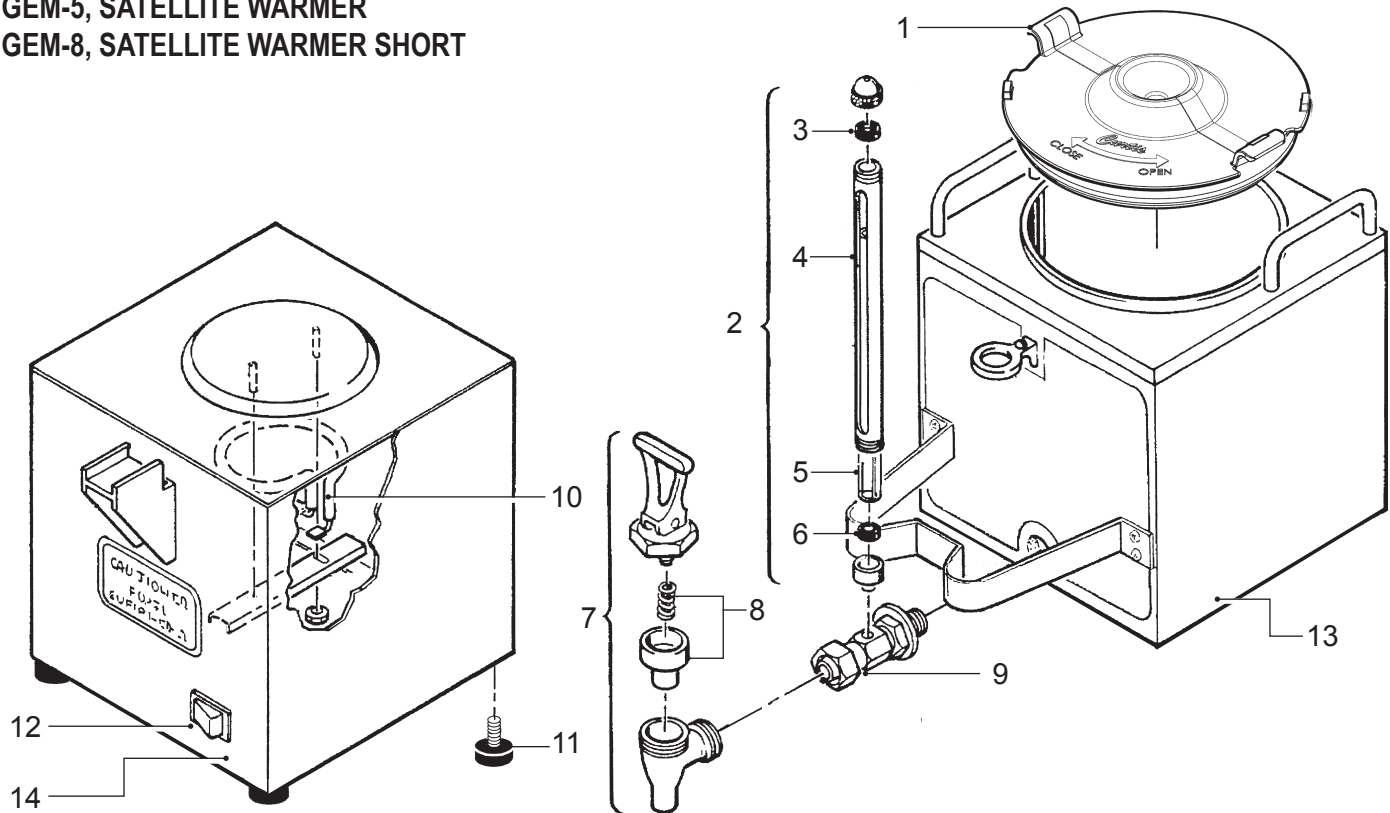


Illustrated Parts List

GEM-3, SATELLITE COFFEE SERVER

GEM-5, SATELLITE WARMER

GEM-8, SATELLITE WARMER SHORT



ITEM №	PART №	DESCRIPTION
1	WC-5622	LID, SATELLITE PLASTIC GEM3
1A	WC-3307	LID, SATELLITE STAINLESS (OLDER UNITS)
2	WC-2102	GAUGE GLASS ASSEMBLY 8"
3	WC-2005*	WASHER, SHIELD CAP 1/8"
4	WC-2010C	SHIELD, 8 INCH GAUGE GLASS
5	WC-2025*	GAUGE GLASS, 8 INCH
6	WC-2006*	WASHER, SHIELD BASE 3/16"
7	WC-1800	FAUCET, S' NON LOCKING
8	WC-3705*	KIT, FAUCET S' SERIES
9	WC-1901A	SHANK, FAUCET W/SHIELD BASE
10	WC-37102	KIT, WARMER ELEMENT 100W 120V
11	WC-3503	LEG, SCREW BUMPER 3/8"- 16 STD
12	WC- 114R	SWITCH, ROCKER (RED) 120V NEON SPST 15A 250V
13	GEM-3	SATELLITE SERVER 1/2 GALLON
14	GEM-5	SATELLITE WARMER STAND 120V 100W 1A 1PH 2W+G
15	GEM-8	SATELLITE WARMER STAND, SHORT 120V 100W

* Recommended parts to stock.

Cleaning the Coffee Brewer

Regular cleaning and preventive maintenance is essential in keeping your coffee brewer looking and working like new.



CAUTION – Do not use cleansers, bleach liquids, powders or any other substance containing chlorine. These products promote corrosion and will pit the stainless steel. USE OF THESE PRODUCTS WILL VOID THE WARRANTY.

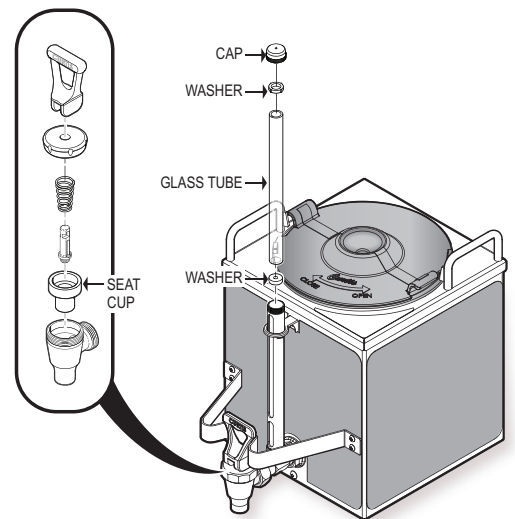
1. Wipe exterior surfaces with a moist cloth, removing spills and debris.
2. Slide the brewcone out and clean it. Clean the sprayhead area with a moist clean cloth.
3. Rinse and dry the brewcone.
4. Drain drip tray of coffee. Wash out the drip tray. Dry the tray.
5. Rub a stainless steel polish on the outside surfaces to protect the brewer.

Cleaning the Satellite Server

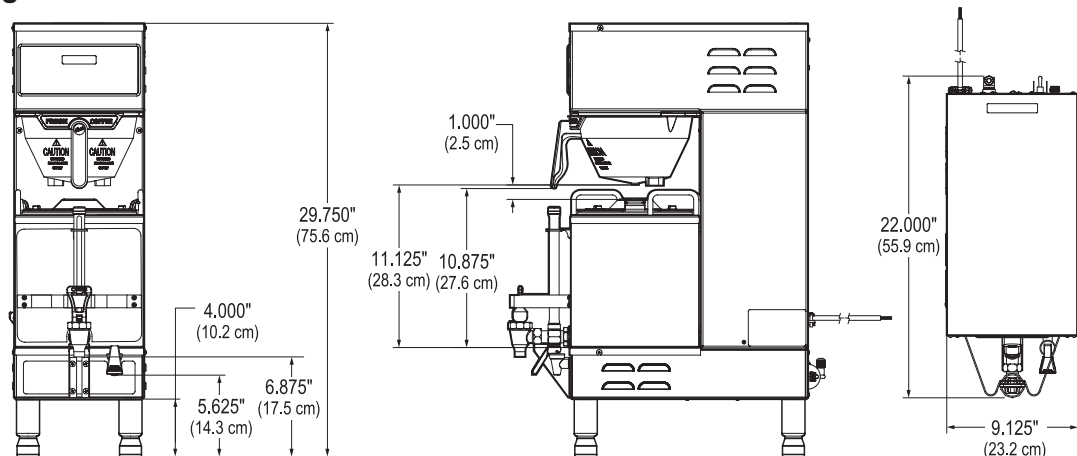
To clean the Satellite components, prepare a mild solution of detergent and warm water.

DO NOT immerse the Satellite in water or any other liquid.

1. Remove lid from Satellite. Clean the lid at the funnel area with a spiral brush and detergent solution.
2. Rinse the lid, removing all traces of cleaning solution.
3. Clean inside of the Satellite. Remove coffee residue with the detergent solution.
4. Thoroughly rinse out the Satellite with clean warm water.
5. Unscrew the handle/bonnet assembly and remove it from the dispensing faucet.
6. Inspect the silicone seat cup for wear, cracks, or hardening. If okay, then leave the seat cup attached on the handle/bonnet assembly. Soak then wipe clean. Replace the seat cup if damaged.
7. Remove the gauge glass tube by unscrewing the gauge glass cap.
8. Clean the gauge glass tube with a gauge brush soaked with detergent solution. Soak and wipe the two washers. Rinse with clean water. Dry the parts and assemble them onto the Satellite. Hand tighten the cap.
9. Clean all parts. Thoroughly rinse with clean warm water.
10. Dry and assemble the parts. Hand-tighten when the assembling.



Rough-In Drawing



Product Warranty Information

The Wilbur Curtis Company certifies that its products are free from defects in material and workmanship under normal use. The following limited warranties and conditions apply:

- 3 Years, Parts and Labor, from Original Date of Purchase on digital control boards.
- 2 Years, Parts, from Original Date of Purchase on all other electrical components, fittings and tubing.
- 1 Year, Labor, from Original Date of Purchase on all electrical components, fittings and tubing.

Additionally, the Wilbur Curtis Company warrants its Grinding Burrs for Forty (40) months from date of purchase or 40,000 pounds of coffee, whichever comes first. Stainless Steel components are warranted for two (2) years from date of purchase against leaking or pitting and replacement parts are warranted for ninety (90) days from date of purchase or for the remainder of the limited warranty period of the equipment in which the component is installed.

All in-warranty service calls must have prior authorization. For Authorization, call the Technical Support Department at 1-800-995-0417. Effective date of this policy is April 1, 2003.

Additional conditions may apply. Go to www.wilburcurtis.com to view the full product warranty information.

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 the following 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 technician and must comply with all local electrical, mechanical and plumbing codes.*
- 3) **Improper voltage:** *Equipment must be installed at the voltage stated on the serial plate supplied with this equipment.*
- 4) **Improper water supply:** *This includes, but is not limited to, excessive or low water pressure, and inadequate or fluctuating water flow rate.*
- 5) **Adjustments and cleaning:** *The resetting of safety thermostats and circuit breakers, programming and temperature adjustments are the responsibility of the equipment owner. The owner is responsible for proper cleaning and regular maintenance of this equipment.*
- 6) **Damaged in transit:** *Equipment damaged in transit is the responsibility of the freight company and a claim should be made with the carrier.*
- 7) **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. The equipment must be maintained according to the manufacturer's recommendations.*
- 8) **Replacement of items subject to normal use and wear:** *This shall include, but is not limited to, light bulbs, shear disks, "O" rings, gaskets, silicone tube, canister assemblies, whipper chambers and plates, mixing bowls, agitation assemblies and whipper propellers.*
- 9) **Repairs and/or Replacements** *are subject to our decision that the workmanship or parts were faulty and the defects showed up under normal use. All labor shall be performed during regular working hours. Overtime charges are the responsibility of the owner. 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. The Wilbur Curtis Company will allow up to 100 miles, round trip, per in-warranty service call.*

RETURN MERCHANDISE AUTHORIZATION: *All claims under this warranty must be submitted to the Wilbur Curtis Company Technical Support Department prior to performing any repair work or return of this equipment to the factory. All returned equipment must be repackaged properly in the original carton. No units will be accepted if they are damaged in transit due to improper packaging. **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 agent. Call the Wilbur Curtis Technical Support Department to find an agent near you.*

ECN 14810 . 3/7/13@9.3 rev A



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