

# Grind'n Brew Coffee Systems®

## Operation and Instruction Manual

for

Models: -11, -21, -10, -20 including H, HQ versions

### TABLE OF CONTENTS

Warning Labels .....	3
Technical Data .....	4
Unit Installation .....	5
Water Hook-up .....	5
Electrical Hook-up & Start-up Procedure .....	6
Operating the Touchpad .....	6
Brewing .....	7
User Lockout .....	7
Bean Counter .....	8
User Settings .....	8
Pulse Brew Cycle .....	8
User Menu .....	9
Brew Volume Setting .....	10
System Restore Feature .....	10
Factory/Field Test Menu .....	11
Water System Errors .....	12
Timer Settings .....	12
Setting the Grind .....	12
Maintenance .....	13
Shear Plate Replacement .....	14
Troubleshooting Guide .....	15
Exploded Views .....	17
Wiring Diagrams .....	22



Model Grind'n Brew-10H



Model Grind'n Brew-11H



Model Grind'n Brew-20H



Model Grind'n Brew-21H

*Prior authorization must be obtained from Grindmaster Corporation for all warranty claims.*



**GRINDMASTER™**  
CORPORATION

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## Warning Labels

The following warning labels were on your grinderbrewer when it shipped from the factory. They should remain on your grinderbrewer in good, readable condition at all times. If one of your labels is missing or damaged, order a replacement label immediately.

Part # 71104

Located on outside back, grinderbrewer casing

 **WARNING:**

USE ONLY ON A CIRCUIT THAT IS PROPERLY PROTECTED AND CAPABLE OF THE RATED LOAD.

 **WARNING:**

ELECTRONICALLY GROUND THE CHASSIS.

 **WARNING:**

DO NOT DEFORM PLUG OR CORD.

 **WARNING:**

FOLLOW NATIONAL AND LOCAL ELECTRICAL CODES.

 **WARNING:**

WATER CONNECTIONS SHALL COMPLY WITH THE PLUMBING CODE OF BOCA & THE FOOD SERVICE SANITATION MANUAL OF THE FDA

 **WARNING:**

DO NOT USE NEAR COMBUSTIBLES.

 **WARNING:**

FAILURE TO COMPLY RISKS PERSONAL INJURY, DAMAGE TO EQUIPMENT, FIRE OR SHOCK HAZARD.

 **WARNING:**

READ THE ENTIRE OPERATING MANUAL INCLUDING THE LIMIT OF WARRANTY AND LIABILITY BEFORE BUYING OR USING THIS PRODUCT.

 **WARNING:**

ALWAYS UNPLUG UNIT FROM POWER SUPPLY BEFORE SERVICING.

# Technical Data - Single Bean Domestic Models

MODEL PART #	10 70916	10H 70917	10Q 70920	10HQ 70921	11 70900	11H 70901	11Q 70904	11HQ 70905
VOLTAGE	120	120	208/240	208/240	120	120	208/240	208/240
FREQUENCY	60 Hz	60 Hz	60 Hz	60 Hz	60 Hz	60 Hz	60 Hz	60 Hz
WATTS	1710	1710	2674	3560	1810	1810	2749	3660
CIRCUIT BREAKER	15	15	20	20	15	15	20	20
NO. OF HOPPERS	1	1	1	1	1	1	1	1
HOPPER CAPACITY/HOPPER	5 1/2 lbs.	5 1/2 lbs.	5 1/2 lbs.	5 1/2 lbs.	5 1/2 lbs.	5 1/2 lbs.	5 1/2 lbs.	5 1/2 lbs.
BREW CAPACITY	1/2 gal.	1/2 gal.	1/2 gal.	1/2 gal.	1/2 gal.	1/2 gal.	1/2 gal.	1/2 gal.
NO. OF WARMERS	0	0	0	0	1	1	1	1
<b>FEATURES:</b>								
GRIND N BREW	x	x	x	x	x	x	x	x
GRIND ONLY	x	x	x	x	x	x	x	x
BREW ONLY	x	x	x	x	x	x	x	x
HALF BREW	x	x	x	x	x	x	x	x
PAINTED CASING	x		x		x		x	
STAINLESS CASING		x		x		x		x
<b>AGENCY APPROVALS</b>								
U.L. ELECTRICAL	x	x	x	x	x	x	x	x
CUL ELECTRICAL	x	x	x	x	x	x	x	x
U.L. SANITATION	x	x	x	x	x	x	x	x
<b>DIMENSIONS:</b>								
WIDTH (INCHES)	9 1/4"	9 1/4"	9 1/4"	9 1/4"	9 1/4"	9 1/4"	9 1/4"	9 1/4"
DEPTH (INCHES)	**24 1/4"	**24 1/4"	**24 1/4"	**24 1/4"	**24 1/4"	**24 1/4"	**24 1/4"	**24 1/4"
HEIGHT (INCHES)	* 31"	* 31"	* 31"	* 31"	26 1/4"	26 1/4"	26 1/4"	26 1/4"
WEIGHT (LBS.)	65 lbs.	65 lbs.	65 lbs.	65 lbs.	65 lbs.	65 lbs.	65 lbs.	65 lbs.
SHIPPING WEIGHT (lbs.)	80 lbs.	80 lbs.	80 lbs.	80 lbs.	80 lbs.	80 lbs.	80 lbs.	80 lbs.

# Technical Data - Dual Bean Domestic Models

MODEL PART #	20 70918	20H 70919	20Q 70922	20HQ 70923	21 70902	21H 70903	21Q 70906	21HQ 70907
VOLTAGE	120	120	208/240	208/240	120	120	208/240	208/240
FREQUENCY	60 Hz	60 Hz	60 Hz	60 Hz	60 Hz	60 Hz	60 Hz	60 Hz
WATTS	1710	1710	2674	3560	1810	1810	2749	3660
CIRCUIT BREAKER	15	15	20	20	15	15	20	20
NO. OF HOPPERS	2	2	2	2	2	2	2	2
HOPPER CAPACITY/HOPPER	6 1/2 lbs.	6 1/2 lbs.	6 1/2 lbs.	6 1/2 lbs.	6 1/2 lbs.	6 1/2 lbs.	6 1/2 lbs.	6 1/2 lbs.
BREW CAPACITY	1/2 gal.	1/2 gal.	1/2 gal.	1/2 gal.	1/2 gal.	1/2 gal.	1/2 gal.	1/2 gal.
NO. OF WARMERS	0	0	0	0	1	1	1	1
<b>FEATURES:</b>								
GRIND N BREW	x	x	x	x	x	x	x	x
GRIND ONLY	x	x	x	x	x	x	x	x
BREW ONLY	x	x	x	x	x	x	x	x
HALF BREW	x	x	x	x	x	x	x	x
PAINTED CASING	x		x		x		x	
STAINLESS CASING		x		x		x		x
<b>AGENCY APPROVALS</b>								
U.L. ELECTRICAL	x	x	x	x	x	x	x	x
CUL ELECTRICAL	x	x	x	x	x	x	x	x
U.L. SANITATION	x	x	x	x	x	x	x	x
<b>DIMENSIONS:</b>								
WIDTH (INCHES)	9 3/8"	9 3/8"	9 3/8"	9 3/8"	9 3/8"	9 3/8"	9 3/8"	9 3/8"
DEPTH (INCHES)	**24 1/4"	**24 1/4"	**24 1/4"	**24 1/4"	**24 1/4"	**24 1/4"	**24 1/4"	**24 1/4"
HEIGHT (INCHES)	*37 1/2"	*37 1/2"	*37 1/2"	*37 1/2"	32 3/4"	32 3/4"	32 3/4"	32 3/4"
WEIGHT (LBS.)	80	80	80	80	80	80	80	80
SHIPPING WEIGHT (lbs.)	95	95	95	95	95	95	95	95

\* BASED ON 4 in LEG HEIGHT  
 \*\* INCLUDING WATER INLET FITTING

# Unit Installation

**IMPORTANT:** This brewer should be installed by a knowledgeable and experienced commercial equipment installer.

## Brewer Contents

Your brewer package should include the following:

- 1 Grinderbrewer (either single or dual bean)
- 1 Operation and Instruction Manual (this manual)
- 1 Hose to 1/4" flare fitting (part # 61237)

## Tools Required for Installation

- #2 Phillips screwdriver
- 9/16" wrench
- 5/8" wrench  
(or crescent wrench)
- 6" level

**NOTE:** Other tools may be needed depending on the type of water supply tubing and location.

1. Inspect unit to see if any damage occurred in shipment.
2. Position brewer on counter. Place on sturdy permanent counter top. If you have an airpot brewer, install the 4" plastic legs (included) at the bottom of the brewer. Lean the brewer towards its side to expose screwholes underneath for legs. Adjust the leg height to suit the size of airpots you will use. **IMPORTANT: Adjust the feet to level the brewer.** With bubble level, check to see that the brewer is level on countertop.

## Water Hook-up (All Models) (Refer to Figure A)

**IMPORTANT:** This equipment must be installed in compliance with applicable Federal, State and/or Local plumbing codes having jurisdiction. Incoming water pressure should be greater than 20 psi and not more than 100 psi.

1. The incoming water supply should have a shut-off valve connected in-line. The end should have a female 1/4" flare fitting. Water supply should be a 1/4" I.D. dedicated line branched off a 1" or larger supply line.
2. Prior to installing the brewer, flush out the water line by running approximately 1 gal. of water into a pail. This will insure no sediment from a new installation can get in the brewer.
3. Make sure your source water is turned off. Connect the water line's 1/4" female flare fitting (1) to the 1/4" male fitting on the hose connector (2).
4. Make sure Grind'n Brew is unplugged. Connect the water line to the brewer with the hose connector (2).
5. Turn the water valve on, sending water to the brewer. If there are any leaks, tighten connections to stop leakage.

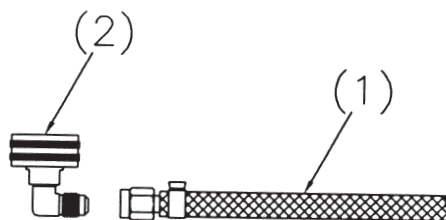


Figure A

## Electrical Hook-up and Start-up Procedure (All Models)

**IMPORTANT:** Do not plug the unit in yet.

**IMPORTANT:** This equipment must be installed in compliance with applicable Federal, State and/or Local electrical codes having jurisdiction. Do not use extension cords. Make sure that the outlet the brewer plugs into is grounded.

**IMPORTANT:** Make sure that the Main Power Switch in the back of the unit is in the Off position before plugging in the brewer.

**IMPORTANT:** Domestic Q models at 208/230V must have a 4 wire electrical connection. The circuit must have 2 hots, 1 ground and 1 neutral wire. Failure to install with a 4 wire connection will void the manufacturer's warranty. 208/230 Volt Grind'n Brew units require a 20 Amp circuit.

1. Plug the brewer into an electrical outlet (or run power to unit for hardwire applications).
2. Make sure the brew basket is inserted in the brew rails.
3. Reach to the back of the brewer and press the white Main Power Switch to the On position. The front control lights will go on, and water will enter the brewer. The tank will fill in 2-3 minutes from the moment the Main Power Switch is turned on.
4. Once the tank is full, it will take 10-15 minutes to heat the water to the brewing temperature. (Cut that time in half for the 230V "Q" models.) Once the Ready light is lit, you are ready to brew.

## Operating the Touchpad (Refer to Figure B)

1. To select the appropriate bean hopper, press the hopper (left) button until the desired indicator arrow is illuminated.

**NOTE:** This step only applies to dual bean hoppers.

2. To select a portion size, press the center of the Portion Size (middle) button until the half pot or full pot symbol (depending on your need) is illuminated.
3. The Mode (right) button allows you to select either the "Brew Only", "Grind Only" or "Grind and Brew" feature.
  - a) To grind only, press the center of the Mode (right) button until the grinder symbol is illuminated.
  - b) To brew only, press the center of the Mode (right) button until the coffee cup symbol is illuminated.
  - c) To grind and brew, press the Mode (right) button until both symbols are illuminated together.

Bean Selector  
(Dual Bean Models Only)

Half or Full Pot

Grind only  
Brew only  
Grind and Brew Option



Figure B  
(Dual Bean Model)



(Single Bean Model)

**IMPORTANT:** Brewers are factory set for throw weight and water portion. Please check that installation is correct before making adjustment. No adjustments should be necessary for normal installation.

# Brewing

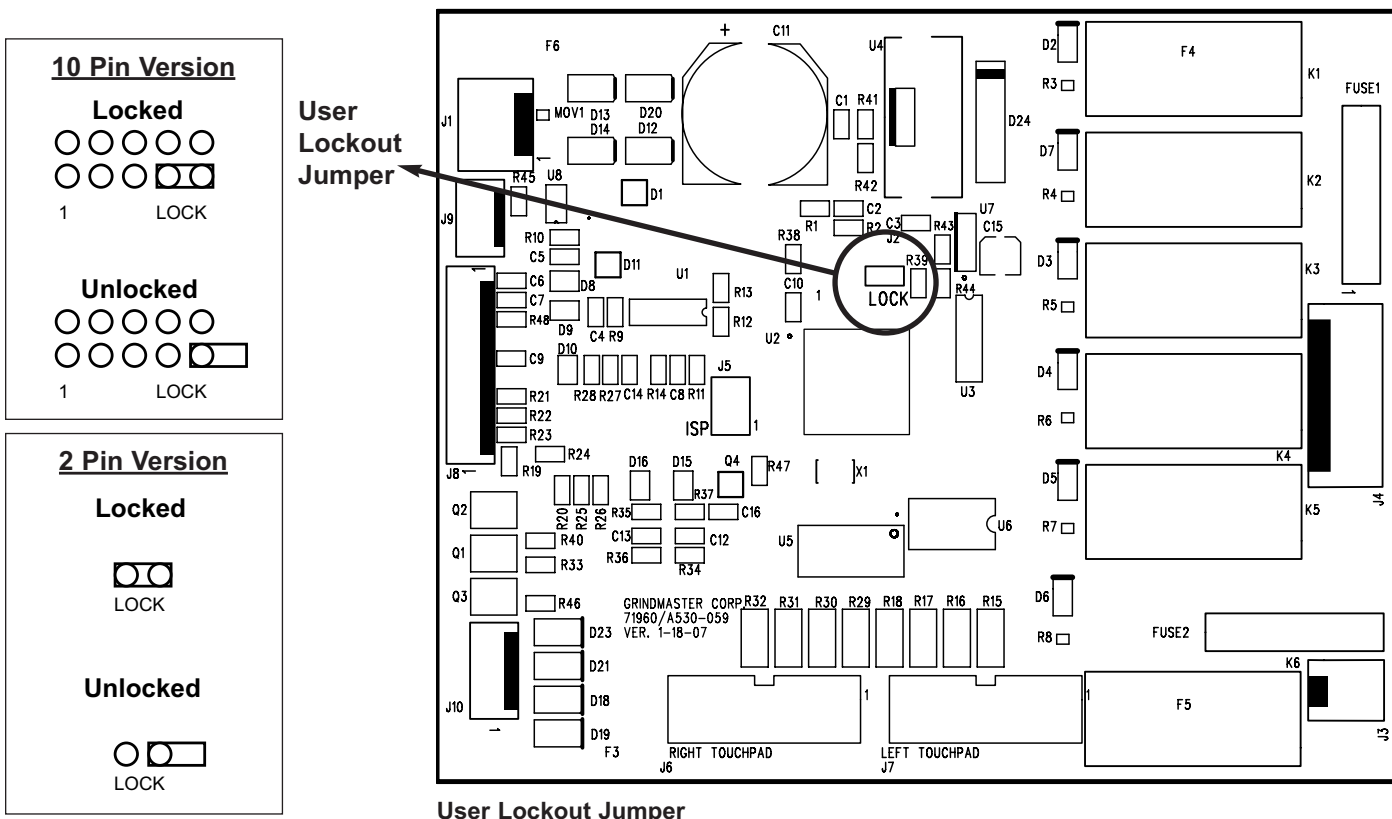
**IMPORTANT:** Brewers are factory set for the correct grind and brew times for average situations. You should not need to make adjustments in the field.

1. Make sure that a new paper filter is in the brew basket and the brew basket is in place in the brewer.
2. Place beans in the hopper.
3. Choose to "Grind and Brew". Press the far right touchpad so "Grind and Brew" lights are lit.
4. Choose the Portion Size. Press the middle touchpad until desired volume is lit.
5. Choose Decaf or Regular coffee (only applicable to dual bean Grind'n Brews). Press left touchpad. Arrow will either point left or right for Decaf or Regular.
6. Place a decanter or airtop under the brew basket, depending on the model.
7. Press Start. You will see the coffee bean level go down slightly. You will hear the coffee grind. Coffee is automatically ground, portioned and placed in brew basket. Then ground coffee is automatically brewed. The Ready light will now blink, indicating that grinding and brewing are in progress. This will take 3-4 minutes for a 1/2 gal. pot. Portions are factory set. A stop function is added to the start switch. When this switch is depressed, it allows the unit to stop during the selected grind, brew or grind and brew functions.

After brewing a pot, the tank must reheat. Reheat time is 5 1/2 - 8 minutes for 120V brewers and half that time for 230V machines. Remember that the brewer will not function (although the grinder will) until the Ready light is on, indicating that the water is hot enough to brew. A flashing green light indicates that the brewer is reheating or that there is a cycle in progress. Do not remove the brew basket while the light is flashing. **The brew basket must be removed before a new brew can be initiated.** This feature ensures that the operator discards the old coffee grounds and installs a new coffee filter.

# User Lockout

User Lockout is achieved via the position of the LOCK jumper on the board header. Locate the header on the board (shown below) and place the jumper in the desired position. In the *Locked* position all menus in this document are locked out, and the unit will only allow brewing or grinding functions. There are two versions of the header, 10 pin and 2 pin. Both configurations are shown below.



## Bean Counter

The built-in bean counter measures relative usage of its Grind'n Brew® machine by totaling the amount of seconds the augers have fed beans into the grinder. This number directly correlates to the amount of beans used by the machine.

Depending on model, the bean counter is either always shown or hidden to the user.

The **Bean Counter Menu** is accessed by holding the *UP* and *DOWN* keys for 5 seconds. If the counter is normally hidden, it will be shown here. The user can reset the counter through this menu. Pressing the *SET* button will display “*REs*” and the user can select “*YEs*” or “*no*” with the *UP* and *DOWN* keys. Pressing the *SET* key finalizes the selection. This menu times out after 10 seconds and is disabled by the **User Lockout Jumper**.

## User Settings

The Grind'n Brew® has several factory-set options that can be modified by the user. These are divided into two categories: Universal Settings or Brew Settings. Universal Settings pertain to the whole unit, and Brew Settings pertain to one of the four available brew cycles – (Regular Full, Regular Half, Decaf Full and Decaf Half). All settings are retained during a power loss. The original factory settings can be restored by using the **System Restore Function**.

### User Settings

Universal Settings	Brew Settings x 4
Temperature Scale	Auger Time
Water Temperature	Pulse Brew Pulses
Low Temp No Brew Enable	Pulse Brew Pour Time
	Pulse Brew Delay Time
	Brew Time

## Pulse Brew Cycle

Pulse Brewing is a feature that increases the control and performance of the Grind'n Brew® machine. By pulsing water during the brew cycle, you allow greater contact time and better extraction of the coffee. Ultimately you will achieve a bolder and more consistent cup of coffee by using this feature.

If pulse brewing is selected, the unit will brew the number of pulses identified by the **Pulse Brew Pulses** setting. Each pulse is identical. It will begin by dumping water for the **Pulse Brew Pour Time** and then wait for the **Pulse Brew Delay Time**. This will repeat until all pulses are finished.

Once the pulses are complete, the unit will pour water for the remaining **Brew Time**. **Brew Time** is the total amount of time water is poured over the coffee grinds. **Pulse Brew Pour Times** are included in this total. **Pulse Brew Delay Times** are not included. The cycle will always stop pouring once the **Brew Time** is met, regardless of whether this happens in the middle of pulse brewing.

**Drip Time** is half of the **Brew Time**. However, the **Drip Time** will never be greater than 1:30.



# User Menu

The **User Menu** is accessed by pressing the *SET* key on the display board. Navigation is accomplished by pressing the *UP*, *DOWN* and *SET* keys. Feedback to the user is shown by the 3-digit numerical display.

The **User Menu** exits after a 1 minute timeout or all modes are stepped through. This menu is disabled by the **User Lockout Jumper**.

## Brew Settings - Brew Cycle Selection

There are four independent settings for brew cycles: Regular Full Brew, Regular Half Brew, Decaf Full Brew and Decaf Half Brew. The **User Menu** adjusts settings for the brew cycle selected by the keypad. For instance, if you want to change settings for Decaf Half brew then set the keypad to the Decaf Hopper and Half Brew Size before entering the **User Menu**. The keypad settings cannot be changed while the **User Menu** is displayed.

## User Menu Navigation

Advancing through the menu is done by pressing the *SET* Key. Each parameter is adjusted by pressing the *UP* and *DOWN* keys. Pressing and holding the *UP* and *DOWN* keys will quickly scroll through settings. The table below shows how to step through this menu.

Step	Setting	Display	Adjustments
1	<b>Temperature Scale</b> between °F or °C	Displays the current selection. Factory default is "°F"	"°F" or "°C"
2	<b>Water Temperature</b> setpoint in °F or °C	Displays the current selection. Factory default is "195" in °F or "91" in °C.	"170" to "205" °F "77" to "96" °C
3	<b>Show Auger Time</b> the amount of coffee beans fed into the grinder	"At"	None
4	<b>Set Auger Time</b> the amount of coffee beans fed into the grinder	Displays the current selection depending on Brew Cycle	"0.1" to "45.0" seconds
5	<b>Show Brew Time</b> Total amount of pour time for the brew cycle	"br"	None
6	<b>Set Brew Time</b> Total amount of pour time for the brew cycle	Displays the current selection depending on Brew Cycle	"0.01" to "6.00" in minutes.seconds
7	<b>Show Pulse Brew</b>	"P-b"	None
8	<b>Pulse Brew Pulse Number</b> sets the number of pulses in the brew cycle	Displays the current selection depending on Brew Cycle	"OFF" to "10"
9	<b>Pulse Brew Pour Time</b> sets the amount of pour time in each pulse	Displays the current selection depending on Brew Cycle	"0.05" to "1.00" in minutes.seconds
10	<b>Pulse Brew Delay Time</b> sets the amount of delay time between each pulse	Displays the current selection depending on Brew Cycle	"0.05" to "1.00" in minutes.seconds
11	<b>Show Low Temp No Brew</b>	"Ltn"	None
12	<b>Set Low Temp No Brew</b> enable or disable	Displays the current selection. Factory default is "YES"	"OFF" or "ON"

## Brew Volume Setting Menu

This feature sets the brew time based on water volume of a desired container. Before using this feature, remove the brew basket, remove the spray head and place the desired container in place underneath the brewer.

The **Brew Volume Setting Menu** is started by selecting a brew cycle and holding in the *START* switch for 5 seconds. The display will show "*Pro*" at this time. Again press the *START* switch, and water will begin dispensing into the container. The display shows a **Brew Time** count at this time. When satisfied with the water level, again press the *START* switch. At this point the **Brew Time** flashes on the display for 20 seconds. Press the *START* switch again within the 20 seconds to accept the new **Brew Time**. No changes will be made if the Brew Time is not confirmed in this last step.

There are four independent brew times in the unit. The set **Brew Time** is the cycle shown on the keypad. The keypad cannot be modified while setting the brew volume. This feature is disabled by the **User Lockout Jumper**.

## System Restore Feature

This function will restore a Grind'n Brew® unit to its original factory settings. To activate system restore, power on the unit while holding in the *DOWN* button.

Continue holding the *DOWN* button and the display will scroll "*rEStorE*" to indicate that a system restore is about to happen. If the *DOWN* button is released at this point, the restore is cancelled. If the button hold is continued, the display will scroll "*donE*" to show completion of a system restore.

Upon a successful restore, the original factory settings will override all changes. The bean counter is not affected.

## Factory/Field Test Menu

This menu is intended to check product functionality both at the end of the factory line and in the field. This mode is entered by pressing and holding the DOWN key on the display board and Full/Half key on the keypad for 10 seconds. Once the menu is entered, the unit will start with an LED test that lights all LEDs and segments on the display. Navigation is done just like the User Menu. Refer to the table below for operation. Field Test Mode exits after stepping through all modes only – there is not a timeout.

Step	Function	Operation	Description
1	<b>LED Test</b>	All LEDs ON	Verify that all LEDs turn on.
2	<b>Firmware Version</b>	Display firmware version	Shows the software version of the control.
3	<b>Date Code</b>	Display date code/serial ID	Not used with Grind'n Brew®
4	<b>Non Resetable Bean Counter</b>	Scroll non-resetable bean counter	Shows the total number of seconds the grinder has been grinding (non-resetable)
5	<b>Configuration Inputs</b>	Each digit of the display corresponds to a configuration input. The input is either "0" - disabled or "1" - enabled.	<b>Highest Digit (left most):</b> "1" - Double Hopper; "0" - Single Hopper <b>Middle Digit (center):</b> "1" - Always show bean count; "0" - Don't show bean count <b>Lowest Digit (right most):</b> "1" - Grind'n Brew® Model; "0" - Grind Only Model
6	<b>Display Water Temperature</b>	Show averaged A/D reading of temperature	Show the current temperature in °F of the thermistor
7	<b>Display Water Level 1</b>	Show averaged A/D reading of water level 1	If > 500 water level full, If < 500 water level not full
8	<b>Display Water Level 2</b>	Show averaged A/D reading of water level 2	Not used with Grind'n Brew®
9	<b>Show Input</b>	Display scrolls "InPut"	Input Test Mode
10	<b>Input Test</b>	Press each key and the display will show a number related to that key	Hopper Button: 12 Size Button: 10 Grind/Brew Button: 8 Down Button: 0 Up Button: 2 Start Switch: 16 Basket Out Switch: 17 <b>Select Button: advances Factory Test to Step 11</b>
11	<b>Show Output</b>	Display scrolls "outPut"	Output Test Mode
12	<b>Output Test</b>	Turns on each relay separately. Displays "O###" where: ### = 2 digit output number  <b>IMPORTANT: Each output will be turned ON when its number is on the display REGARDLESS of temperature or fill level. Be CAREFUL not to overfill the tank and keep electric items out of the way of the brew channel.</b>	<b>Scroll through relay outputs with the UP and DOWN keys.</b> Outputs are as follows:  O01: Fill Valve O02: Brew Valve O03: Grind Shutter O04: Left Auger Motor O05: Right Auger Motor O06: <i>not used</i> O07: Heater O08: Grinder Motor O09: Basket Out Light O10: Ready Light

# Water System Errors

There are three system errors that can be detected by the microprocessor. These errors are:

1. Water Fill Error (Er1) – the water full detection has failed, and the fill valve has been on for at least 5 minutes.
2. Thermistor Error (Er2) – the Thermistor is detected either open, shorted OR the water is boiling.
3. Heater Error (Er3) – the heater has been on for 3 minutes, but no rise in water temperature was detected.

If any of these errors are detected, the unit will shut off all water fill and heat related functions. Brewing is disabled, but grinding is still allowed. The display will show the error when the unit is idle. To clear any error, the user can hold in the *UP* key for 5 seconds, reset power to the unit or enter field test mode.

## Timer Settings

### A standard 64 oz. bottle Grind'n Brew

	Setting Single Bean	Approx. yield	Setting Dual Bean	Approx. yield
Single/Left Full Pot	4.2 sec.	2 oz.	5.7 sec.	2 oz.
Right Full Pot	-	-	5.7 sec.	2 oz.
Single/Left Half Pot	2.4 sec.	1.25 oz.	3.0 sec.	1.25 oz.
Right Full Pot	-	-	3.0 sec.	1.25 oz.
Full Pot	112-125 sec.	62 fl oz.	112-125 sec.	62 fl oz.
Half Pot	56-63 sec.	31 fl oz.	56-63 sec.	31 fl oz.

### All Airpot Grind'n Brews

	Setting Single Bean	Approx. yield	Setting Dual Bean	Approx. yield
Single/Left Full Pot	4.5 sec.	2.3 oz.	6.2 sec.	2.3 oz.
Right Full Pot	-	-	6.2 sec.	2.3 oz.
Single/Left Half Pot	2.7 sec.	1.4 oz.	3.7 sec.	1.4 oz.
Right Full Pot	-	-	3.7 sec.	1.4 oz.
Full Pot	140-153 sec.	72 fl oz.	140-153 sec.	72 fl oz.
Half Pot	70-77 sec.	36 fl oz.	70-77 sec.	36 fl oz.

- Increase of 1 sec. to timer setting equates to an increase in fluid volume by 1/2 oz.
- Decrease of 1 sec. to timer setting equates to a decrease in fluid volume by 1/2 oz.

## Setting the Grind (Refer to Figure C)

**Tools Required: #2 Phillips screwdriver, 7/8" box wrench, large flat blade screwdriver**

1. Remove front decal panel by removing screw on underside of panel and 2 screws on both sides of panel.
2. Loosen adjusting screw lock nut by turning counter clockwise.
3. Turn slotted adjusting screw clockwise to make the grind coarser or counter clockwise to make the grind finer. Generally, a 1/8 to 1/4 turn will provide the desired adjustment.
4. After adjustment has been made, re-tighten the adjusting screw lock nut.
5. Visually inspect the grind adjustment with a small portion of coffee and readjust if necessary.
6. Reinstall the front decal panel.

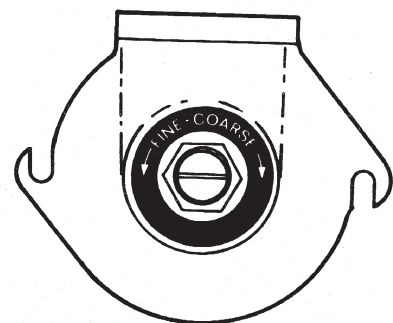


Figure C

# Maintenance

## Daily Cleaning

**Cabinet:** The outside of the machine can be cleaned with a damp cloth, a household dusting spray or a stainless steel cleaner. Do not use any abrasive such as Scotchbrite or Brillo pads. These may mar the finish.

Wipe the underside of the cabinet hood with a clean cloth. Be especially careful when using soap or detergent around the sprayhead. Any soap left on the deflector may give an unpleasant taste to the first brews.

**Warmers:** The warmer plate is easy to clean and will maintain its appearance longer if cleaned regularly. Coffee stains can be wiped off with a damp cloth. Use detergent or sanitizer for heavy deposits, but refrain from using abrasives.

## Weekly Cleaning (Refer to Figure D)

**Slide Valve:** The slide valve behind the spray deflector under the cabinet hood should be wiped off with a clean, dry cloth. Using the finger tab open the slide valve and wipe the ground coffee from inside of the spout, seal and slide valve.

**NOTE:** When the machine is not in use, the finger tab will automatically activate every 60 minutes to keep clear.

**Brew Basket, Airpots and Decanters:** Use commercial grade urn cleaner (as directed by manufacturer) and rinse thoroughly.

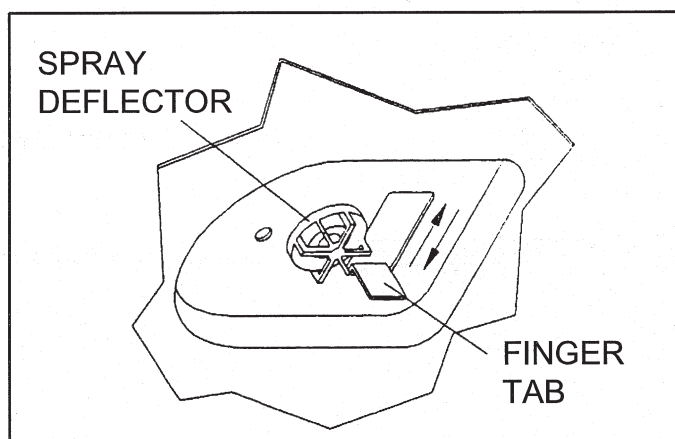
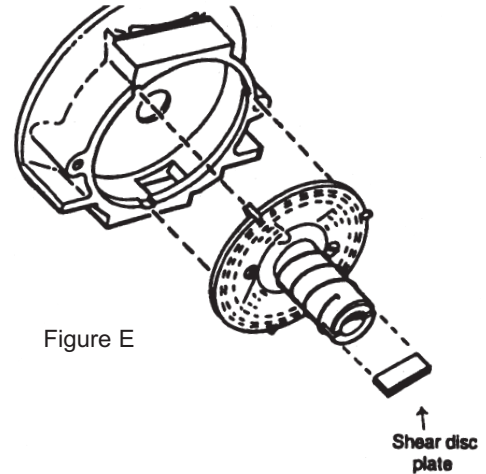


Figure D

## Shear Plate Replacement (Refer to Figure E)

**Tools Required: #2 Phillips screwdriver, large flat blade screwdriver**

1. Unplug the machine.
2. Remove the front panel. Shut off the bean flow to the grinder. Single bean units require you to pull the bean shut-off valve forward. Dual bean units require you to push the bean shut-off valve back into the slots in the hopper.
3. Remove the hopper cradle. There are 5 screws (2 in front and 3 across the back) holding the hopper cradle in place.
4. Remove the spray head. First remove the spray deflector by spinning it clockwise. Second, pull the spray nozzle away from the mounting sheet.
5. Remove the grind cap by loosening the 2 screws and rotating the grind cap away from the screws.
6. Pull out the revolving burr and feedworm assembly. The sweeps on the revolving burr and feedworm assembly. The sweeps on the revolving burr must line up with the cut outs on the grind head.
7. Remove the shear cap and broken shear plate.
8. Slide the rotating burr onto the motor shaft, aligning up the sweeps with the cutouts on the grind head. Rotate the burr so that the burr is held back into the burr pocket by the sweeps on the grind head lip. Slide the drive coupler into place. Rotate the slot on the drive coupler with the feedworm. Insert a new shear plate.
9. Reassemble the remaining components in reverse order of disassembly.



# Troubleshooting Guide

The following procedures must be performed by a qualified service technician.



**CAUTION: Unplug power cord from outlet before cleaning or servicing the unit.**

<b>Problem</b>	<b>Possible Cause</b>	<b>Remedy</b>
<b>Weak coffee</b>	<ul style="list-style-type: none"> <li>• Not enough coffee used</li> <li>• Grind is too coarse</li> <li>• Water not hot enough</li> <li>• Too much water used (half brews)</li> <li>• Coffee bed has dry areas</li> </ul>	<ul style="list-style-type: none"> <li>• Set to portion more coffee.</li> <li>• Readjust grind to a finer grind.</li> <li>• Check spray temp, should be greater than 185°F.</li> <li>• Adjust brew time at the controller.</li> <li>• Spray deflector broken or missing. Replace.</li> </ul>
<b>Strong coffee</b>	<ul style="list-style-type: none"> <li>• Too much coffee used</li> </ul>	<ul style="list-style-type: none"> <li>• Readjust coffee portion.</li> </ul>
<b>Bitter coffee</b>	<ul style="list-style-type: none"> <li>• Grind is too fine</li> </ul>	<ul style="list-style-type: none"> <li>• Coarsen grind setting.</li> </ul>
<b>Grounds in coffee</b>	<ul style="list-style-type: none"> <li>• Paper filter collapsed during brewing</li> </ul>	<ul style="list-style-type: none"> <li>• Use proper filter.</li> </ul>
<b>Brew basket overflowed</b>	<ul style="list-style-type: none"> <li>• Too much coffee</li> <li>• Coffee ground too finely</li> <li>• Double batching</li> </ul>	<ul style="list-style-type: none"> <li>• Use no more than 3 1/2 oz. of coffee.</li> <li>• Coarsen grind.</li> <li>• You must dump old coffee and use fresh new filter for each brew.</li> </ul>
<b>Unpleasant taste</b>	<ul style="list-style-type: none"> <li>• Water tank or brew basket needs cleaning</li> </ul>	<ul style="list-style-type: none"> <li>• Clean, sanitize (de-lime).</li> <li>• Refer to <b>Regular Maintenance section.</b></li> </ul>
<b>Brewer will not brew</b>	<ul style="list-style-type: none"> <li>• Basket has not been changed</li> </ul>	<ul style="list-style-type: none"> <li>• Remove basket, replace filter, reinstall.</li> </ul>
<b>Grinder will not start when start button is pushed</b>	<ul style="list-style-type: none"> <li>• Main power switch turned off</li> <li>• No power to outlet</li> <li>• Basket out</li> <li>• Circuit breaker has tripped</li> <li>• Basket has not been changed</li> </ul>	<ul style="list-style-type: none"> <li>• Turn main power switch, on located on back of unit (left side from front) on.</li> <li>• Check outlet with lamp or radio to verify outlet has power.</li> <li>• Ensure basket is in position.</li> <li>• Reset circuit breaker (located on back of unit) by pushing the reset button in until you hear a click.</li> <li>• Remove basket, replace filter, reinstall.</li> </ul>
<b>Grinder runs or hums but no coffee is dispensed</b>	<ul style="list-style-type: none"> <li>• Shear disc is broken</li> <li>• Obstruction in opening of auger assembly (on dual bean units)</li> <li>• Obstruction in opening to grinding chamber</li> <li>• Slide valve is bending</li> <li>• Blown fuse on controller board (Dual bean only)</li> </ul>	<ul style="list-style-type: none"> <li>• Replace shear disc. See <b>Shear Disc Replacement section.</b></li> <li>• Remove hopper and clear obstruction.</li> <li>• Remove hopper and clean obstruction.</li> <li>• Check for free operation of slide valve. Adjust solenoid mount or slide valve mount as required. Make sure white slide valve gasket is not touching moving parts.</li> <li>• Check for blown fuse and replace with 5 Amp fuse.</li> </ul>
<b>Quantity of coffee dispensed each throw is not the same</b>	<ul style="list-style-type: none"> <li>• Defective timer in controller</li> <li>• Slide valve is binding</li> </ul>	<ul style="list-style-type: none"> <li>• Check the length of time grinder runs with watch.</li> <li>• Remove upper assembly and clean obstruction.</li> <li>• Check for free operation of slide valve. Adjust solenoid mount or slide valve mount as required. Make sure white slide valve gasket is not touching moving parts.</li> </ul>

## Troubleshooting Guide (cont.)

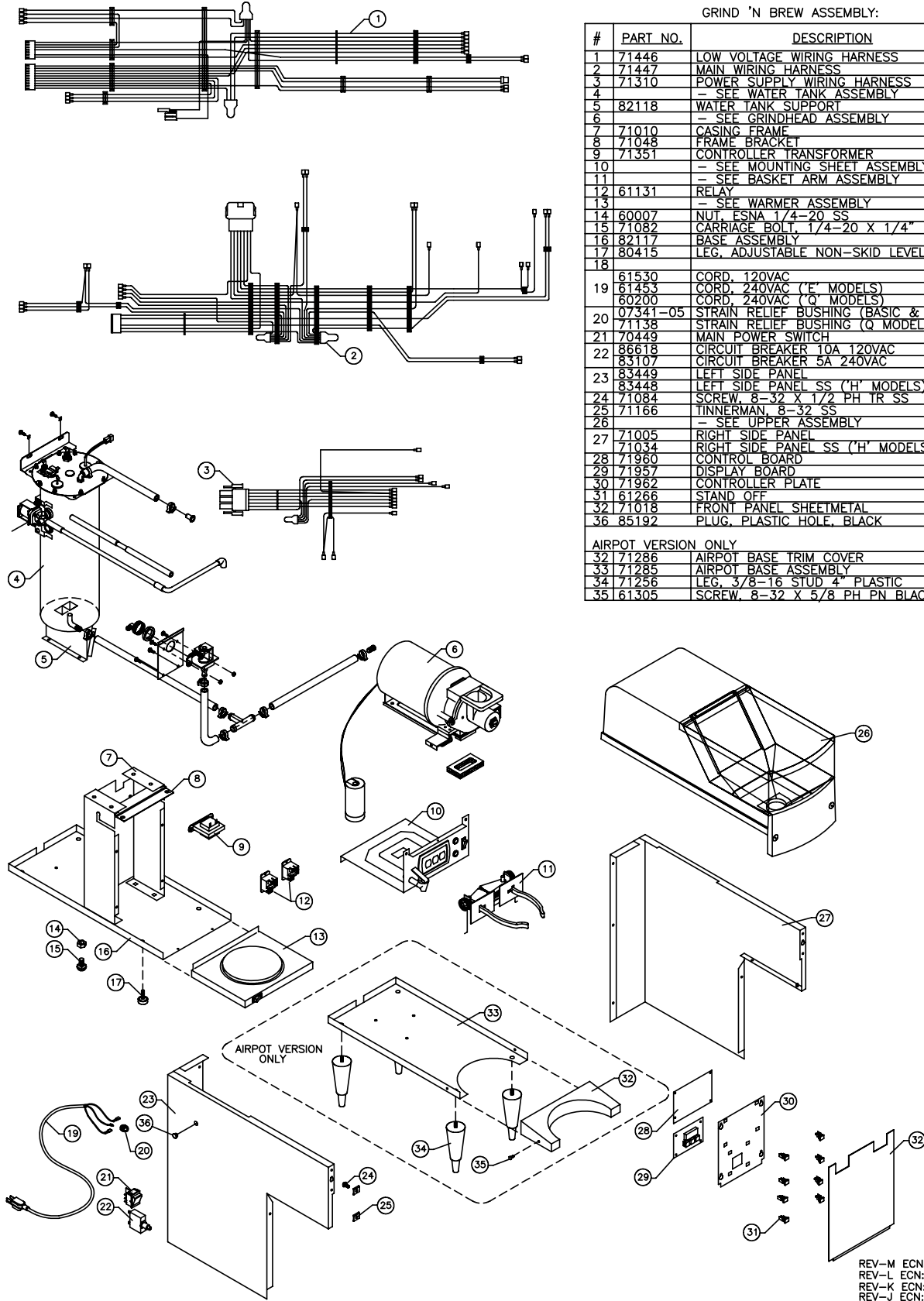
Problem	Possible Cause	Remedy
<b>Circuit breaker continuously trips</b>	<ul style="list-style-type: none"> <li>• Insufficient current due to use of extension cord</li> <li>• Insufficient current due to overloaded line</li> </ul>	<ul style="list-style-type: none"> <li>• Plug unit directly into outlet. Do not use extension cord.</li> <li>• Designate single line for unit. Do not use multi outlet box.</li> </ul>
<b>Basket Out light flashing (Display board displays “ER1”)</b>	<ul style="list-style-type: none"> <li>• Water fill valve on too long</li> <li>• Water supply turned off</li> </ul>	<ul style="list-style-type: none"> <li>• Clean or replace water fill valve.</li> <li>• Turn water supply on.</li> </ul>
<b>Basket Out light flashing (Display board displays “ER2”)</b>	<ul style="list-style-type: none"> <li>• Problem with Thermistor</li> </ul>	<ul style="list-style-type: none"> <li>• Replace if defective.</li> </ul>
<b>Basket Out light flashing (Display board displays “ER3”)</b>	<ul style="list-style-type: none"> <li>• Heater Relay failed</li> <li>• Contactor Failed</li> <li>• Heater Failed open</li> <li>• Hi Temp failed</li> <li>• Control Board output failed</li> </ul>	<ul style="list-style-type: none"> <li>• Replace defective component</li> </ul>
<b>Water not hot enough</b>	<ul style="list-style-type: none"> <li>• Thermistor not set high enough</li> </ul>	<ul style="list-style-type: none"> <li>• Adjust potentiometer</li> </ul>
<b>Water boiling (or steaming)</b>	<ul style="list-style-type: none"> <li>• Thermistor set too high</li> <li>• Defective Thermistor</li> </ul>	<ul style="list-style-type: none"> <li>• Adjust potentiometer.</li> <li>• Replace Thermistor.</li> </ul>
<b>Start switch not working (Basket Out light illuminated)</b>	<ul style="list-style-type: none"> <li>• Brew basket out of place</li> </ul>	<ul style="list-style-type: none"> <li>• Replace basket.</li> </ul>
<b>No lights are on (Including Warmer light)</b>	<ul style="list-style-type: none"> <li>• No power to brewer</li> <li>• Power switch turned Off</li> </ul>	<ul style="list-style-type: none"> <li>• Turn power on.</li> <li>• Turn switch on.</li> </ul>
<b>No touch pad lights (other lights o.k.)</b>	<ul style="list-style-type: none"> <li>• Touch pad disconnected</li> </ul>	<ul style="list-style-type: none"> <li>• Reconnect touch pad.</li> </ul>
<b>Too much or not enough water in decanter</b>	<ul style="list-style-type: none"> <li>• Water time adjustment</li> </ul>	<ul style="list-style-type: none"> <li>• Readjust.</li> </ul>
<b>Spray head dripping</b>	<ul style="list-style-type: none"> <li>• Lime build up in dump valve</li> </ul>	<ul style="list-style-type: none"> <li>• Delime unit.</li> </ul>
<b>Hot water spigot dripping</b>	<ul style="list-style-type: none"> <li>• Faulty seal</li> </ul>	<ul style="list-style-type: none"> <li>• Replace seal.</li> </ul>
<b>Hot water spigot not dispensing</b>	<ul style="list-style-type: none"> <li>• Drain tube limed-up</li> <li>• Defective valve seat</li> </ul>	<ul style="list-style-type: none"> <li>• Delime tank and drain tube.</li> <li>• Replace seat.</li> </ul>
<b>Warmer Failure</b>	<ul style="list-style-type: none"> <li>• Loss of power</li> <li>• Defective warmer switch or warmer heater</li> </ul>	<ul style="list-style-type: none"> <li>• Check power source.</li> <li>• Perform continuity test. Replace defective component.</li> </ul>
<b>Auger motor, water solenoid, shutter not working</b>	<ul style="list-style-type: none"> <li>• Bus fuse on controller board is blown</li> </ul>	<ul style="list-style-type: none"> <li>• Replace 5 Amp bus fuse.</li> </ul>
<b>Basket Out or Brew Cycle indicators will not light up</b>	<ul style="list-style-type: none"> <li>• Polarity reversed</li> <li>• LED burned out</li> </ul>	<ul style="list-style-type: none"> <li>• Connect black wire to + terminal of LED.</li> <li>• Replace LED.</li> </ul>

*If you still need help, call our Technical Service Department at 800-695-4500 (USA & Canada only) or 502-425-4776, Monday through Friday, 8:00 AM - 8:00 PM Eastern Standard Time or an authorized service center in your area. Please have the model and serial number ready so that accurate information can be given.*

*Prior authorization must be obtained from Grindmaster Corporation's Technical Services Department for all warranty claims.*



# Exploded View Grind'n Brew Assembly



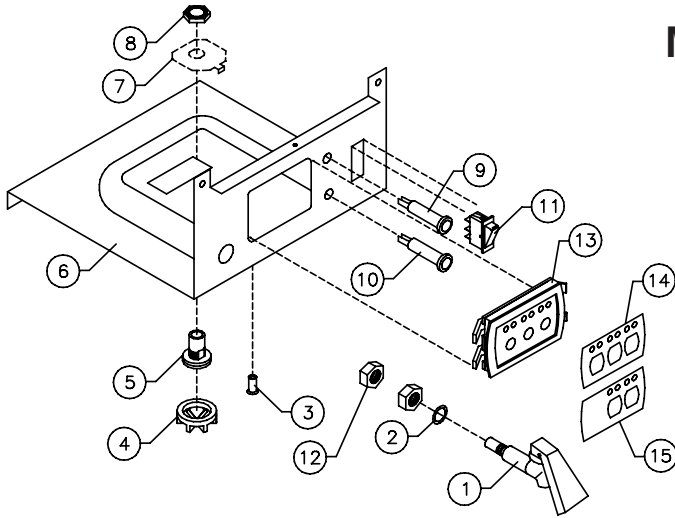
GRIND 'N BREW ASSEMBLY:

#	PART NO.	DESCRIPTION
1	71446	LOW VOLTAGE WIRING HARNESS
2	71447	MAIN WIRING HARNESS
3	71310	POWER SUPPLY WIRING HARNESS
4		- SEE WATER TANK ASSEMBLY
5	82118	WATER TANK SUPPORT
6		- SEE GRINDHEAD ASSEMBLY
7	71010	CASING FRAME
8	71048	FRAME BRACKET
9	71351	CONTROLLER TRANSFORMER
10		- SEE MOUNTING SHEET ASSEMBLY
11		- SEE BASKET ARM ASSEMBLY
12	61131	RELAY
13		- SEE WARMER ASSEMBLY
14	60007	NUT, FSNA 1/4-20 SS
15	71082	CARRIAGE BOLT, 1/4-20 X 1/4"
16	82117	BASE ASSEMBLY
17	80415	LEG, ADJUSTABLE NON-SKID LEVELER
18		
19	61530	CORD, 120VAC
19	61453	CORD, 240VAC ('E' MODELS)
19	60200	CORD, 240VAC ('Q' MODELS)
20	07341-05	STRAIN RELIEF BUSHING (BASIC & E MODELS)
20	71138	STRAIN RELIEF BUSHING ('Q' MODELS)
21	70449	MAIN POWER SWITCH
22	86618	CIRCUIT BREAKER 10A 120VAC
22	83107	CIRCUIT BREAKER 5A 240VAC
23	83449	LEFT SIDE PANEL
23	83448	LEFT SIDE PANEL SS ('H' MODELS)
24	71084	SCREW, 8-32 X 1/2 PH TR SS
25	71166	TINNERMAN, 8-32 SS
26		- SEE UPPER ASSEMBLY
27	71005	RIGHT SIDE PANEL
27	71034	RIGHT SIDE PANEL SS ('H' MODELS)
28	71960	CONTROL BOARD
29	71957	DISPLAY BOARD
30	71962	CONTROLLER PLATE
31	61266	STAND OFF
32	71018	FRONT PANEL SHEETMETAL
36	85192	PLUG, PLASTIC HOLE, BLACK
AIRPOT VERSION ONLY		
32	71286	AIRPOT BASE TRIM COVER
33	71285	AIRPOT BASE ASSEMBLY
34	71256	LEG, 3/8-16 STUD 4" PLASTIC
35	61305	SCREW, 8-32 X 5/8 PH PN BLACK

REV-M ECN 2101  
 REV-L ECN: 1565 11/00  
 REV-K ECN: 1482 9/00  
 REV-J ECN: 1129 7/99  
 REV-H ECN: 1107 6/99  
 REV-G  
 REV-F

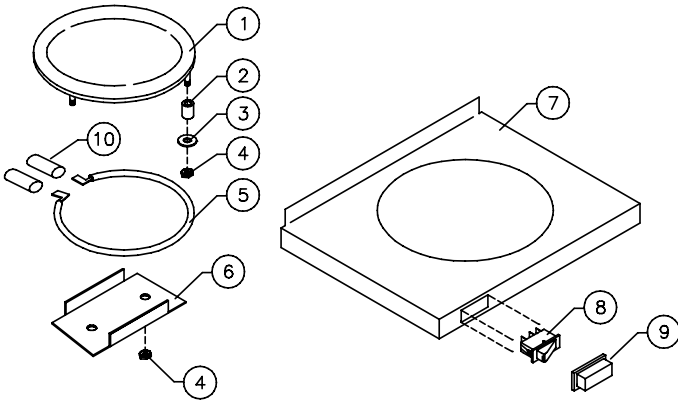
GNBISO-2.DWG REV-F

## Mounting Sheet Assembly



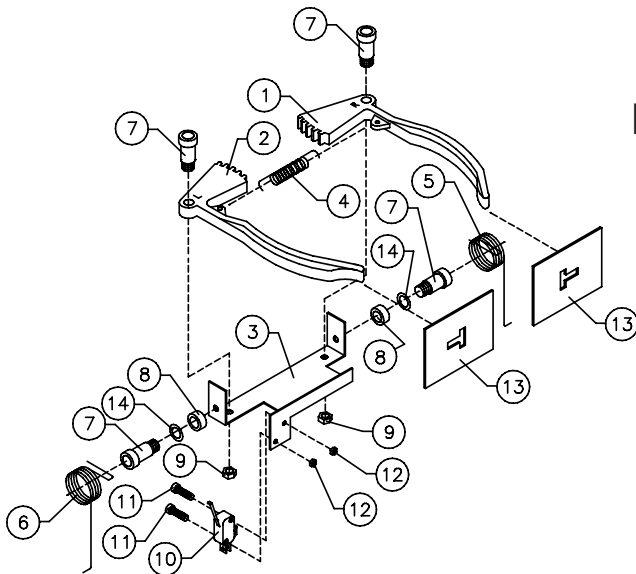
#	PART NO.	DESCRIPTION
1	71546	GRAVITY FAUCET
2	86836	LOCK WASHER 1/2 INTERNAL
3	71148	TUBE SUPPORT
4	06491	SPRAY HEAD DEFLECTOR
5	71368	SPRAY HEAD NOZZLE
	06490	SPRAY HEAD NOZZLE (CDP)
6	71054	MOUNTING SHEET
7	71046	SPRAY HEAD BRACKET (older models)
8	07220	SPRAY HEAD NUT
9	71448	GREEN INDICATOR LIGHT
10	71449	RED INDICATOR LIGHT
11	70445	WHITE MOMENTARY SWITCH
12	07206-05	NUT FAUCET
13	71140	T-PAD ASSY SNGL BEAN
	71303	T-PAD ASSY DUAL BEAN
	71451	T-PAD ASSY SNGL BEAN
	71452	T-PAD ASSY DUAL BEAN
14	71454	DECAL T-PAD DUAL BEAN
15	71455	DECAL T-PAD SINGLE BEAN

## Warmer Assembly



#	PART NO.	DESCRIPTION
1	12096-11	WARMER PLATE
2	06976	SPACER
3	00845	WASHER
4	71129	NUT, KEPS 8-32 SS
5	13029	120 VOLT WARMER HEATING ELEMENT
	02200-11	240 VOLT WARMER HEATING ELEMENT
6	13018	WARMER BRACKET
7	71019	WARMER PLATE BOX
8	06957	120 VOLT RED ROCKER SWITCH
	10124	240 VOLT RED ROCKER SWITCH
9	71315	COVER SWITCH
10	70631	TUBING HEAT SHRINK

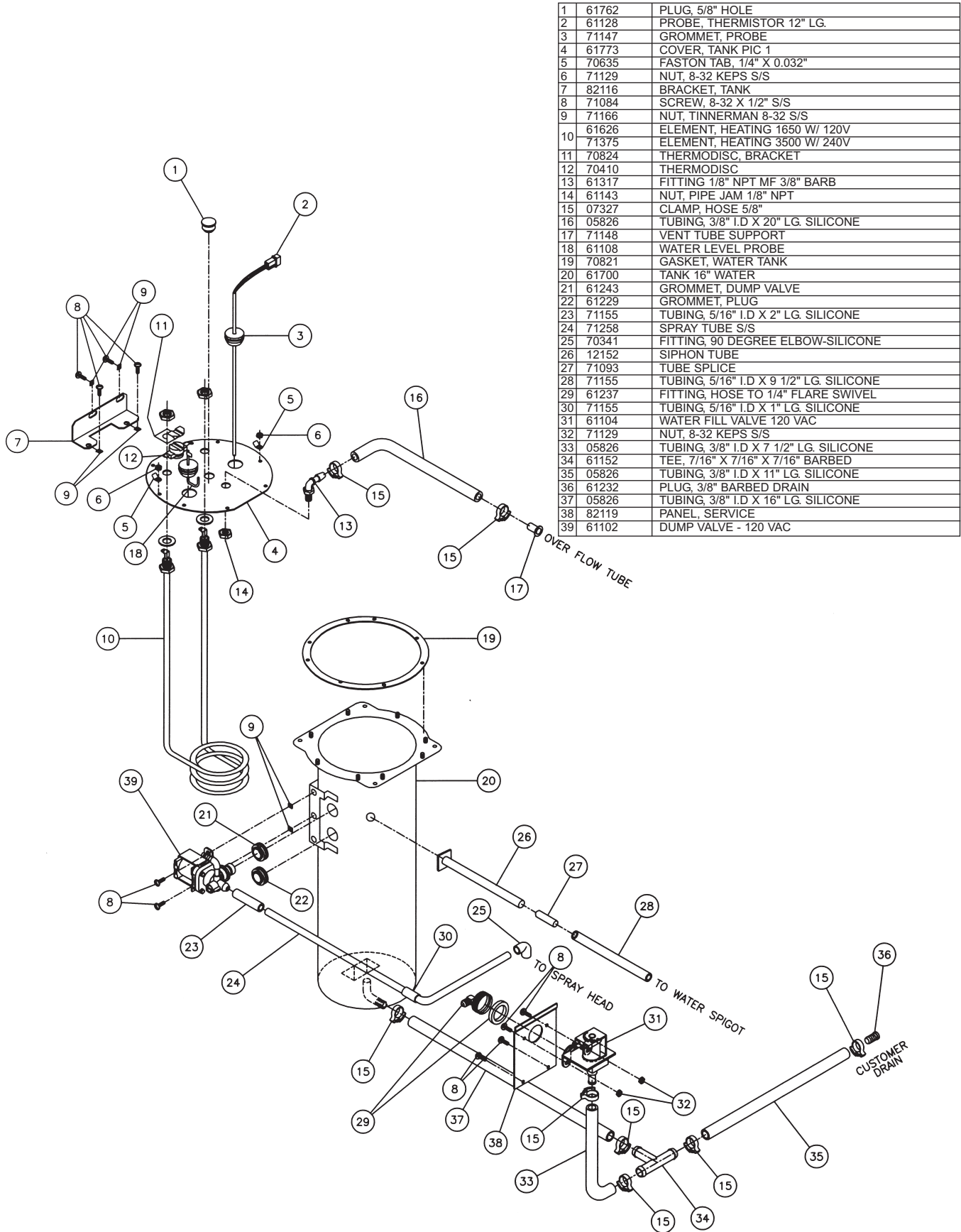
## Basket Arm Assembly



#	PART NO.	DESCRIPTION
1	71183	RIGHT BASKET ARM
2	71184	LEFT BASKET ARM
3	71042	BRACKET, BASKET ARM
4	71015	CENTER SPRING
5	71041	RIGHT BASKET ARM SPRING
6	71040	LEFT BASKET ARM SPRING
7	71122	SHOULDER BOLT, 5/16"x5/8" SS
8	71063	SPACER, 5/8"OD x 1/4"
9	60007	NUT, ESNA 1/4-20 SS
10	71092	SWITCH, SNAP ACTION
11	71127	SCREW, 4-40 x 5/8"
12	71128	NUT, 4-40
13	71065	BELLOW
14	60006	WASHER, 1/4"ID SAE SS

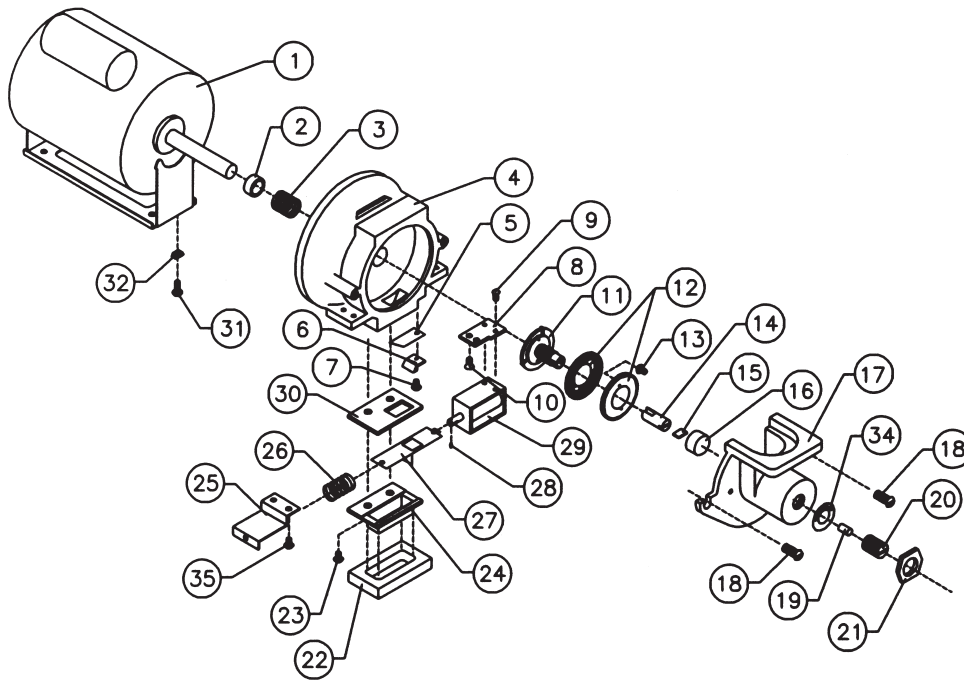
REV-D, ECN1127  
REV-E, ECN2124  
GNBISO-1.DWG, REV-F, ECN2129

# Exploded View Hot Water Tank Assembly



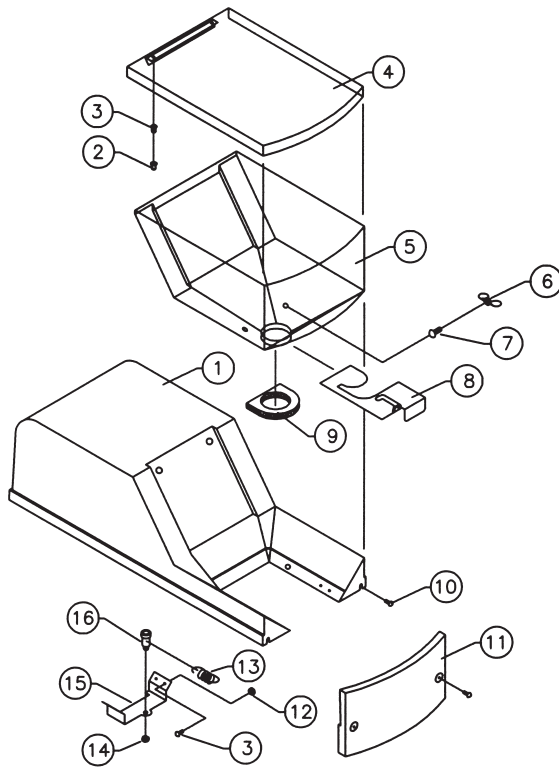
1	61762	PLUG, 5/8" HOLE
2	61128	PROBE, THERMISTOR 12" LG.
3	71147	GROMMET, PROBE
4	61773	COVER, TANK PIC 1
5	70635	FASTON TAB, 1/4" X 0.032"
6	71129	NUT, 8-32 KEPS S/S
7	82116	BRACKET, TANK
8	71084	SCREW, 8-32 X 1/2" S/S
9	71166	NUT, TINNEMAN 8-32 S/S
10	61626	ELEMENT, HEATING 1650 W/ 120V
	71375	ELEMENT, HEATING 3500 W/ 240V
11	70824	THERMODISC, BRACKET
12	70410	THERMODISC
13	61317	FITTING 1/8" NPT MF 3/8" BARB
14	61143	NUT, PIPE JAM 1/8" NPT
15	07327	CLAMP, HOSE 5/8"
16	05826	TUBING, 3/8" I.D X 20" LG. SILICONE
17	71148	VENT TUBE SUPPORT
18	61108	WATER LEVEL PROBE
19	70821	GASKET, WATER TANK
20	61700	TANK 16" WATER
21	61243	GROMMET, DUMP VALVE
22	61229	GROMMET, PLUG
23	71155	TUBING, 5/16" I.D X 2" LG. SILICONE
24	71258	SPRAY TUBE S/S
25	70341	FITTING, 90 DEGREE ELBOW-SILICONE
26	12152	SIPHON TUBE
27	71093	TUBE SPLICE
28	71155	TUBING, 5/16" I.D X 9 1/2" LG. SILICONE
29	61237	FITTING, HOSE TO 1/4" FLARE SWIVEL
30	71155	TUBING, 5/16" I.D X 1" LG. SILICONE
31	61104	WATER FILL VALVE 120 VAC
32	71129	NUT, 8-32 KEPS S/S
33	05826	TUBING, 3/8" I.D X 7 1/2" LG. SILICONE
34	61152	TEE, 7/16" X 7/16" X 7/16" BARBED
35	05826	TUBING, 3/8" I.D X 11" LG. SILICONE
36	61232	PLUG, 3/8" BARBED DRAIN
37	05826	TUBING, 3/8" I.D X 16" LG. SILICONE
38	82119	PANEL, SERVICE
39	61102	DUMP VALVE - 120 VAC

# Exploded View Grinder Assembly



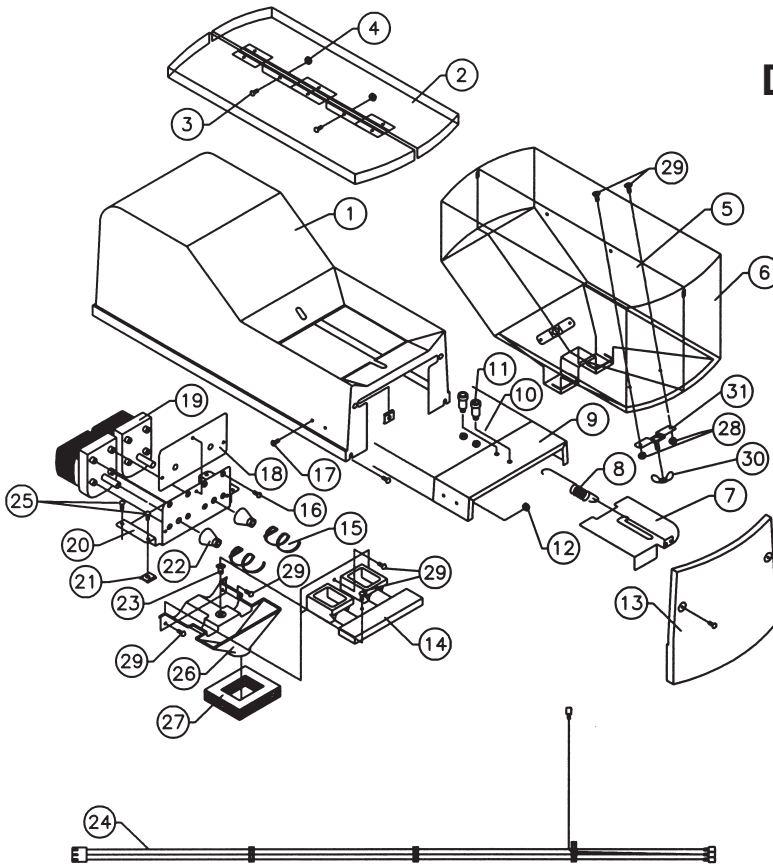
## GRINDHEAD ASSEMBLY:

#	PART NO.	DESCRIPTION
1	71133	230 VOLT GRINDER MOTOR
2	71124	THRUST BEARING
3	80025	TENSION SPRING
4	71000	GRIND HEAD
5	71030	CHAFF SPRING
6	71123	CHAFF SPRING RETAINER
7	71179	SCREW, 4-40x1/4 PH FL
8	71052	SOLENOID BRACKET
9	07046-02	SCREW, 8-32x1/4" PH PN
10	71177	SCREW, 8-32x3/8" PH FL HD
11	71176	FEEDWORM ASSEMBLY
12	85281w	BURRS
13	86812	SCREW, 10-32x5/16"
14	71012	DRIVE COUPLER
15	71081	SHEAR PLATE
16	70483	SHEAR COVER
17	71001	GRIND CAP
18	71100	SCREW, 5/16-18x5/8"
19	71298	ADJUSTING BEARING
20	86341	ADJUSTING SCREW
21	86340	LOCKING NUT
22	71080	WETNESS SEAL GASKET
23	07044-02	SCREW, 8-32x1/2"
24	71056	KEEPER PLATE
25	71282	SPRING BRACKET
26	71171	SHUTTER SPRING
27	71004	SHUTTER GLIDE
28	71130	SPRING PIN
29	71257	220 VOLT SHUTTER SOLENOID
30	71057	BEARING SHEET
31	86872	BOLT, 1/4-20x1/2"
32	86864	CAGE NUT, 1/4-20
34	71169	DECAL - COARSE/FINE
35	07026-07	SCREW, 8-32x3/8" PH PN



## Single Bean Upper Assembly

#	PART NO.	DESCRIPTION
1	71090	HOPPER CRADLE ASSEMBLY
2	71174	FLANGED SLEEVE, .183" OD SS
3	60288	SCREW, 6-32 X 1/2" PH RD HD SS
4	71175	HOPPER LID ASSEMBLY
5	71277	HOPPER ASSEMBLY
6	71199	WINGNUT, ESNA 1/4-20
7	71082	BOLT, CARRIAGE 1/4-20 X 1/2" SS
8	71279	BEAN SHUTOFF
9	71117	HOPPER GASKET
10	71084	SCREW, 8-32x1/2" PH TR SS
11	71189	FRONT PANEL ASSEMBLY
12	86913	NUT, ESNA 6-32
13	71171	SPRING, SHUTTER
14	60007	NUT, ESNA 1/4-20 SS
15	71193	BRACKET, SHUTOFF
16	71122	BOLT, SHOULDER 5/8" X 5/16" SS

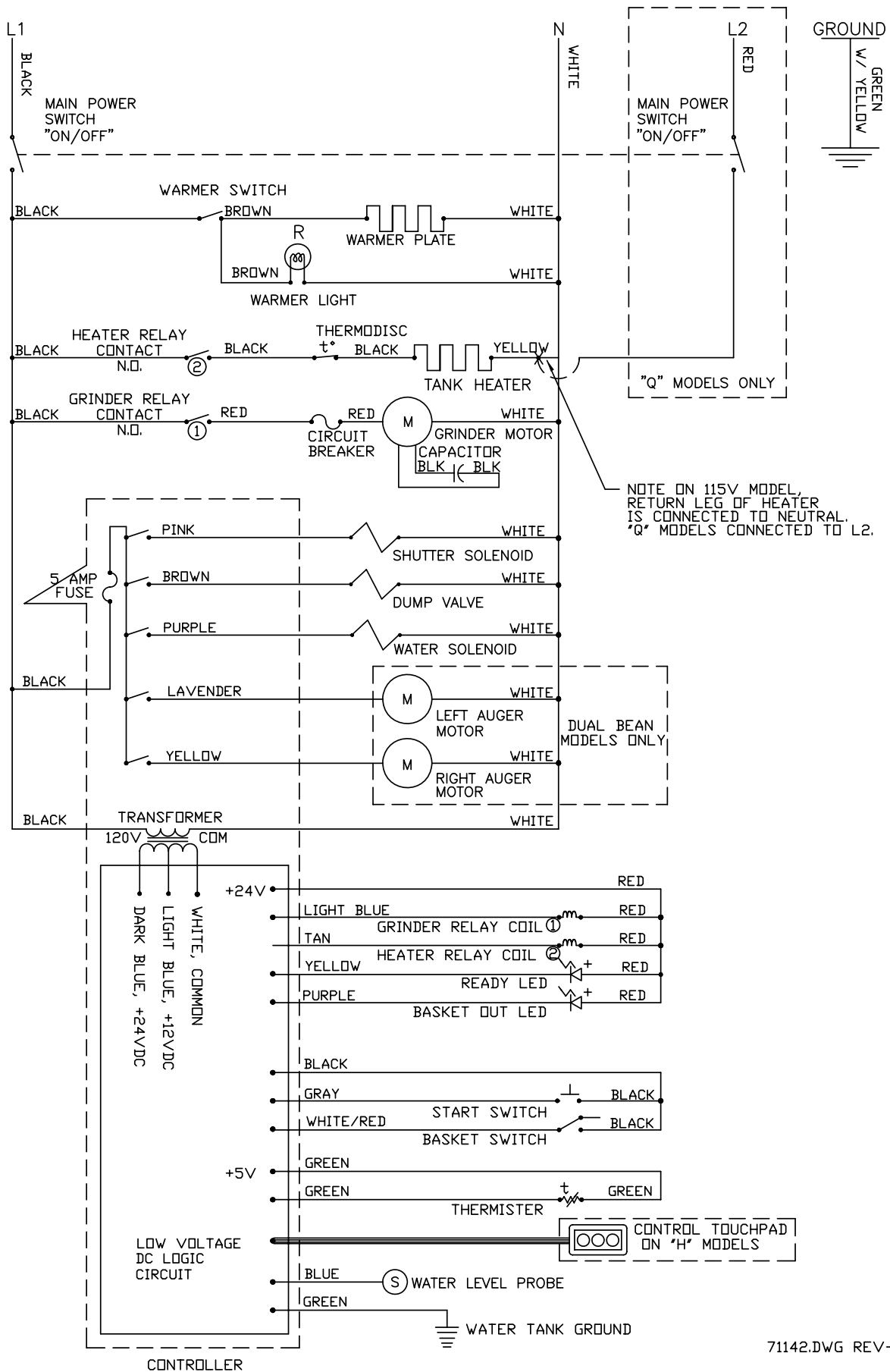


## Dual Bean Upper Assembly

#	PART NO.	DESCRIPTION
1	71222	HOPPER CRADLE ASSEMBLY
2	71229	HOPPER LID ASSEMBLY
3	86087	NYLON SCREW, 8-32x1/2 SL BD
4	86086	NYLON NUT, 8-32 LOCK
5	71206	HOPPER PARTITION
6	71210	DUAL BEAN HOPPER ASSEMBLY
7	71204	SHUTOFF VALVE
8	86508	CENTER SPRING
9	71208	SHUTOFF VALVE BRACKET
10	60007	NUT, 1/4-20 ESNA
11	71122	SHOULDER BOLT, 5/16"x5/8"
12	86913	NUT, 6-32 ESNA
13	71228	FRONT PANEL ASSEMBLY
14	71220	PORTIONER, UPPER HALF
15	86481	AUGER DRIVE SPRING
16	71177	SCREW, 8-32x3/8 PH FL
17	61304	SCREW, 6-32x1/2 PH PN BLACK
18	71248	PORTIONER COVER PLATE
19	86482	120 VOLT AUGER MOTOR
20	71215	AUGER MOTOR BRACKET
21	71166	TINNERMAN, 8-32 S.S.
22	86480	AUGER DRIVE FEEDER
23	71253	RIVNUT, 8-32 SECOND GRIP
24	71304	AUGER MOTOR WIRE HARNESS
25	71084	SCREW, 8-32x1/2 PH PN TYPE F
26	71219	PORTIONER, LOWER HALF
27	71419	PORTIONER GASKET
28	71261	8-32 ESNA NUT
29	07044-02	8-32 X 1/2 PH PN SS SCREW
30	71252	1/4-20 WING NUT
31	12074	BRACKET W/ 1/4-20 STUD

GNBISO-5.DWG REV-F

# Wiring Diagram 115/230V, 60Hz



71142.DWG REV-E





**GRINDMASTER™**  
CORPORATION

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