

Eccellenza touch



Service Manual

1.4.2

VKI
TECHNOLOGIES
A DIVISION OF KEURIG CANADA INC.





Carefully read this instruction manual before proceeding with the installation and operation of this equipment. Keep this manual in a safe place for future reference.

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SECTION 1

Safety Information & Equipment Specifications

Your safety is extremely important to us. To avoid personal injury or damage to the equipment and its surrounding areas, it is **imperative** that you read and understand the safety information outlined in this section before proceeding with the installation and operation of this equipment.

Safety Symbols

The following symbols are used throughout this publication:



Indicates an electrical shock hazard.



Indicates a potential safety risk, or a risk of damage to equipment and/or its surroundings.



Indicates important information that must be understood before proceeding.

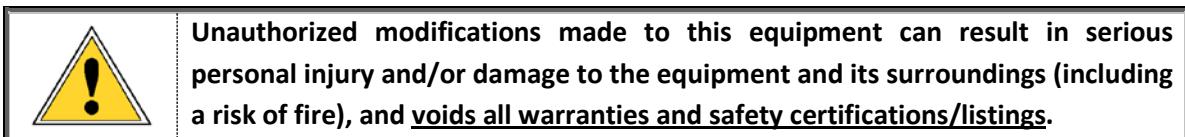


Indicates an important note or useful tip.

Important Safeguards and Precautions

- This equipment is designed for indoor use **ONLY** and must **never** be installed outdoors.
- The installation of this equipment **must** comply with **all** municipal, state/provincial, and federal electrical and plumbing codes.
- Installation and servicing of this equipment must **only be performed by qualified personnel**. Do not attempt to install or service this equipment if you are not qualified as it may result in personal injury. There are no user-serviceable parts inside the equipment.
- Do not use an electrical extension cord or power bar.
- This equipment must be installed in a location with an ambient temperature between 5°C-35°C (40°F-95°F).
- The main water supply pressure must be between a minimum of 20psi and a maximum of 100psi.
- This equipment must be positioned so that the wall plug and the main power switch are both easily accessible.
- Do not connect this equipment to a voltage supply other than the voltage indicated on the serial number decal.
- Do not immerse this equipment, or any part of this equipment, in liquid.
- Do not install the equipment in an area where water spray is present.
- This equipment must be installed securely on a level surface. If it does not appear to be a stable location, select another installation location.
- Leave a **minimum of 2" (5cm)** of space all around this equipment for proper ventilation.
- Keep hands clear of the dispensing area at the front of this equipment. Liquids being dispensed are extremely hot and can cause severe burns.
- **Never** disconnect this equipment from the wall outlet by pulling on the service cord, and never use this equipment if the service cord is damaged.
- If the service cord is damaged, **it must be replaced with a new service cord** that is available from your distributor or the manufacturer of this equipment.
- **Never** circumvent the safety features incorporated into the equipment. They are there for your protection and **should never be disabled or bypassed under any circumstances**.
- **Always** switch the power off and disconnect the service cord when cleaning the interior of this equipment. Components inside this equipment can cause electrical shock resulting in personal injury.

- Use caution when servicing the water tank or any of its components - the water in the tank and the tank components may be extremely hot and can cause severe burns.
- Use caution when working inside this equipment as there may be sharp edges on some components that can cause cuts.
- To prevent electrical shock, remove all jewelry (rings, watches, etc.) when servicing this equipment.
- **Use only original equipment manufacturer replacement parts.** Unapproved replacement parts can result in personal injury, fire and/or further damage to the equipment.
- **Do not** allow children to access this equipment. They are not aware of the potential dangers that exist.
- **Never** use ammonia-based cleaners on the surfaces of this equipment as they will become discolored and/or damaged permanently. Use mild cleaning products, such as dish soap.
- **Do not** lean on, push or shake the equipment as there is a risk that it can tip or fall, or cause water to overflow and contact electrical components creating a shock hazard.



Specifications

Voltage Rating	120 Volts AC @ 60hz (120 Volt Model)
Heater Wattage	1300 Watts
Weight	76 lbs (34.5 kg)
Cup Sizes	8-oz, 10-oz, 12-oz
Temperature Control	Electronic Probe
Heating Time	20 minutes after install
Brew Temperature	198°F (92°C)
Heater Protection	Yes
Overflow Protection	Yes
Circuit Protection	Yes
Certifications & Listings	  

Capacities

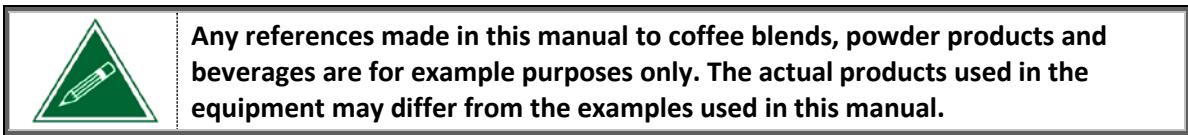
Coffee Hopper 1	1000 grams (2.25 lbs) with partition at center or 1350 grams (3 lbs) with partition at right side
Coffee Hopper 2	1000 grams (2.25 lbs) with partition at center or 650 grams (1.5 lbs) with partition at right side
Powder Hopper 1	1000 grams (2.25 lbs)
Powder Hopper 2	1000 grams (2.25 lbs)
Powder Hopper 3	1000 grams (2.25 lbs)
Water Tank	3.8 litres (1 gallon)
Waste Bin	Approximately 25 cups (10-oz)

Equipment Dimensions

Height:	28.0" (71 cm)
Width:	20.0" (51 cm)
Depth:	20.25" (51 cm)

Installation Dimensions

Height:	34.5" (88 cm)
Width:	22.0" (56 cm)
Depth:	22.5" (57 cm)



SECTION 2

Care and Maintenance

To keep the Eccellenza Touch running efficiently and at peak performance, the following maintenance procedures must be performed at their specified intervals. It is recommended that equipment maintenance be scheduled at a time that would be the least disruptive to your customers. Whenever possible, replace the components requiring maintenance with new or refurbished ones, and then refurbish the older components at your shop.



Failure to perform the required care and maintenance will result in poor beverage quality and will lead to equipment malfunctions. It may also void any remaining warranty on the equipment and its components.

Daily Care

- ▶ **Empty the Cup Stand** – empty the contents of the cup stand and rinse the stand and grill under clean running water.
- ▶ **Empty the Waste Bin** – empty the contents of the waste bin.
- ▶ **Refill the Coffee Dispensers and Powder Dispensers** – top off the coffee and powder dispensers.
- ▶ **Wipe Exterior and Countertop** – using a clean towel, wipe any coffee grounds and spills from the exterior of the machine and the countertop.

Every 1-2 Weeks

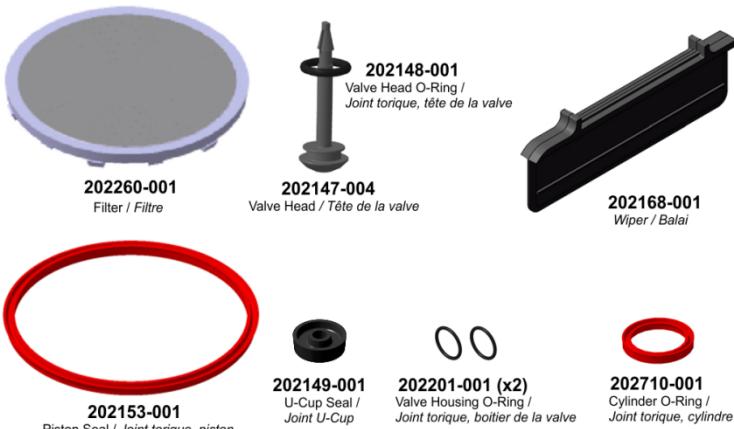
- ▶ **Clean the whipper components** - for detailed information about disassembling and cleaning the whipper components, go to [page 42](#).
- ▶ **Inspect Water Hoses and Tubing** - inspect all plumbing connections, water hoses, tubing, clamps, fittings and water related components (valves, water tank, etc.) for signs of wear or damage. Replace them, if required.

Every 10,000 Cycles or 12 Months

- ▶ **Clean the brewer components** with warm water and dish soap. For detailed information about disassembling the brewer, go to [page 23](#).
- ▶ **Clean the whipper hoses** - remove all three whipper outlet hoses and thoroughly clean the exterior and the interior of each of the hoses. A plastic bristled brush (VKI P/N - 202477-001) must be used to clean the interior of the hoses.



- **Replace Brewer Seals and Gaskets** - there are several seals and gaskets located throughout the brewer assembly that need to be replaced every 12 months. The brewer '**Yearly Maintenance Kit**' (p/n - 202341-001) contains everything required.



Contents of Yearly Maintenance Kit (202341-001)

- **Replace whipper seals** - replace the rubber seals on all three whipper bases.
- **Inspect Electrical Wiring and Components** - inspect all of the equipment wiring, terminals, connectors and electrical components (valves, motors, relays, element, etc.) for signs of wear, damage or overheating at connection points. Replace them, if required.

Every 3 Years - Technician

- **Replace the following:** heater element, thermal cut-off switch, external relays, all seals and gaskets and o-rings.
- **Refurbish the Brewer** - the brewer must be disassembled and all worn components must be replaced. The brewer '**3 Year Maintenance Kit**' (p/n - 202341-002) contains everything required.

Miscellaneous

- Run the **Brewer Rinse Cycle** when prompted by the machine (a message appears on the touch screen).
- Run the **Powder Rinse Cycle** when prompted by the machine (a message appears on the touch screen).
- **Verify Water Tank Components** - dependant on the local water conditions, inspect, clean or replace components, as required.
- **Cleaning the Coffee Dispenser** - empty, remove, and clean the coffee dispenser with warm water and dish soap. Thoroughly dry the dispenser before re-installing it. For detailed information about removing the coffee dispenser, go to [page 35](#).
- **Cleaning the Powder Dispensers** - empty, remove, and clean the powder dispensers with warm water and dish soap. Thoroughly dry the dispensers before re-installing them. For detailed information about removing the powder dispensers, go to [page 39](#).



Failure to perform the required care and maintenance will result in poor beverage quality and will lead to equipment malfunctions. It may also void any remaining warranty on the equipment and its components.

SECTION 3

Error and Reminder Messages

Main Screen

Message Displayed	Condition	Action(s) Required
Backend Services Unreachable. Trying to reconnect...	The connection was lost.	Will reconnect automatically. If not, reboot the machine.
<ul style="list-style-type: none"> • System Starting • Waiting for initialization • System initialization • System update • Warming up • Machine warming up • System Ready • Brewing in progress • Water filling • Brewer reinitialization 	These are all regular operation messages.	These messages will clear themselves automatically.
Power Saving Mode	The machine is currently in Power Saving mode.	The machine will exit Power Saving mode at its preset wake time.
Powder #1 (#2, #3) low level. Fill powder container #1 (#2, #3)	The powder level for the identified container (#1, #2 or #3) is low.	Refill the powder container(s). <i>Note: the message may continue to appear for a few vends after refilling - this is normal and it will clear.</i>
Empty waste bin and cup stand	The waste bin is full.	Empty the contents of both the waste bin and the cup stand.
Automatic brewer (or powder system) rinse. Insert an empty container under spout and press <Start>.	The automatic rinse cycle for the brewer or for the powder system has been triggered.	Place an empty, leak proof container under the pour spouts area, and then press <Start> to begin the rinse cycle.
Overflow detected. Remove and empty cup stand and floor tray.	An overflow has been detected.	Remove the cup stand and floor tray and empty their contents.
Verify water connection and feed	The water tank is taking too long to fill.	Check the main water source, as well as the hoses going to the machine inlet valve for leaks or blockages.
Please reinsert waste bin	The waste bin is not installed.	Install the waste bin. If message persists, check the waste bin sensor. <i>*If message persists, clean the proximity sensor and the brewer wiper.</i>
Water Safety Level. Water level has reached the level safety probes.	The water tank has overfilled.	Drain some water from the tank. If this persists, clean the level probes.
Interrupted vend. Insert an empty container under spout and press Start.	The vend was interrupted and the cycle did not finish.	Place a cup under the pour spouts and press the <Start> button. Any liquid still in the system will drain into the cup.
Call for Service (in VENDING MODE)	The Cashbox is full.	Empty the cashbox and reset the cashbox counter.

System Status Screen

Code	Message Displayed	Condition	Action(s) Required
--	Electronic Board Communication Lost Please Call for Service or Press Acknowledge to Retry	Communication between the control board and HMI is lost.	1 - Press "Acknowledge" to reset 2 - Reboot the machine. 3 - If message persists, check the HMI, Control Board and wiring.
B1	Blower & Fan current is over safety level	Blower & Fan current is above the recommended safety level. Fan may be drawing too much power.	1 - Check the wiring and connections for the powder system blower. 2 - Clean any accumulation from the blower. 3 - If message persists, replace the powder system blower.
	Blower & Fan current is under minimum operation level	Blower & Fan current is below the minimum operating level. Fan may not be drawing enough power.	1 - Check wiring and connections for the powder system blower. 2 - If message persists, replace the powder system blower.
D2	LED in Waste Bin detector has a fault	The IR LED of the waste bin sensor voltage is over the configured maximum operation level.	1 - Clear the message. 2 - Reboot the machine. 3 - If message persists, replace the waste bin presence sensor.
G1	Coffee Grinder Over Current Standby	The grinder current was over the stand by operation level.	1 - Clear the message. 2 - Reboot the machine.
	Grinder Fuse Fault	Grinder fuse is in fault.	1 - Check the fuse on the control board.
	Grinder Sensor Error	Grinder Current Sensor is out of range.	1 - Clear the message. 2 - Reboot the machine.
	Grinder's current is close to critical level	Grinder current is close to maximum operating level. Grinder may be drawing too much power.	1 - Check to see if the grinder is jammed (possibly a foreign object in the grinder heads). 2 - Check the condition of the grinder belt. 3 - Reboot the machine. 4 - If message persists, replace the grinder.
	Grinder's current is close to minimum operation level	Grinder current is close to minimum operating level. Grinder may not be drawing enough power.	1 - Reboot the machine. 2 - If message persists, replace the grinder.
	Grinder's current is over safety level	Grinder current has exceeded the maximum operating level.	1 - Check to see if the grinder is jammed (possibly a foreign object in the grinder heads). 2 - Check the condition of the grinder belt. 3 - Reboot the machine. 4 - If message persists, replace the grinder.
	Grinder's current is under minimum operation level	Grinder current is below the minimum operating level.	1 - Check the condition of the grinder belt. 2 - Check the wiring and connections to the grinder. 3 - The grinder may need to be replaced.

Section 3 - Error & Reminder Messages

Code	Message Displayed	Condition	Action(s) Required
H1	Heater's current is close to critical level	Heater current is close to maximum operating level. Heater may be drawing too much power.	1 - Inspect wiring and connections to the heater relay and heater element. 2 - Heater element may be drawing too much power. If message persists, replace the heater element.
	Heater's current is close to minimum operation level	Heater current is close to minimum operating level. Heater may not be drawing enough power.	1 - Reboot the machine. 2 - If message persists, replace the heater element.
	Heater's current is over safety level	Heater current has exceeded the maximum operating level.	1 - Inspect wiring and connections to the heater relay and heater element. 2 - Heater element may need to be replaced. 3 - Heater relay may need to be replaced.
	Heater's current is under minimum operation level	Heater current is below the minimum operating level.	1 - Check wiring and connections to the heater relay. 2 - Check wiring and connections to the heater element. 3 - Replace heater element.
	Water Tank Default Critical Min Temp	Water temperature went below the configured minimum critical temperature (Default 0 C).	1 - Clear the message. 2 - Reboot the machine.
	Water Tank Default Fill Heating Time	Inlet valve and heater were both activated for a period of time longer than the configured timeout.	1 - Clear the message. 2 - Reboot the machine.
	Water Tank Heating Timeout	Reaching the water set point (Default 95 C) took longer than the maximum configured heating timeout (Default: 30 min.)	1 - Clear the message. 2 - Reboot the machine. 3 - If message persists, replace the heater element.
	Water Tank Heating Probe Error	Heater bad connection count has exceeded the configured limit.	1 - Clear the message. 2 - Reboot the machine.
	Water temperature is over the maximum level	Water temperature has exceeded configured temperature setting.	1 - Heater relay may need to be replaced. 2 - Control board may need to be replaced.
K1	Fan is not present or has abnormal operation	Fan is not present or operating abnormally.	1 - Check fan wiring and connection to the control board. 2 - Clean any accumulation from fan. 3 - If message persists, replace the exhaust fan. 4 - If message persists, replace the control board.
L4	Water Tank Level Error	Safety level probe is detected while the normal level probe is not.	1 - Check wiring and connections to the level probes. 2 - Clean level probes.
L5	The water level is reaching the safety level probes	The water tank has overfilled and the water level is reaching the safety level probe.	1 - If this occurs during initial heating, it may be due to water expansion. Empty some water from tank. 2 - The machine may have been moved causing tank to overfill. Empty some water from tank. 3 - Level probes require cleaning.
MDB1	Cash Box Full	The cash box in the changer housing is full.	1 - Empty the cash box. 2 - Reset the Cash Box counter.
	Coin Changer...(various messages)	Miscellaneous Coin Changer-related issues.	Consult the coin changer manufacturer's documentation.

Code	Message Displayed	Condition	Action(s) Required
M1, M2, M3	Powder Dispensers current is close to critical level	Powder Dispenser current is close to maximum operating level. Powder motor may be drawing too much power.	1 - The powder product in the dispenser may be packed or compressed. Empty the dispenser. 2 - The dispenser may be jammed. 3 - The dispenser motor may be seized. Try to unseize the motor. 4 - If message persists, replace the powder dispenser motor.
	Powder Dispensers current is close to minimum operation level	Powder Dispenser current is close to minimum operating level. Powder motor may not be drawing enough power.	1 - Check the wiring and connections to the powder dispenser motor. 2 - The powder dispenser may not be engaged properly with the powder dispenser motor. 3 - The powder dispenser motor coupling may need to be replaced. 4 - If message persists, replace the powder dispenser motor.
	Powder Dispensers current is over safety level	Powder Dispenser current has exceeded the maximum operating level.	1 - The powder in the dispenser may be packed or compressed. Empty the powder dispenser. 2 - Powder dispenser may be jammed. 3 - The powder dispenser motor may be seized. Try to free the motor. 4 - If message persists, replace the powder dispenser motor.
	Powder Dispensers current is under minimum operation level	Powder Dispenser current is below the minimum operating level.	1 - Check the wiring and connections to the powder dispenser motor. 2 - If message persists, replace the powder dispenser motor.
M4, M5, M11	Whippers current is close to critical level	Powder Whipper current is close to maximum operating level.	1 - If message persists, replace the faulty whipper motor.
	Whippers current is close to minimum operation level	Powder Whipper current is close to minimum operating level.	1 - If message persists, replace the faulty whipper motor.
	Whippers current is over safety level	Powder Whipper current has exceeded the maximum operating level.	1 - If message persists, replace the faulty whipper motor.
	Whippers current is under minimum operation level	Powder Whipper current is below the minimum operating level.	1 - Check the wiring and connections to the whipper motor. 2 - If message persists, replace the faulty whipper motor.
M6, M7	Coffee Dispensers current is close to critical level	Coffee Dispenser current is close to maximum operating level.	1 - The dispenser may be jammed. 2 - The coffee dispenser motor may be seized. 3 - If message persists, replace the coffee dispenser motor.
	Coffee Dispensers current is close to minimum operation level	Coffee Dispenser current is close to minimum operating level.	1 - Check the wiring and connections to the dispenser motor. 2 - The coffee dispenser may not be engaged with the dispenser motor. 3 - The coffee dispenser motor coupling may need to be replaced. 4 - If message persists, replace the coffee dispenser motor.
	Coffee Dispensers current is over safety level	Coffee dispenser motor current has exceeded the maximum operating level.	1 - Check to see if the coffee dispenser motor is jammed. 2 - Reboot the machine. 3 - If message persists, replace the coffee dispenser motor.

Section 3 - Error & Reminder Messages

Code	Message Displayed	Condition	Action(s) Required
M6, M7	Coffee Dispensers current is under minimum operation level	Coffee dispenser motor current is below the minimum operating level.	1 - Check wiring and connections to the coffee dispenser motor. 2 - The coffee dispenser may not be engaged with the dispenser motor. 3 - The coffee dispenser motor coupling may need to be replaced. 4 - If message persists, replace the coffee dispenser motor.
M9	Brewer current is over safety level	Brewer current has exceeded the maximum operating level.	1 - The brewer may be seized/jammed. 2 - The brewer motor may need to be replaced.
	Brewer current is under minimum operation level	Brewer current is below the minimum operating level.	1 - Check the wiring and connections to the brewer motor. 2 - The brewer motor may need to be replaced.
	Brewer Inversion	Brewer is going in the wrong direction. or Wiper is going in the wrong direction (detected by the activation of the wrong switch).	1 - Check the wiring and connections to the brewer motor. 2 - Check wiring and connections to the wiper motor switches. 3 - One, or both, of the wiper motor switches needs to be replaced.
	Brewer Not Counting	The brewer quadrature encoder is not returning any count.	1 - Clear the message. 2 - Reboot the machine. 3 - If message persists, replace the brewer motor.
	Brewer Not Initialized	A brewer sequence was started while the brewer was not initialized.	1 - Reboot the machine to initialize the brewer.
	Brewer Over Current Standby	The brewer current was over the configured stand by operation level.	1 - Clear the message. 2 - Reboot the machine.
	Brewer Safety Fault	The IC of the brewer driver is in fault.	1 - Clear the message. 2 - Reboot the machine. 3 - If message persists, replace the brewer motor.
	Brewer Timeout	Brewer motion is timed out: brewer is moving too slow, and unable to reach required position in the allotted period of time.	1 - Check the wiring and connections to the brewer motor. 2 - The brewer motor may need to be replaced.
	Brewer Unexpected Item Received	A brewer sequence step was received while a wiper sequence was already in progress.	1 - Clear the message. 2 - Reboot the machine. 3 - If message persists, replace the brewer motor.
M10	Wiper current is over safety level	The wiper motor current was over the configured maximum operation level.	1 - The wiper may be jammed or binding. 2 - The wiper motor may need to be replaced.
	Wiper current is under minimum operation level	The wiper motor current was under the configured minimum operation level.	1 - The wiper may be missing or improperly installed. 2 - Check wiper motor connections. 3 - The motor may need to be replaced
	Wiper Inversion	The wiper limit switches are inverted.	1 - Reverse the wiring connections to the wiper switches.
	Wiper Not Initialized	A wiper sequence was started while the wiper was not initialized (hommed).	1 - Clear the message. 2 - Reboot the machine. 3 - If message persists, check wiper motor switches and connections. 4 - If message persists, a wiper motor switch needs to be replaced.
	Wiper Over Current Standby	The wiper current was over the configured stand by operation level.	1 - Clear the message. 2 - Reboot the machine.

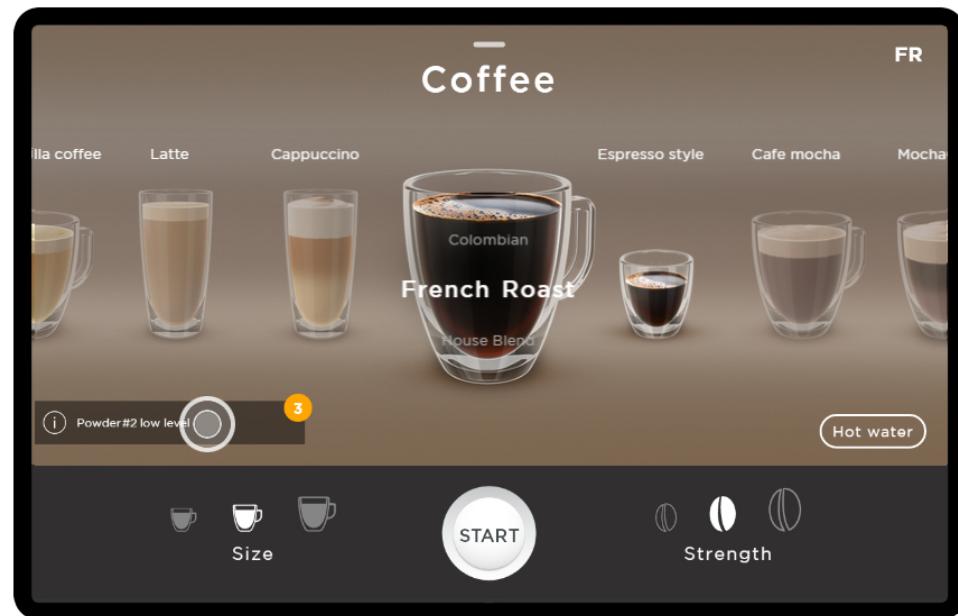
Code	Message Displayed	Condition	Action(s) Required
M10	Wiper Safety Fault	The IC of the wiper driver is in fault mode.	1 - Reboot the machine. 2 - If message persists, the control board may need to be replaced.
	Wiper Timeout	Wiper motion is timed out: brewer is moving too slow (or stopped), unable to reach required position in the allotted period of time.	1 - The wiper may be jammed/binding. 2 - Check wiper motor connections. 3 - The wiper motor may need to be replaced.
	Wiper Unexpected Item Received	A wiper sequence step was received while a wiper was already in progress.	1 - Clear the message. 2 - Reboot the machine.
S1, S2	Machine No Cup Light 1 Short / Machine No Cup Light 2 Short	Cup Light LED #1 or #2 is shorted.	1 - Replace LED/harness.
	Impossible temperature (greater than over heat or below 0)	Invalid temperature being reported.	1 - Inaccurate temperature reading - replace the temperature probe.
T1	Impossible temperature (greater than over heat or below 0)	Invalid temperature being reported.	1 - Inaccurate temperature reading - replace the temperature probe.
	Water Tank Temperature Probe Short	Temperature probe is shorted	1 - Check the wiring and connection to the temperature probe. 2 - Replace the temperature probe.
	Water Tank Temperature Probe Not Present	Temp probe is open.	1 - Check the wiring and connection to the temperature probe. 2 - Replace the temperature probe.
T1	Water temperature is not rising	Water temperature is not increasing while in heating mode.	1 - Check wiring and connections to heater relay, heater element and control board. 2 - Heater relay may need to be replaced. 3 - Element may need to be replaced. 4 - Control board may need to be replaced.
V1-V6	Valves & Relay current is under minimum operation level	Valves & Relay current is below the minimum operating level.	1 - Clear the message. 2 - Check wiring and connections to inlet and outlet valves. 3 - If message persists, the inlet valve or one of the outlet valves may need to be replaced.
	Valves & Relay current is over safety level.	Valves & Relay current has exceeded the maximum operating level.	1 - Clear the message. 2 - If message persists, the inlet valve or one of the outlet valves may need to be replaced.
Z99	Coffee Dispensers Over Current Standby	The coffee dispensers current sum was over the configured stand by operation level.	1 - Clear the message. 2 - Reboot the machine.
	Machine Fan Blower Over Current Standby	The fan or blower current sum was over the configured stand by operation level	1 - Clear the message. 2 - Reboot the machine.
	Powder Dispensers Over Current StandBy	The powder dispensers current sum was over the configured stand by operation level.	1 - Clear the message. 2 - Reboot the machine.
	Powder Whippers Over Current StandBy	Powder whippers current sum was over the configured stand by operation level	1 - Clear the message. 2 - Reboot the machine.
	Water Tank Coil Valves Over Current StandBy	Valve(s) current has exceeded the configured stand by operation level	1 - Clears automatically. If not, reboot the machine.
	Water Tank Detectors Power Failure	Fault signal triggered due to a failure of the level probes and overflow detector power supply.	1 - Clear the message. 2 - Reboot the machine. 3 - If message persists, replace the control board.
	Water Tank Heater Over Current StandBy	Heater current has exceeded the configured stand by operation level.	1 - Clears automatically. If not, reboot the machine.

Clearing Error and Reminder Messages

Should an error or reminder message be triggered, the error or message is displayed at the lower left of the screen. In the example below, the message reads "**Powder #2 low level**". However, in our example, there are three messages present, as indicated by the number "3" in the upper right corner of the message box. Messages are stacked in the order in which they occur.



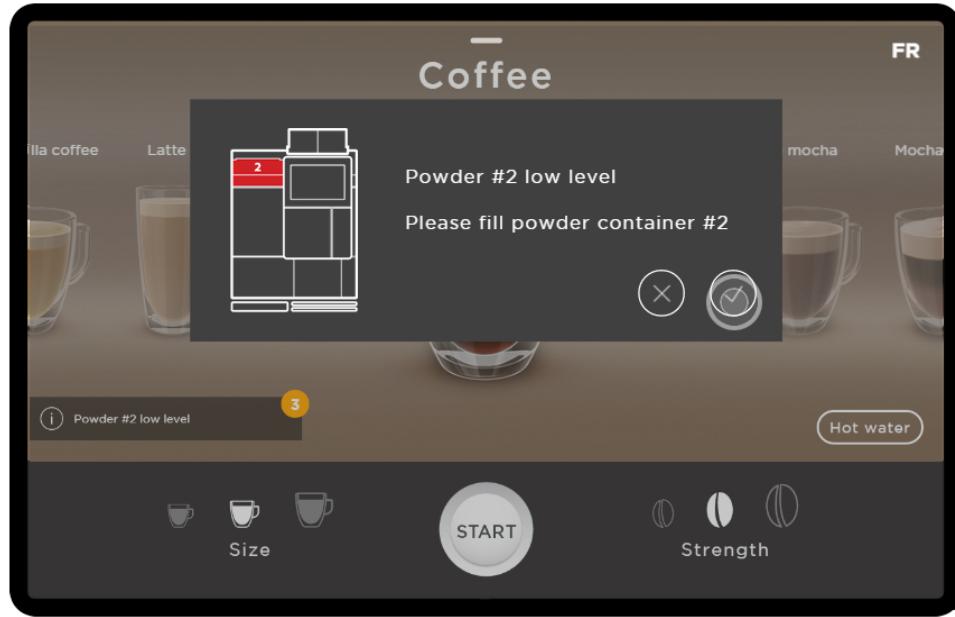
Tap the message box to view more details about the message and the steps required to rectify the issue.



In this case, the 'Powder 2' dispenser is running low and must be refilled. Open the powder dispenser lid and refill the dispenser.



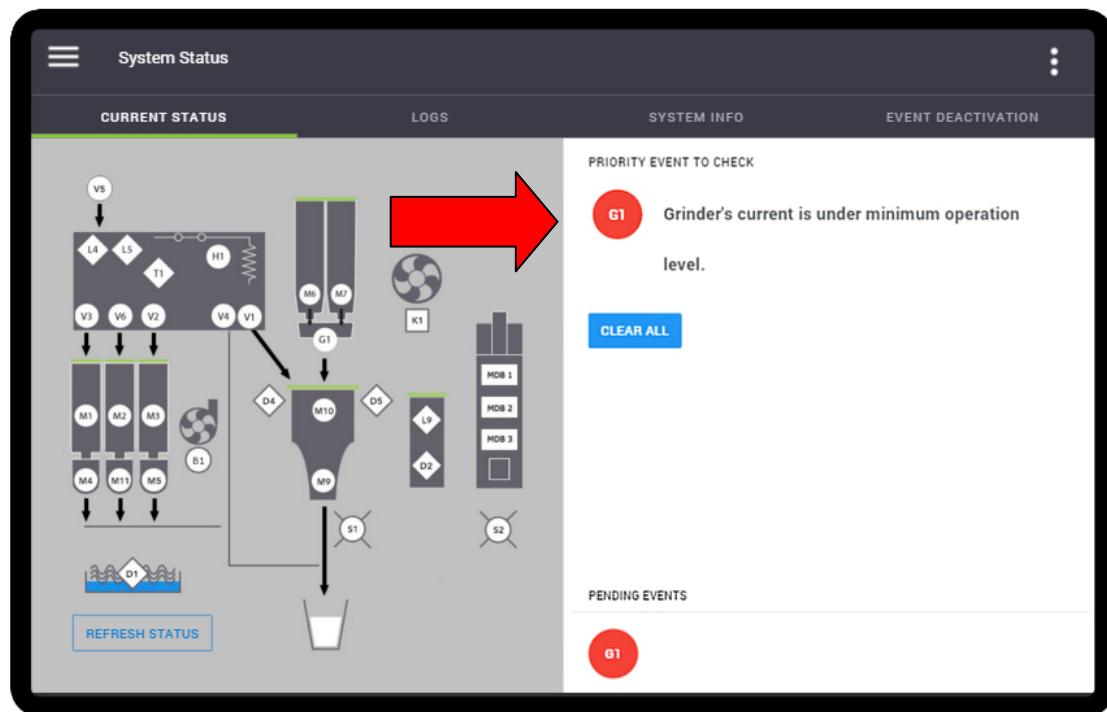
Once done, tap the checkmark to clear this message. If you cannot immediately refill the dispenser, tap the 'X' to close this window without clearing the message.



In a case where multiple messages are present, after clearing the first message, any subsequent messages are displayed (one at a time) until they are all cleared.

Fault Codes

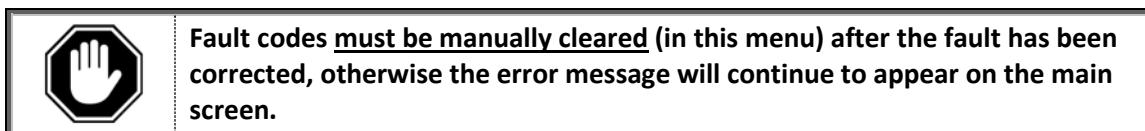
Should a fault be present, it is identified in the "Current Status" tab, under the "System Status" menu, using one of the codes from the list below. The right section of the screen shows the component code (and pending component codes) and a brief description of the fault.



CODE	COMPONENT
B1	Blower (Powders)
D1	Tank Overflow Detection
D2	Waste Bin Presence Detection
D4	Wiper Switch - Left
D5	Wiper Switch - Right
G1	Grinder
H1	Heating Element
K1	Exhaust Fan
L4	Normal Water Level Detection
L5	Safety Water Level Detection
L9	Waste Bin Level Detection
M1	Powder 1 Motor
M2	Powder 2 Motor
M3	Powder 3 Motor
M4	Powder 1 Whipper Motor

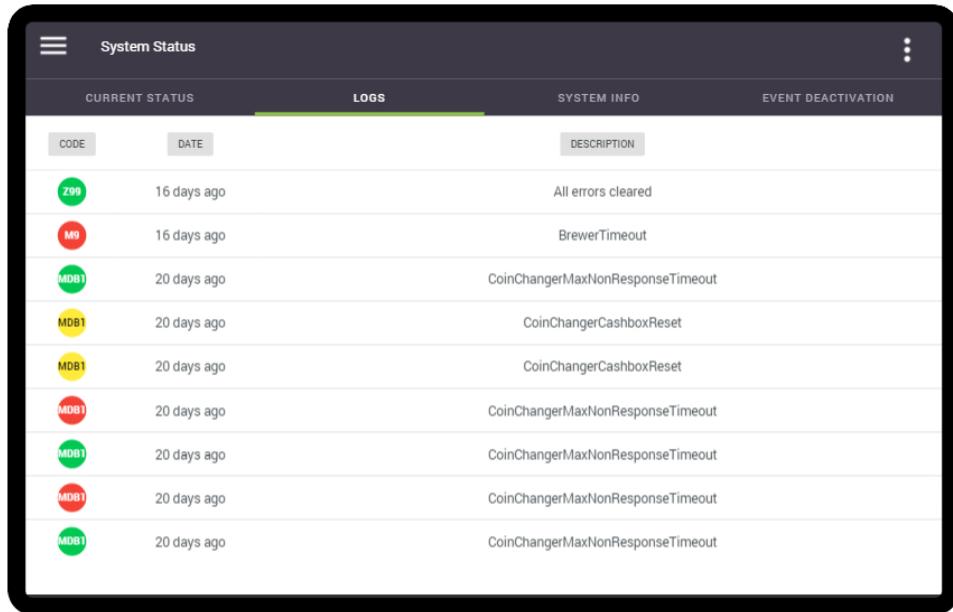
CODE	COMPONENT
M5	Powder 3 Whipper Motor
M6	Coffee 1 Motor
M7	Coffee 2 Motor
M9	Brewer Motor
M10	Brewer Wiper Motor
M11	Powder 2 Whipper Motor
S1	Cup Lighting
S2	Esthetic Lighting
T1	Temperature Probe
V1	Outlet Valve - Coffee
V2	Outlet Valve - Powder 3
V3	Outlet Valve - Powder 1
V4	Outlet Valve - Hot Water
V5	Inlet Valve
V6	Outlet Valve - Powder 2

In the example above, a fault has been detected with "G1", which is the grinder. After correcting the error, tap the "Clear All" button. The screen then displays a green checkmark with the "System is running perfectly" message beneath it. In some cases, the error may re-appear when the machine is placed back in normal operation, at which point a more thorough troubleshooting is required.



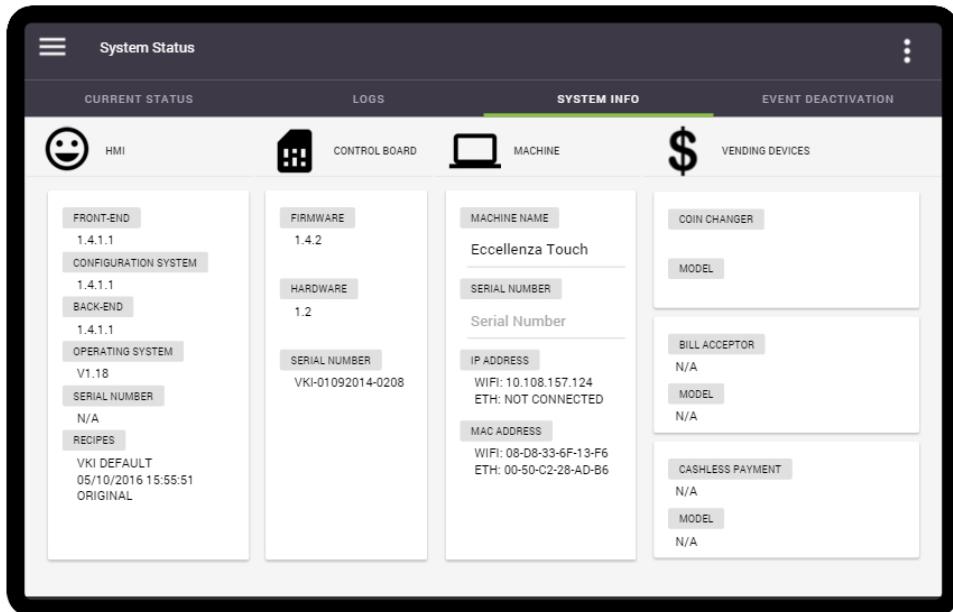
Logs

The 'Logs' tab shows the fault history of the equipment in list form (from newest to oldest). Codes marked in Red identify that servicing was required. Yellow-marked codes warn of potential faults. Codes in green identify that the fault was corrected, and when it was corrected.



System Info

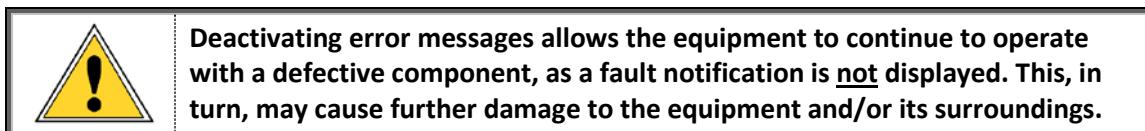
Information about the equipment, such as serial number, firmware versions, network address, etc., can be found in this menu.



The "Machine Name" field can be changed. To do so, simply tap on the machine name and the keyboard appears, allowing you to rename the machine.

Event Deactivation

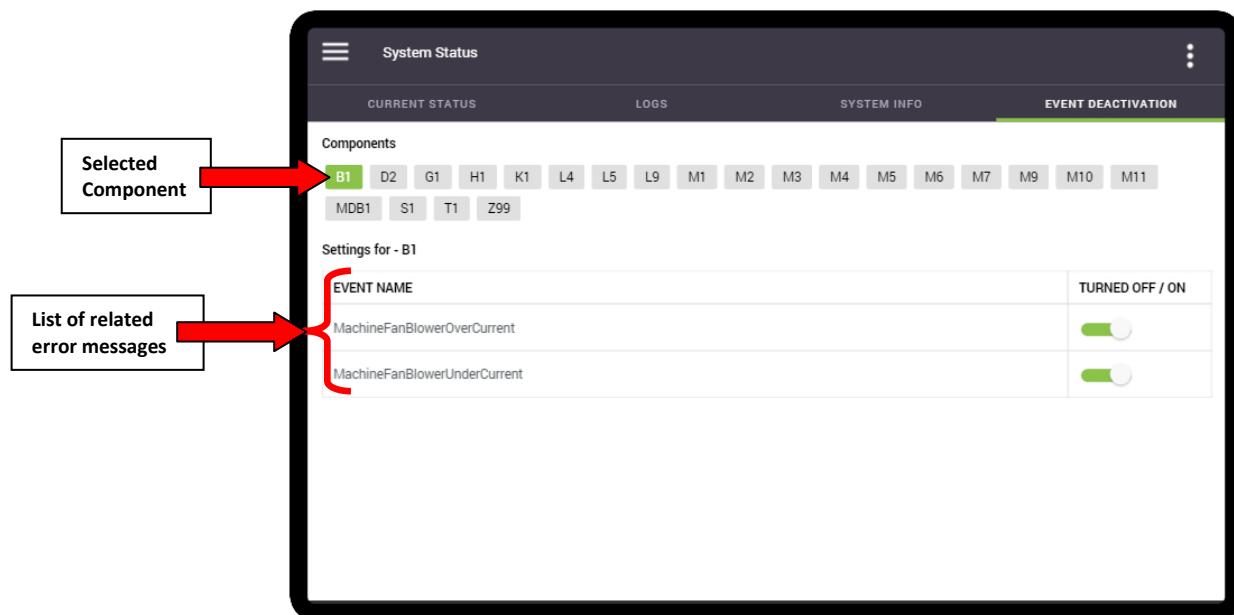
The Event Deactivation tab allows you to deactivate any of the error messages that can potentially appear should the system detect a fault.



To deactivate a particular error message:

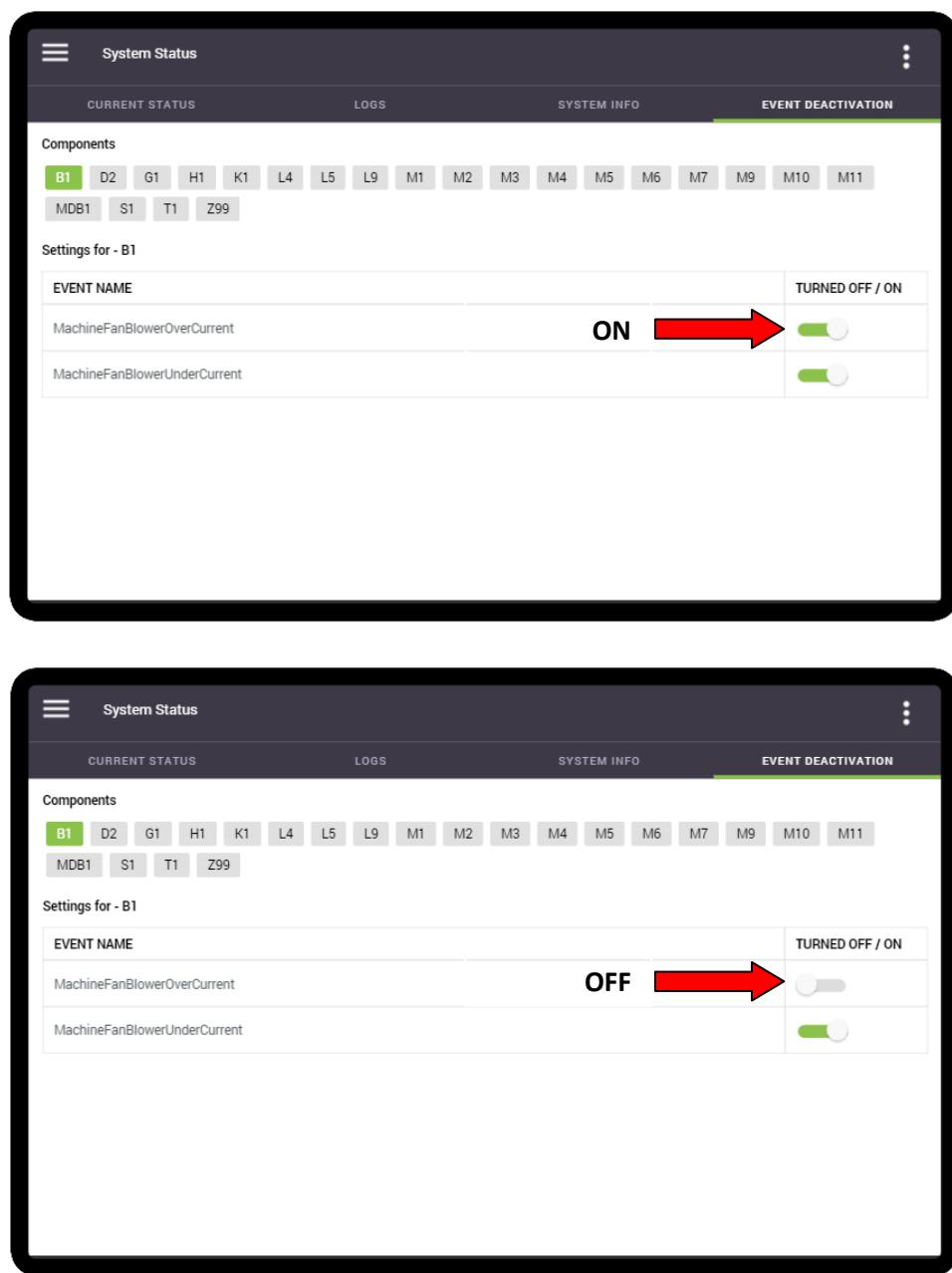
1. Select the required component from the list of components. The table below identifies the component code.

 - a. Once a component is selected, the list of related error messages for this component is displayed under the "Event Name" heading.



CODE	COMPONENT	CODE	COMPONENT
B1	Blower (Powders)	M4	Powder 1 Whipper Motor
D1	Tank Overflow Detection	M5	Powder 3 Whipper Motor
D2	Waste Bin Presence Detection	M6	Coffee 1 Motor
G1	Grinder	M7	Coffee 2 Motor
H1	Heating Element	M9	Brewer Motor
K1	Exhaust Fan	M10	Brewer Wiper Motor
L4	Normal Water Level Detection	M11	Powder 2 Whipper Motor
L5	Safety Water Level Detection	S1	Cup Lighting
<bmdb1< b=""></bmdb1<>	Vending Devices	T1	Temperature Probe
M1	Powder 1 Motor	Z99	Various Components
M2	Powder 2 Motor		
M3	Powder 3 Motor		

- Under the "**Turned Off / On**" heading at the right, turn off the error to be deactivated using the slider (green slider = ON, gray slider = OFF).

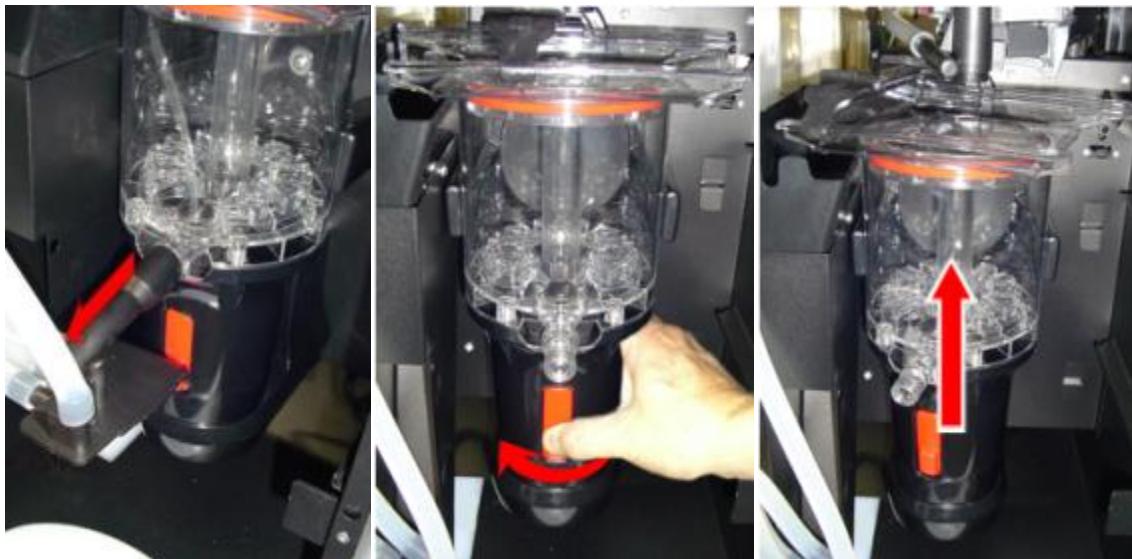


- Repeat the procedure for any other components, if necessary.

SECTION 4

Brewer System

Replacing the Brewer Assembly



1. Remove the waste bin, then unlock and open the front door.
2. Remove the brewer spout assembly.
3. Press on the bottom of the red release latch, and rotate the brewer towards the left (clockwise) to release it.
4. Lift the brewer off the brewer motor to remove it.



If you are performing the annual maintenance on the brewer, continue with this section of the manual for instructions to completely disassemble the brewer.

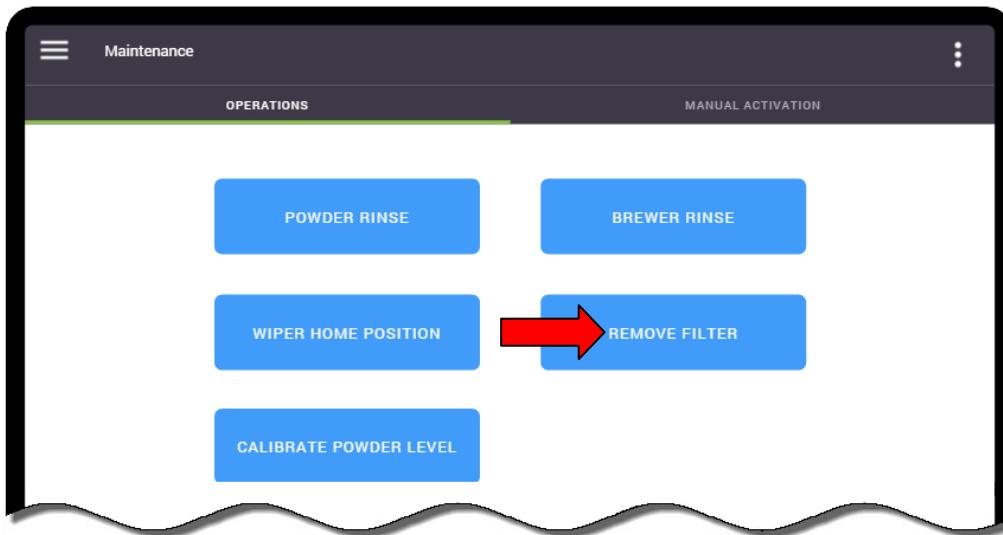
To install the brewer, follow these same instructions in the reverse order.



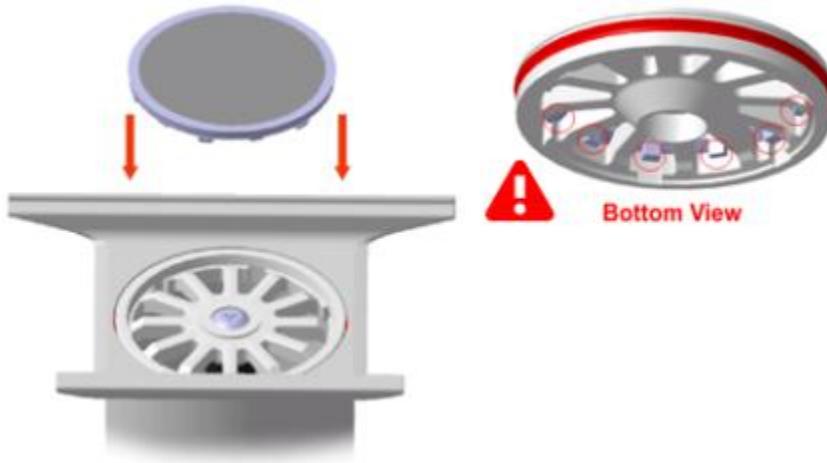
When re-installing the brewer, make certain the wiper is properly installed inside of the wiper arm.

Replacing the Filter Screen

1. Remove the waste bin, open the front door, and re-install the waste bin. Allow the machine to complete its initialization.
2. Access the equipment programming, and navigate to the '**Maintenance**' menu.
3. Tap the '**Remove Filter**' option.



4. The brewer lowers the piston all the way to the bottom of the cylinder, which will subsequently unclip the filter screen from the piston.
5. The piston then moves to the top of the cylinder, allowing for easy retrieval of the filter screen.
6. Install the new filter screen into the top of the piston by clipping it in place - **make certain it is properly clipped all the way around**.



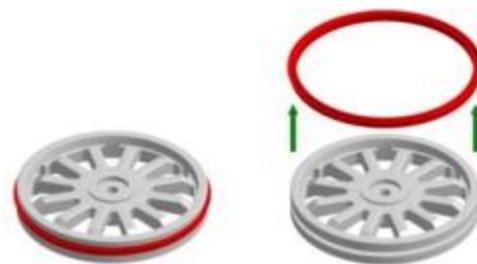
7. Remove the waste bin.
8. Close the door and re-install the waste bin, and allow the machine to complete its initialization.

Removing the Brewer Piston & Seal

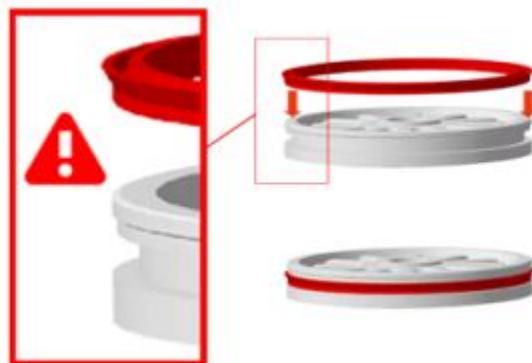
1. Remove the filter screen ([see page 24](#)).
2. Remove the brewer from the machine, and remove the wiper from the brewer.
3. Remove the screw securing the piston to the piston rod, and then remove the piston.



4. Using a small flat head screwdriver, carefully pry the seal from the piston to remove it. ***Avoid damage to the piston as it will then need to be replaced as well.***

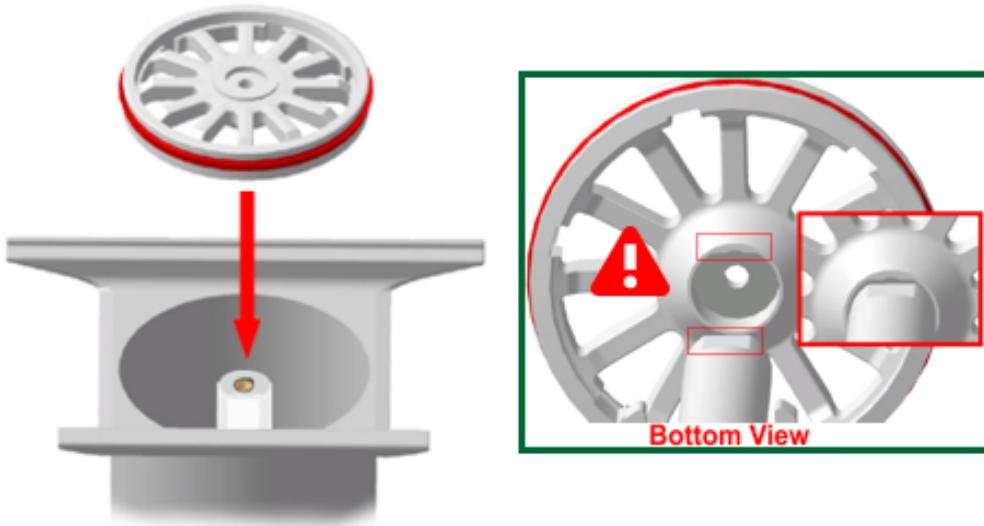


5. Install the new seal onto the piston. **To avoid installing the seal upside down onto the piston, note the orientation of both (see image below).**



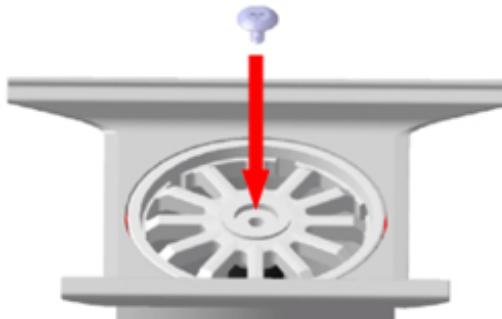
	<p>Prior to reassembling the brewer, make absolutely certain that the seal is <u>completely inserted into its seat all the way around the piston.</u></p>	 	
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6. The piston can only be installed in a specific direction onto the piston rod (the piston rod has a flat spot, as does the piston). Align the piston onto the piston rod and press it down into position.

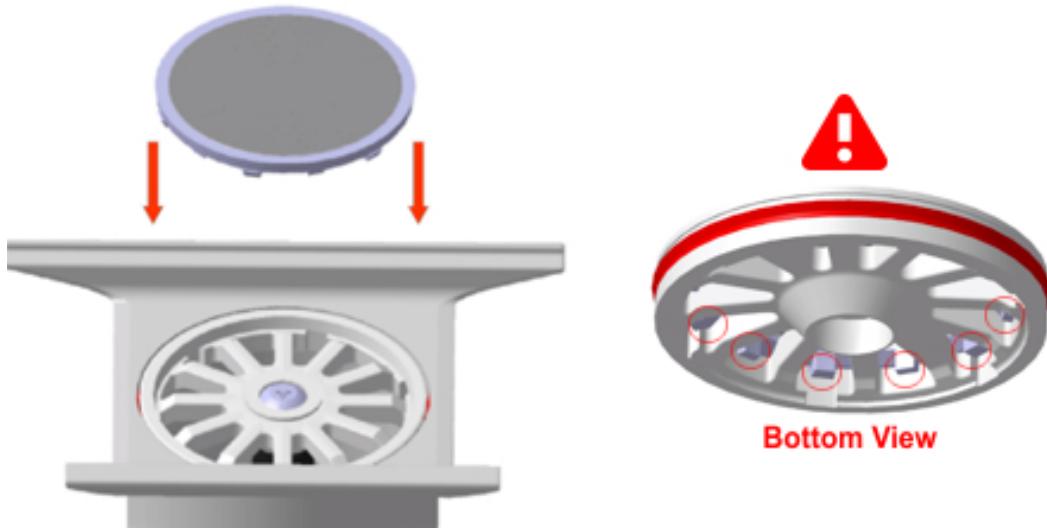


7. Secure the piston to the piston rod using the large sidewalk screw.

NOTE: When re-installing this screw, the torque must be 30 in/lbs.

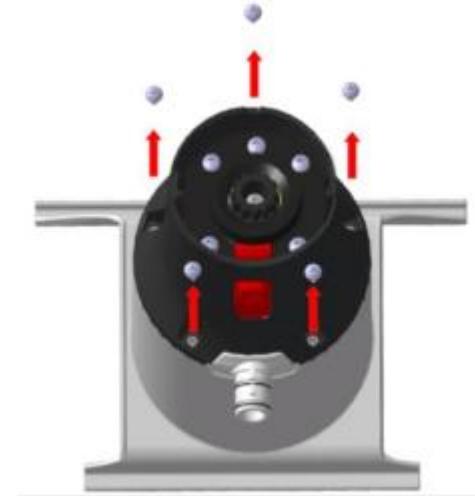


8. Install the filter screen by pressing it onto the piston until it clips into position all the way around.

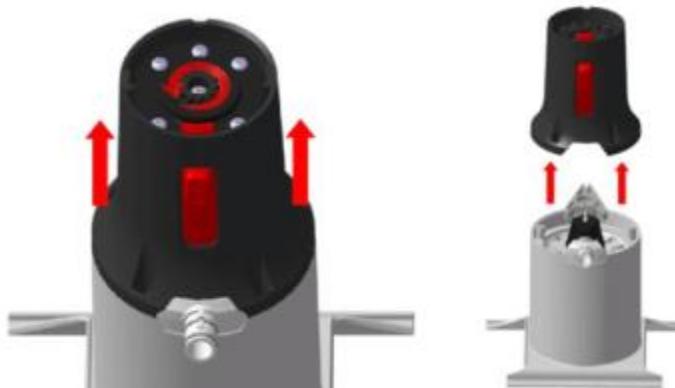


Removing the Brewer Cylinder

1. Remove the brewer piston ([see page 25](#)).
2. Remove the five screws securing the brewer cylinder assembly to the cylinder base and set them aside for now.



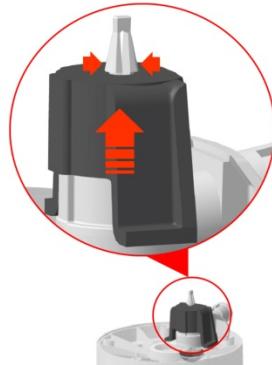
3. Turn the drive gear at the bottom of the brewer counter-clockwise while, at the same time, lifting the base away from the cylinder until it is free, and then remove and discard the old cylinder assembly.



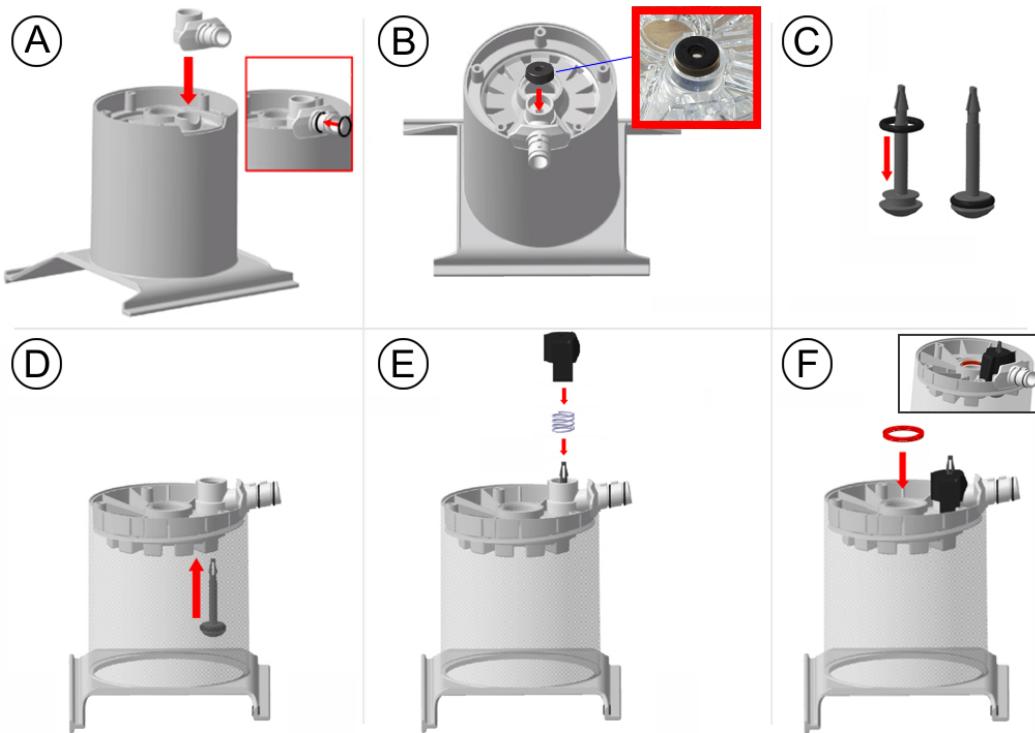
4. Remove the piston rod assembly from the piston, and set it aside as you will be re-installing it later in this procedure.



5. Compress the clips on the tip of the valve body and lift the valve activator to remove it and the other brew valve components.

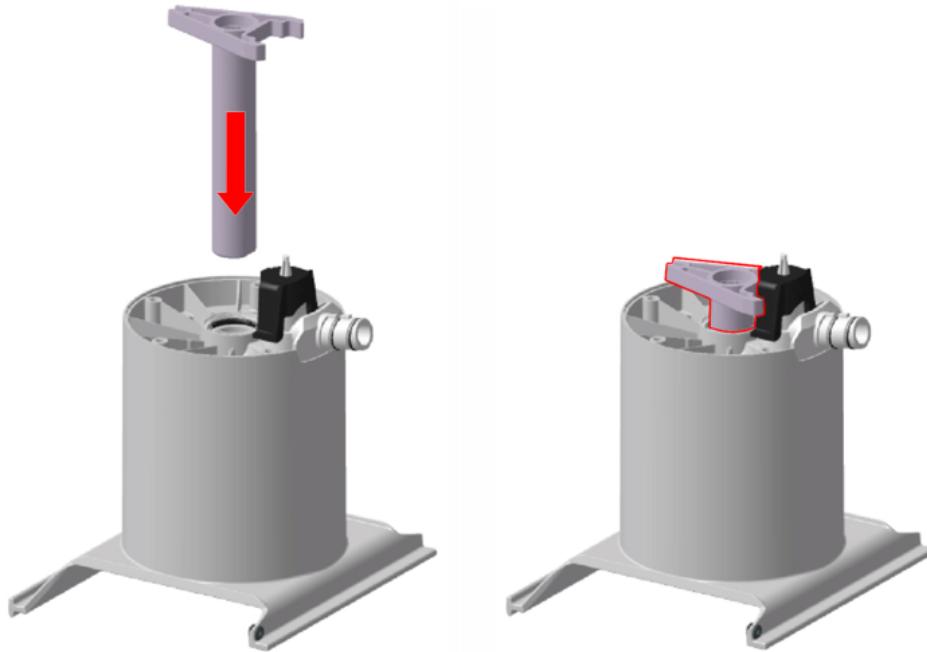


6. Assemble the new cylinder (*consult VKI Publication #100310-001 for the required parts and their part numbers*).



- A) Install the valve housing onto the cylinder (making certain it is pushed down completely), and then install the two o-rings onto the valve housing.
- B) Install the U-cup seal into the valve housing (flat side up).
- C) Install the thick o-ring onto the valve head.
- D) Pass the valve head through the valve housing from the inside of the cylinder. You need to hold the valve head in this position to perform the next step.
- E) Place the spring into the U-Cup seal (with the valve head in the middle of the spring) and then install the valve activator over the spring (flatter side towards the front). While holding the valve body in place inside the cylinder, press firmly on the valve activator until the tip of the valve body passes through the activator, locking everything in place.
- F) Install the large o-ring into the recession in the bottom center of the cylinder.

7. Slide the piston rod assembly all the way down into the cylinder.



8. Apply food grade lubricant (Lubrifilm) onto both sides of the piston track inside the cylinder base.

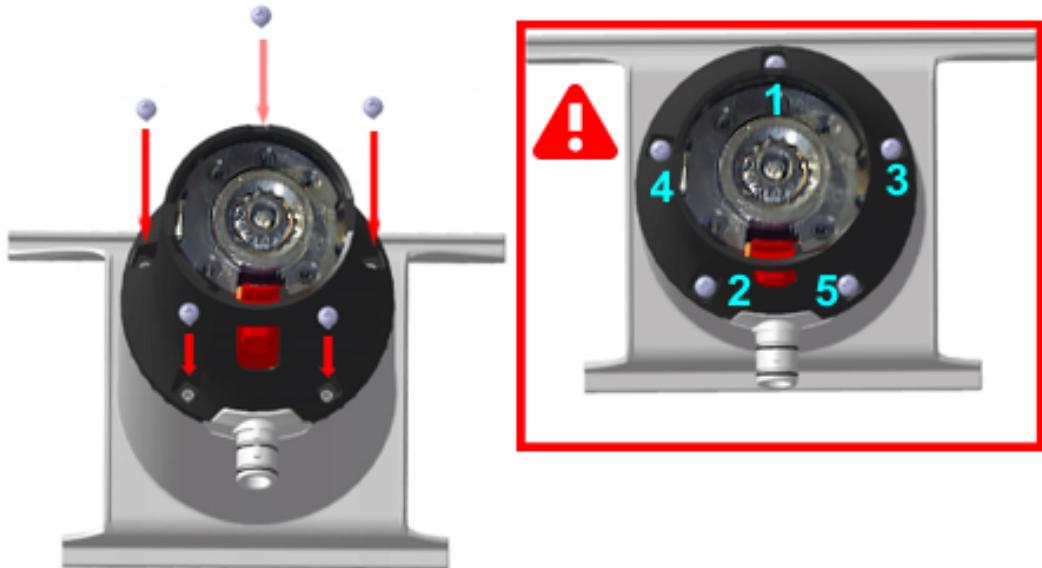


9. Turn the drive gear at the bottom of the brewer clockwise while, at the same time, pushing the base onto the cylinder until it is fully seated.

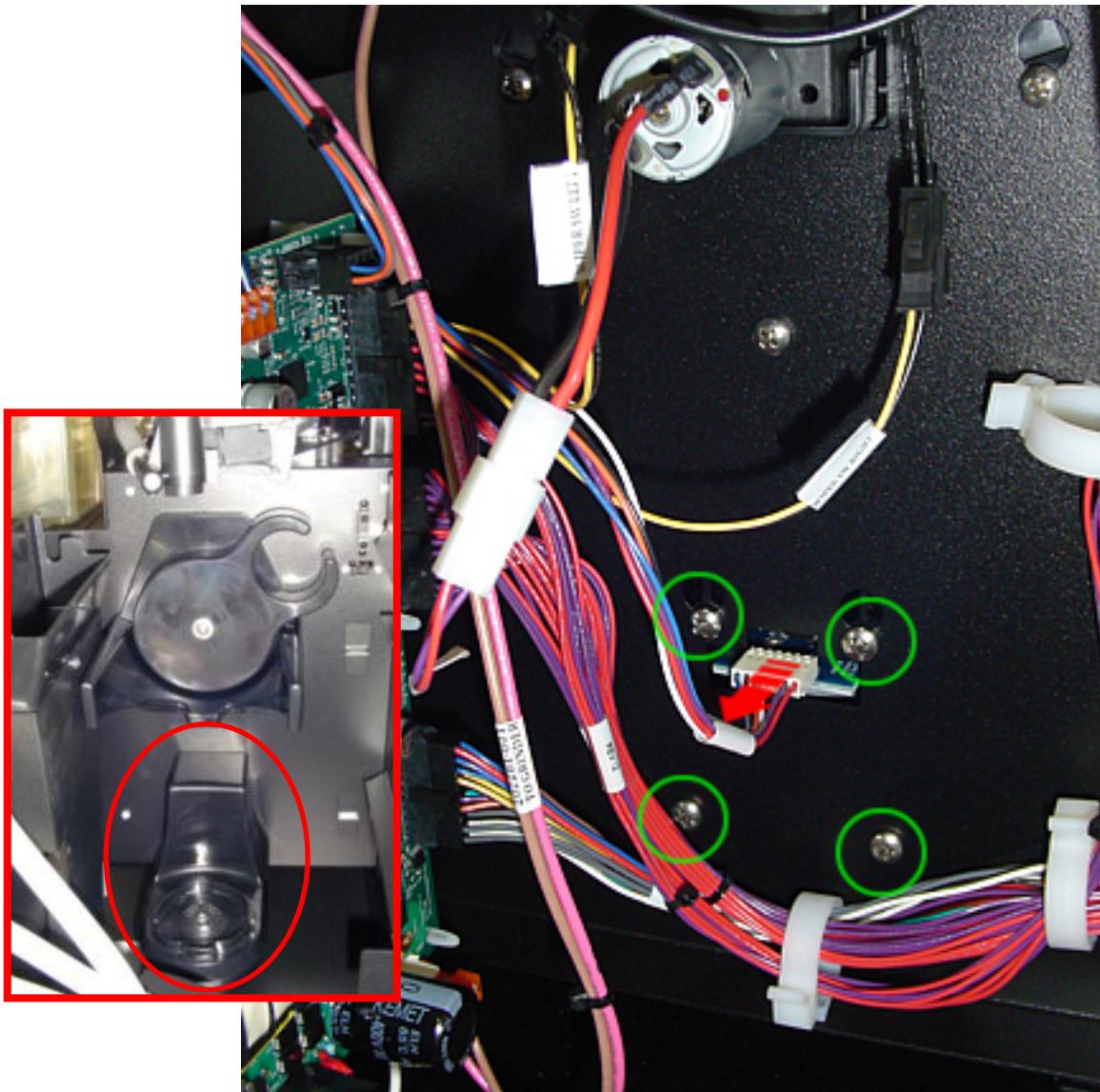


10. Insert the five screws into the cylinder base and tighten them in the sequence shown.

NOTE: When re-installing these screws, the torque must be 30 in/lbs.



Removing the Brewer Motor



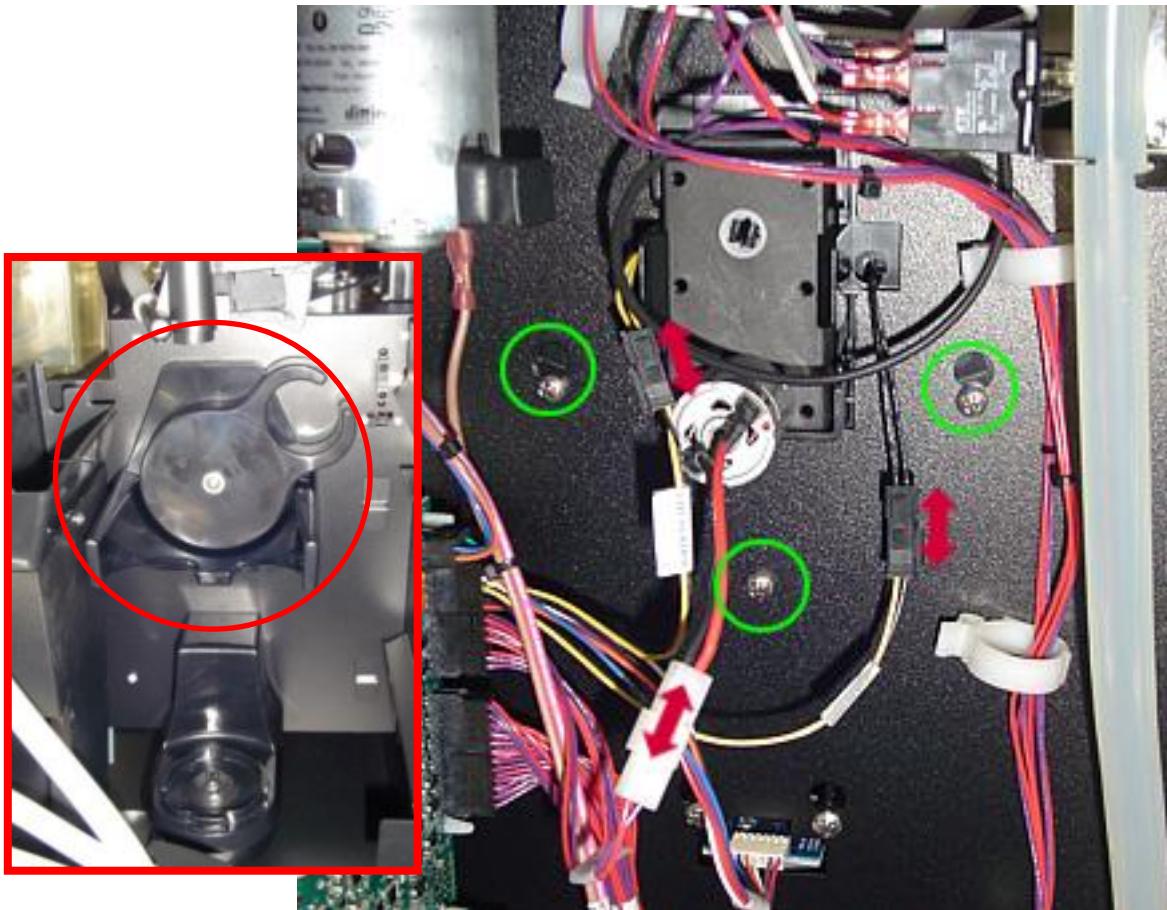
1. Remove the brewer assembly.
2. With the rear panel removed, disconnect the wiring harness from the brewer motor.
3. Loosen the two upper screws and remove the two lower screws.
4. From the front, lift and pull the brewer motor out of the machine.



The brewer motor comes as a complete assembly. There are no spare parts available therefore this motor cannot be serviced.

To install the brewer motor, follow these same instructions in the reverse order.

Removing the Wiper Motor Assembly

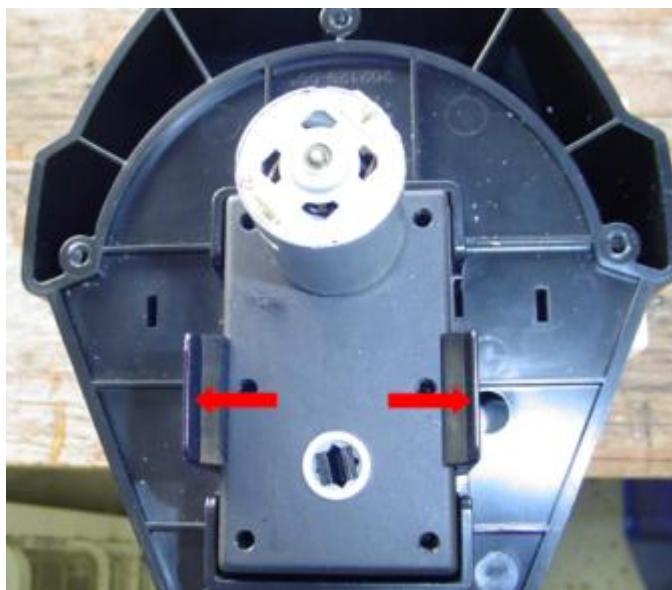


1. Remove the brewer assembly.
2. With the rear panel removed, disconnect the power connector to the brewer wiper motor.
3. Disconnect the left and right switch connectors from the brewer wiper motor.
4. Loosen the two upper screws and remove the lower screw.
5. From the front, lift and pull the brewer wiper motor out of the machine.

To re-install the wiper motor assembly, follow these same instructions in the reverse order.

Removing the Motor from the Wiper Motor Assembly

1. Remove the wiper motor assembly.
2. Spread the motor clips outwards to release the motor from its support.



3. Pull the wiper motor from its support.

Removing the Wiper Motor Pinion/Coupling

1. Remove the wiper motor from the wiper assembly.
2. Compress the two pinion clips at the rear of the motor.
3. Pull the pinion out from the front of the motor.



After replacing the pinion, you'll need to apply a liberal amount of food-grade grease to the center of it.



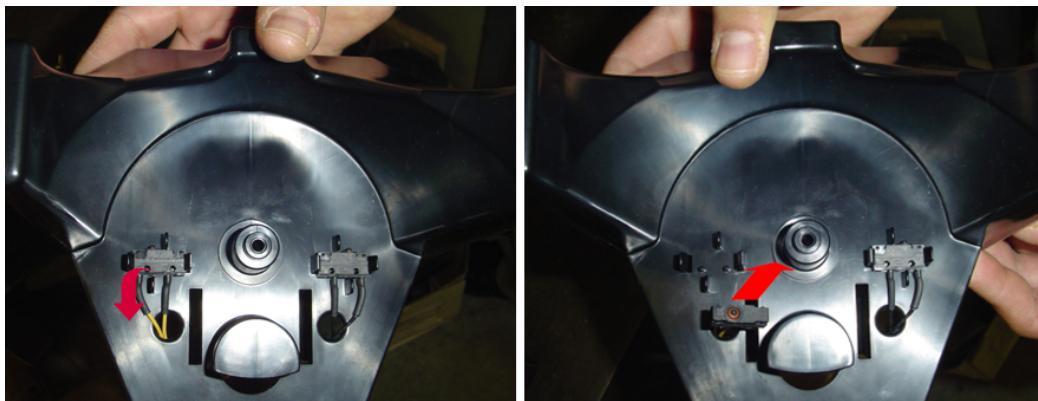
Removing a Wiper Motor Switch

1. Remove the wiper motor assembly.
2. Remove the screw and washer securing the wiper arm to the wiper motor assembly.

NOTE: When re-installing this screw, the torque must be 22 in/lbs.



3. Remove the wiper arm.
4. Unclip the switch to be replaced from its support, and pull the wiring through the hole in the support to remove it.



To install the wiper motor switch, follow these same instructions in the reverse order.



Prior to replacing the wiper arm, apply a liberal amount of food-grade grease to the center of it.



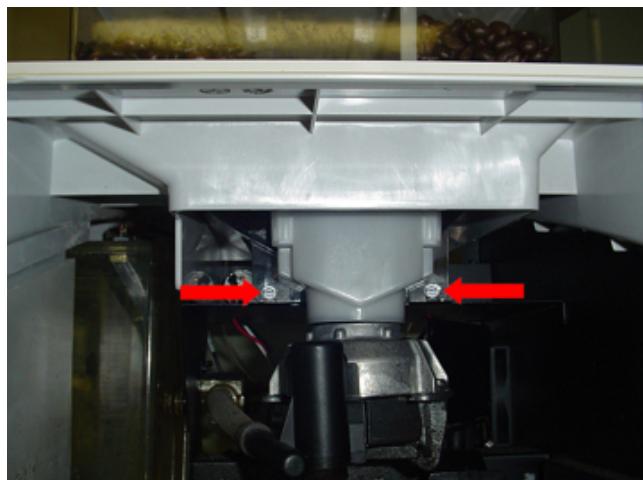
SECTION 5

Coffee and Powder Dispensing Systems

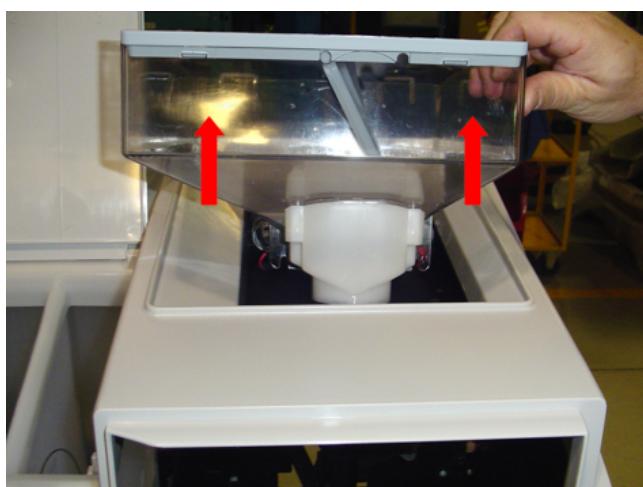
Coffee Dispenser Removal

1. Open the front door.
2. Remove the two hex screws securing the coffee dispenser in place.

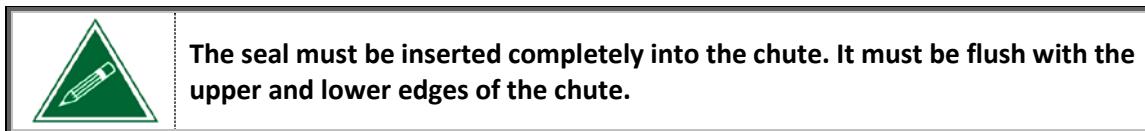
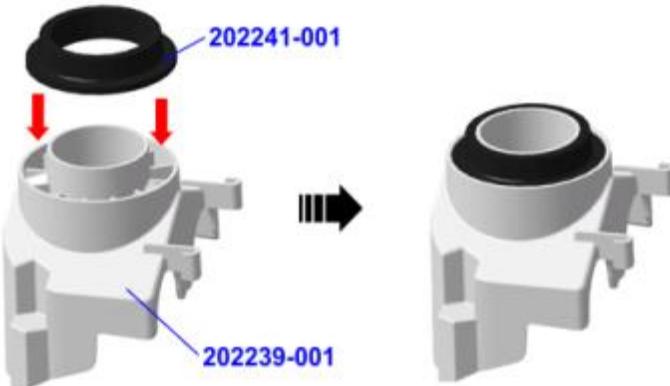
NOTE: When re-installing this screw, the torque must be 15 in/lbs.



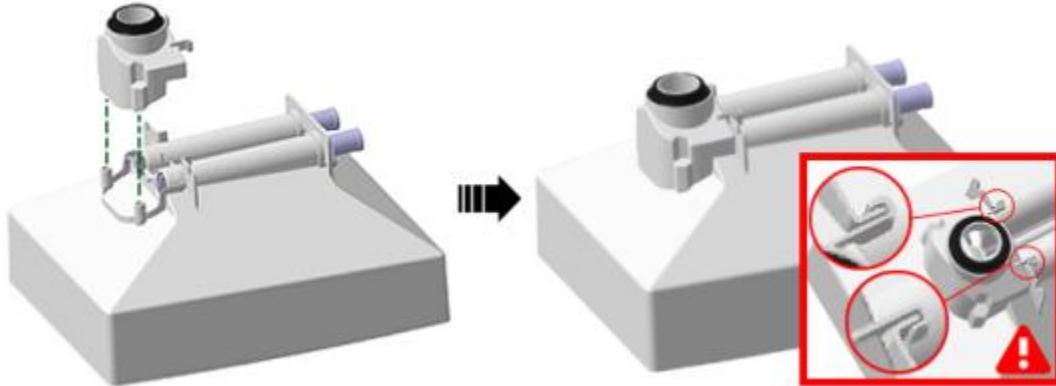
3. Lift the front of the coffee dispenser and pull it away from the motors at the rear to remove it from the machine.



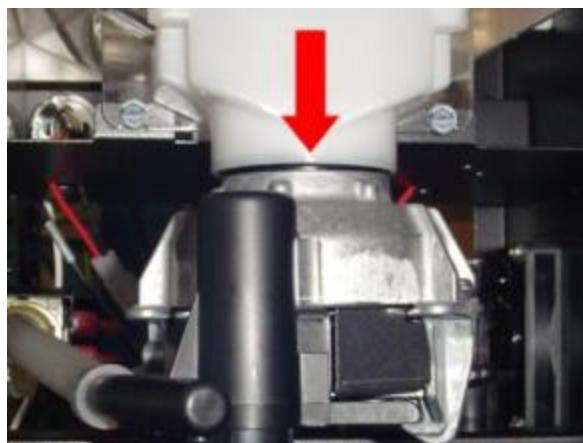
4. If replacing the bean chute, install a new seal into the chute.



5. Install the bean chute assembly onto the bottom of the coffee bean dispenser.

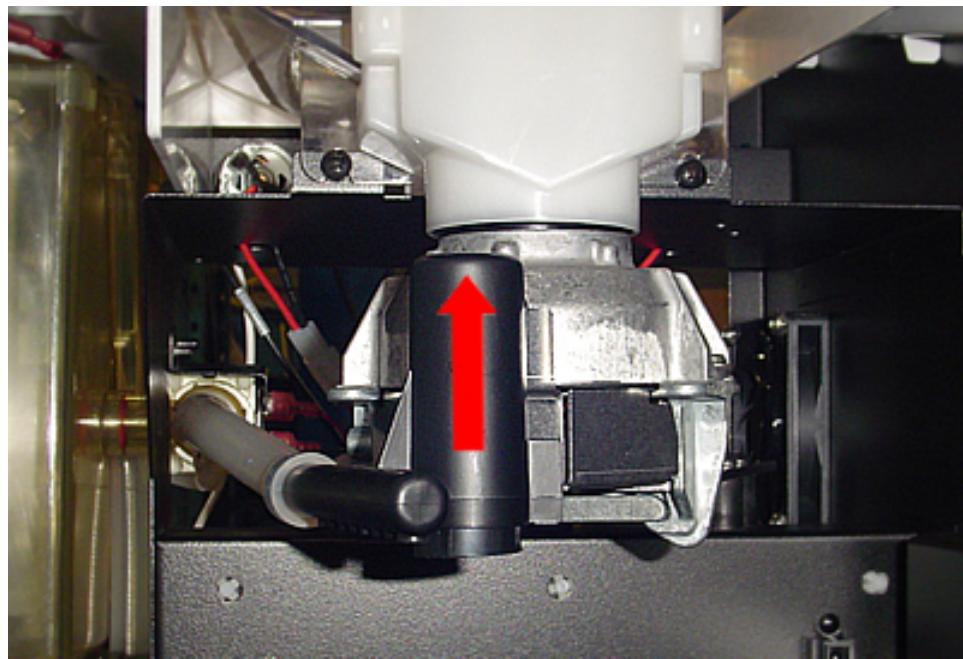


6. When installing the dispenser into the machine, make certain that the dispenser is pushed down as far as possible and that the bean chute is inserted and recessed into the top of the grinder prior to tightening the two mounting screws.

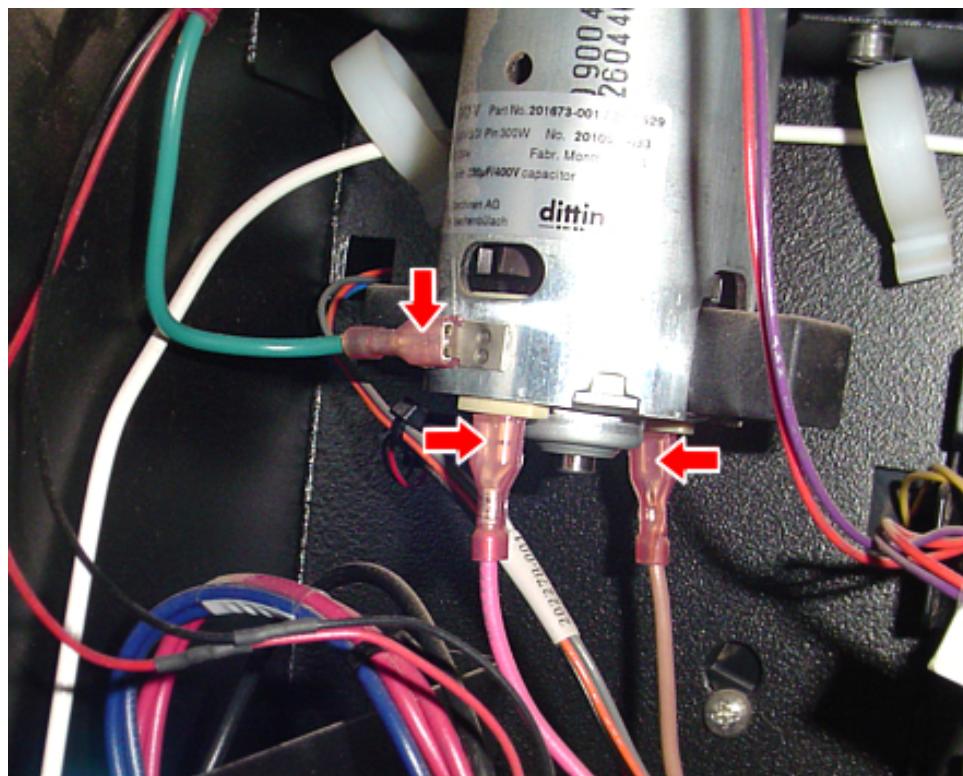


Removing the Grinder

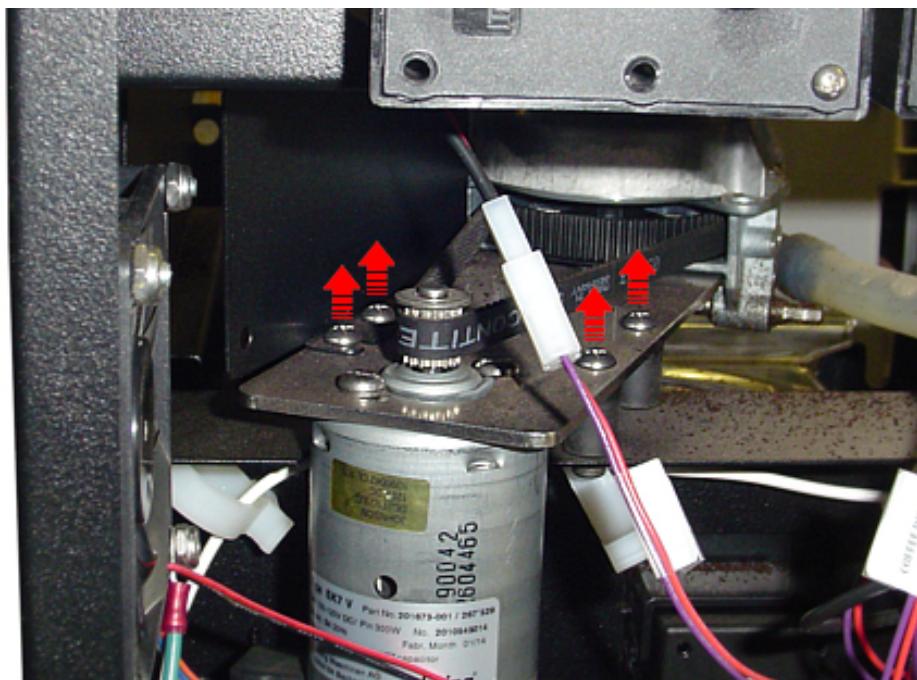
1. Remove the coffee dispenser ([see page 35](#)).
2. Lift the outlet spout to remove it from its support on the grinder.



3. With the rear panel removed, disconnect the two power wires and the ground wire from the grinder.



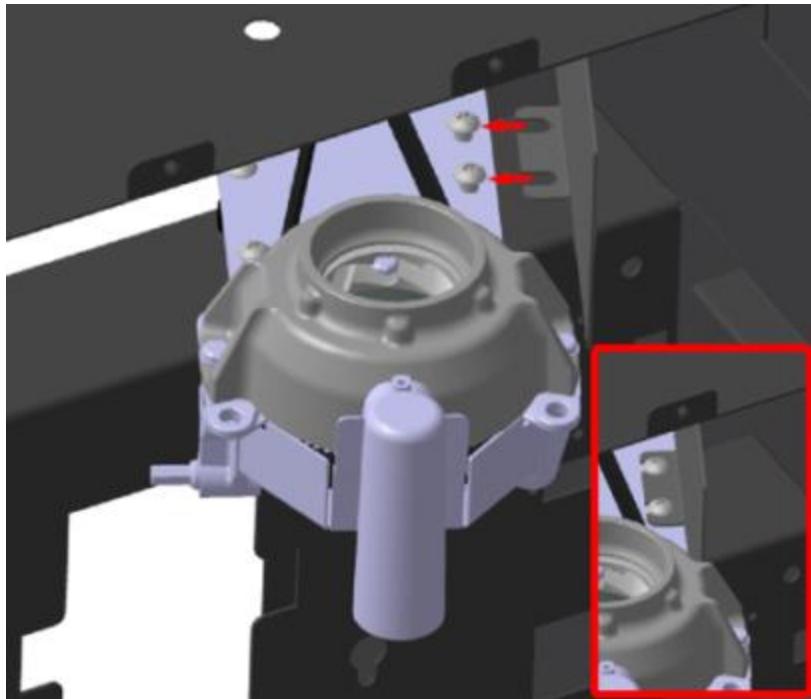
4. Remove the four screws securing the grinder to the machine cabinet, and then remove the grinder.



To install a grinder, follow these same instructions in the reverse order, but please note the following:



When installing the two mounting screws closest to the wall, do not tighten them until the grinder guard has been re-installed.

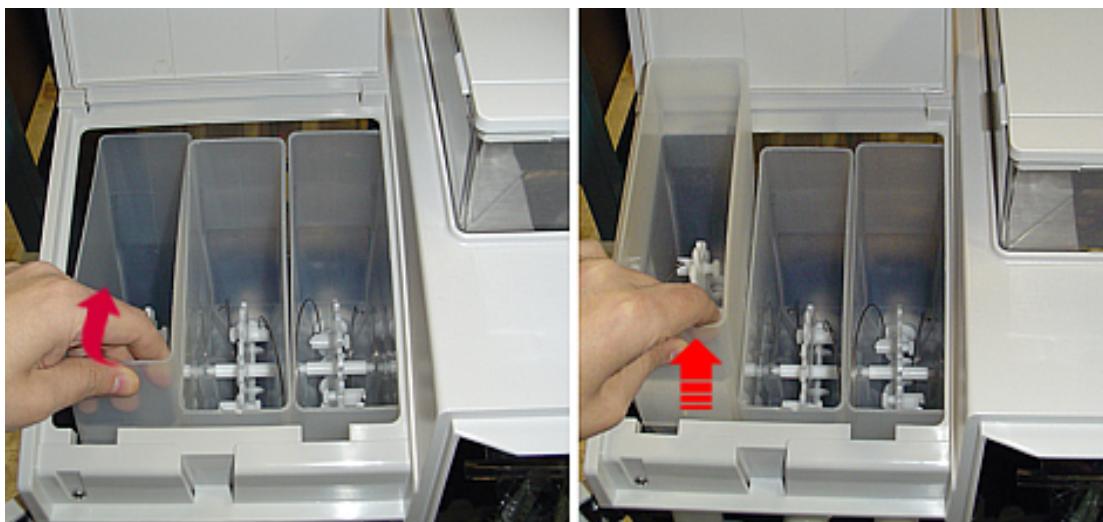


Powder Dispenser Removal (*Machines with Serial Number ET000819 and lower*)

1. Open the main powder lid.
2. Unclip and remove the powder liner.



3. Remove the rubberized trim that seals around the edges of the dispensers.
4. Lift the top front of the dispenser, while at the same time pulling the bottom of the dispenser forwards to disengage the coupling from the dispenser motor.



5. Lift the dispenser up and out the top of the machine.

To install a powder dispenser, follow these same instructions in the reverse order.

Powder Dispenser Removal (*Machines with Serial Number ET000820 and higher*)

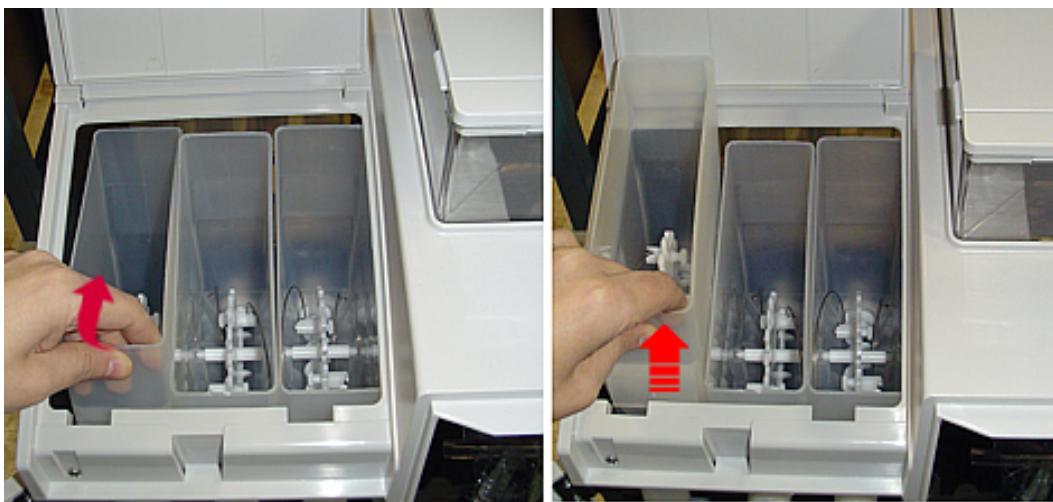
1. **Carefully** remove the main powder lid.
2. Remove the three individual dispenser lids.



3. Lift the rear of the powder liner and remove it.



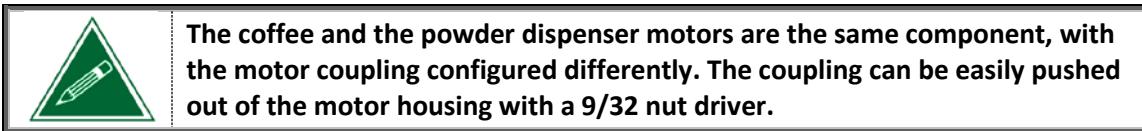
4. Lift the top front of the dispenser, while at the same time pulling the bottom of the dispenser forwards to disengage the coupling from the dispenser motor.



5. Lift the dispenser up and out the top of the machine.

To install a powder dispenser, follow these same instructions in the reverse order.

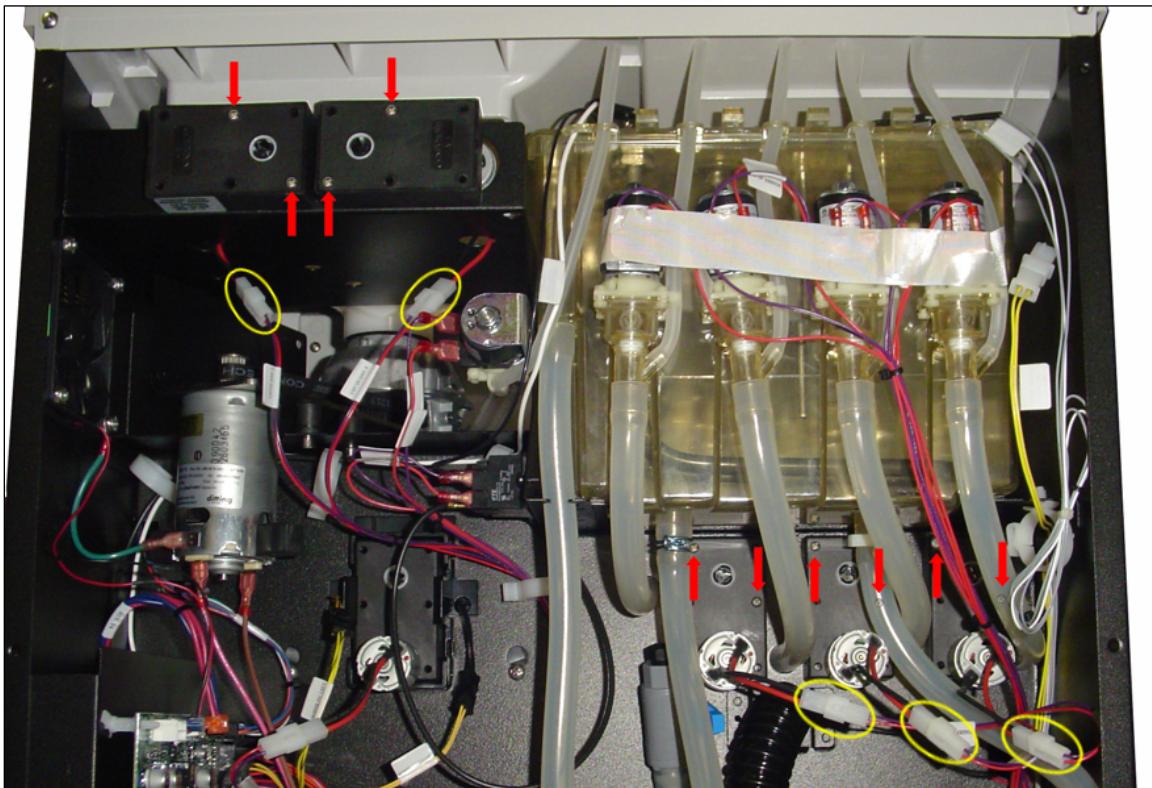
Removing Coffee and Powder Dispenser Motors



Coffee Motor Configuration



Powder Motor Configuration (default)



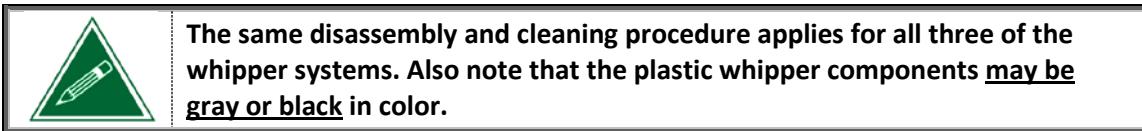
1. Disconnect the inline wiring connector for the motor to be removed (circled in yellow).
 2. Remove the two screws securing the motor to be removed to the machine (red arrows).
- NOTE: When re-installing these screws, the torque must be 4 in/lbs for the coffee motors, and 7 in/lbs for the powder motors.**
3. Remove the motor(s).



When removing or installing a coffee motor, the wiring (and the connector) needs to be passed through the round opening in the coffee dispenser base.

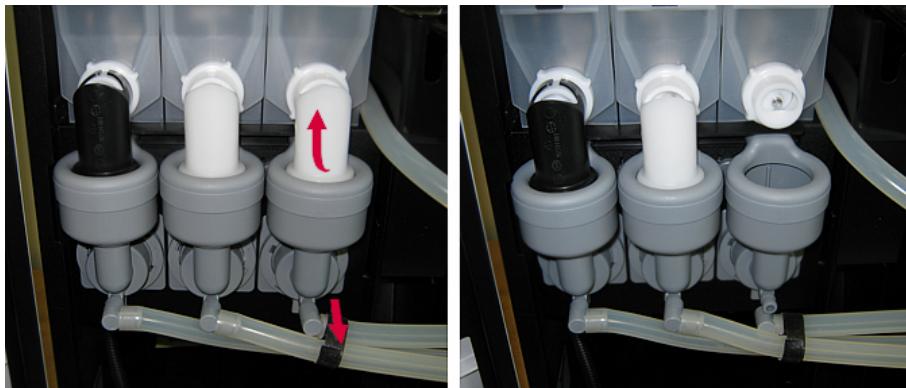
To install a dispenser motor, follow these same instructions in the reverse order.

Whipper System Removal, Manual Cleaning and Installation

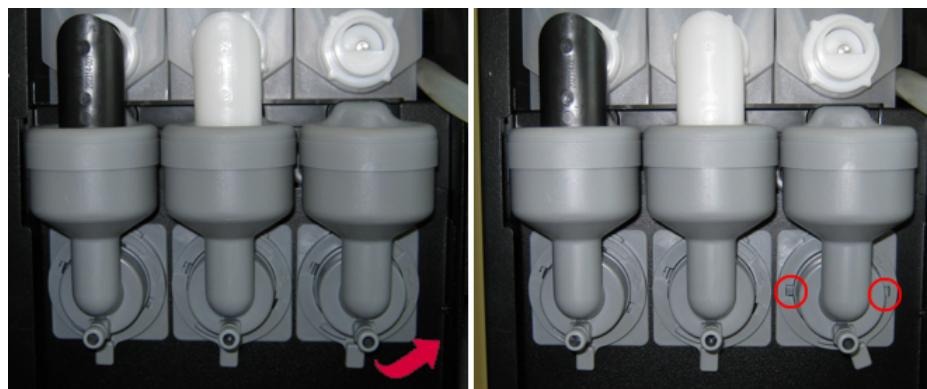


Removing the whipper system components

1. Remove the dispenser chute and disconnect the outlet hose.



2. Turn the small handle on the locking ring (on the whipper base) to the right until it stops. This unlocks the whipper chamber from the whipper base, allowing it to be pulled off.



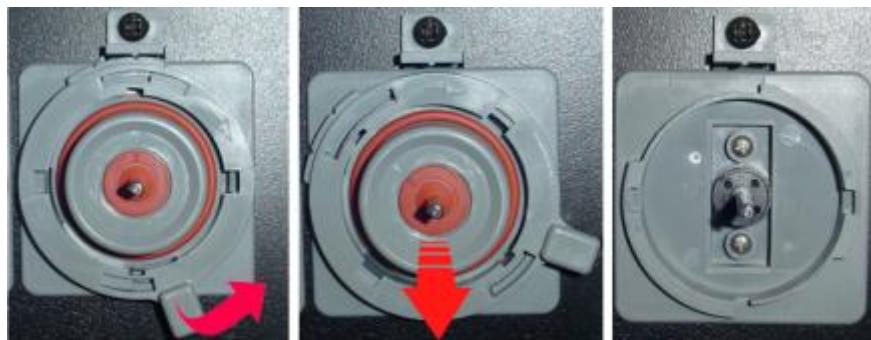
3. Remove the whipper chamber and the steam trap from the whipper base, disengaging it from the powder drawer and inlet fitting.



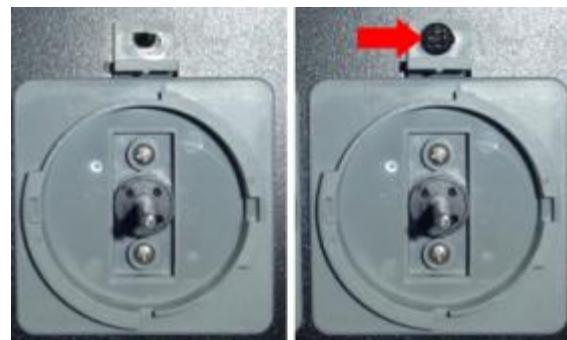
4. Remove the impeller from the motor shaft.



5. Turn the handle to the right and remove the whipper base from the whipper motor.



6. Remove the screw securing the top of the whipper mount.



7. Push down on the locking clip at the front of the base, and pull the base and motor out through the front of the support.



8. Disconnect the inline wiring connector that supplies power to the whipper motor.



Cleaning the whipper components

At this point, all of the **plastic** components have been removed. They can now be cleaned with warm water and dish soap. Thoroughly rinse the components under warm running water for several minutes to remove any remaining residues. Once done, the components must then be dried using a clean cloth.

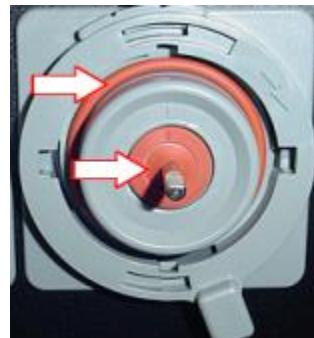


Do not submerge the whipper motor in water.

Do not rinse the whipper motor with water.

Do not use any type of cleaner or detergent on the whipper motor.

Prior to reassembling the whipper system, we recommend that you inspect and, if required, replace the whipper seal and the large whipper base o-ring.



Clean the whipper hoses

Remove all three whipper outlet hoses and thoroughly clean the exterior and the interior of each of the hoses. A plastic bristled brush (VKI P/N - 202477-001) must be used to clean the interior of the hoses.



Installing the whipper system components

1. Connect the inline wiring connector that supplies power to the whipper motor.

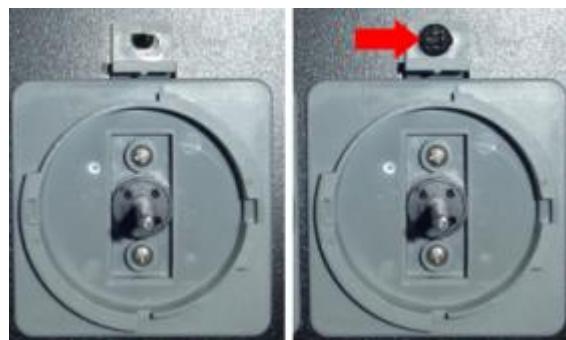


2. Install the new motor into the cutout in the machine wall. Install the bottom of the assembly first, and then push the top of the assembly into the cutout until the plastic clip locks it in place.



3. Secure the mount to the wall with a screw, and then install the base onto the mount.

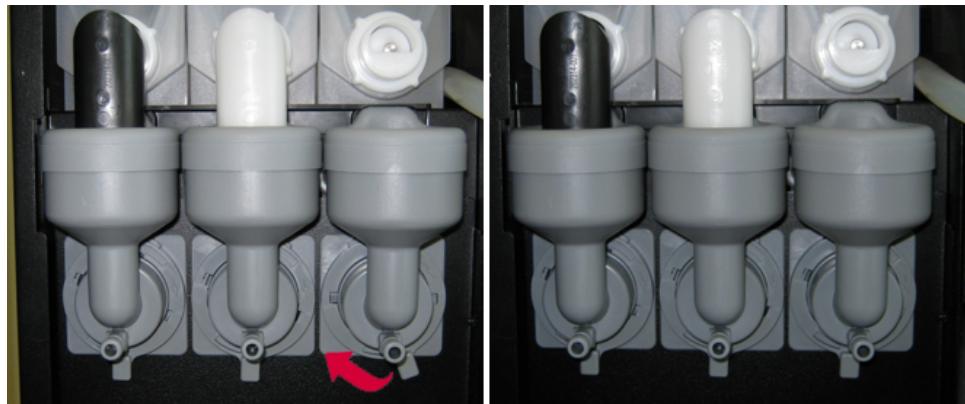
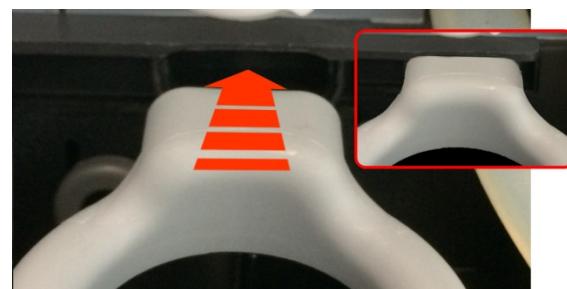
NOTE: When re-installing the screw, the torque must be 15 in/lbs.



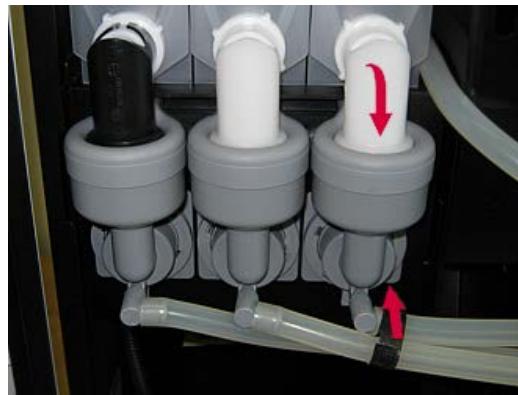
4. Install the impeller onto the shaft (line up the arrow on the impeller with the flat side of the shaft).



5. Insert the whipper chamber into the base (***making sure to also insert the chamber's inlet into the adaptor and the steam trap correctly into the powder drawer***), and turn the handle on the locking ring to the center position to secure the chamber.



6. Reinstall the powder chute into the whipper and re-connect the whipper outlet hose.



7. Perform a “**Powder Rinse**” cycle to flush any powder that may have fallen into the whipper chamber ([see page 50](#)).

Installing the Gasket (Seal) and the Impeller

When replacing the **gasket**, make certain that the small alignment line on the gasket lines up with the alignment line on the base. If the gasket is not aligned properly, it will take on an oval shape, causing an improper seal around the shaft resulting in a major leak.

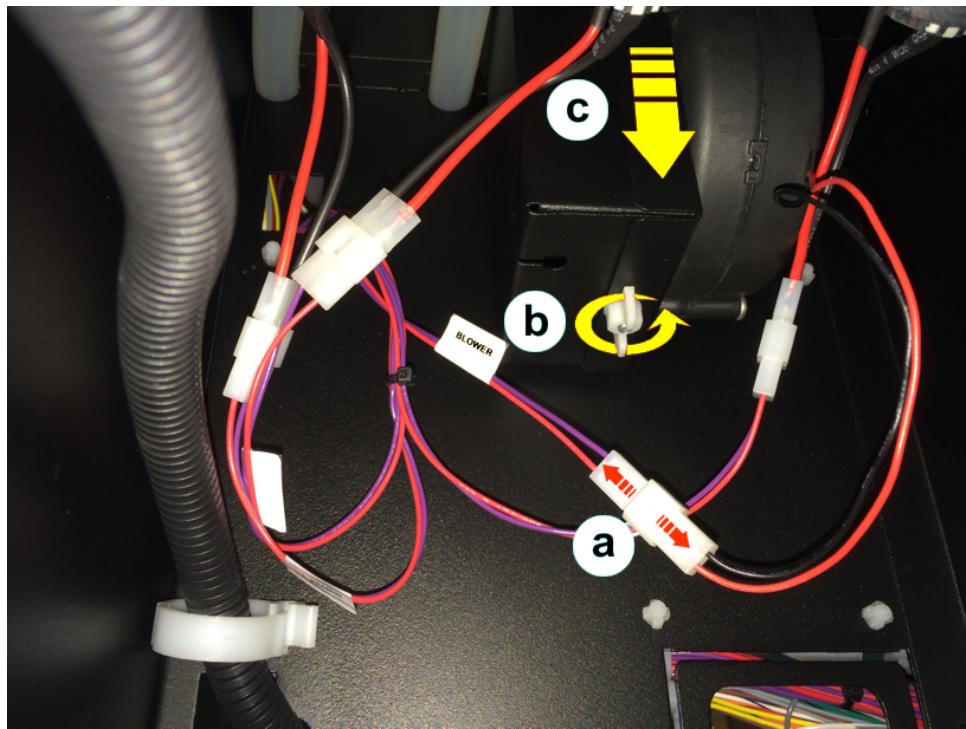


When replacing the **impeller**, align the small arrow on the impeller with the flat side of the whipper shaft. Push the impeller until it clicks in place.

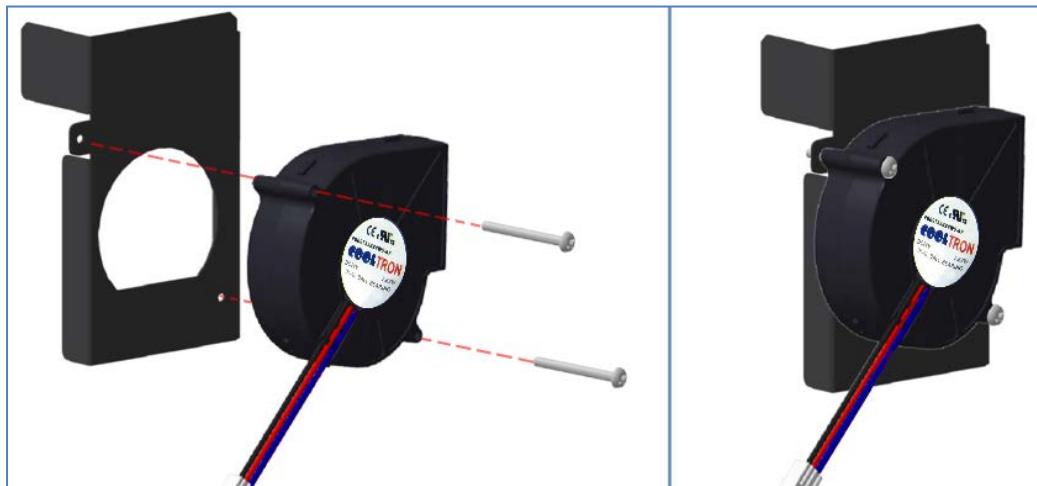


Replacing the Powder Blower

1. Remove the blower bracket from the blower support.
 - a) Disconnect the powder blower wiring.
 - b) Remove the plastic wing nut securing the blower bracket to the blower support.
 - c) Pull down the blower bracket to remove it.

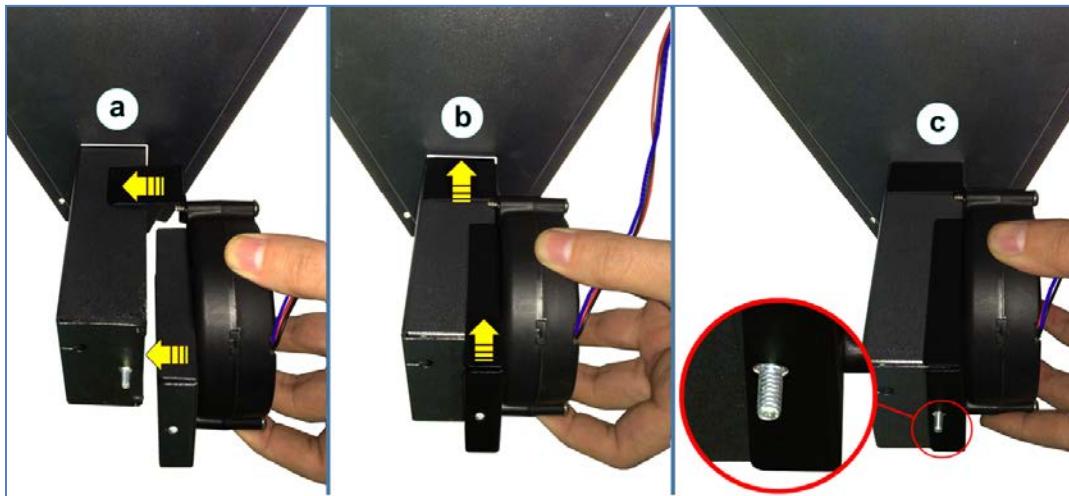


2. Remove the old blower and install the new one onto the blower bracket of the support.

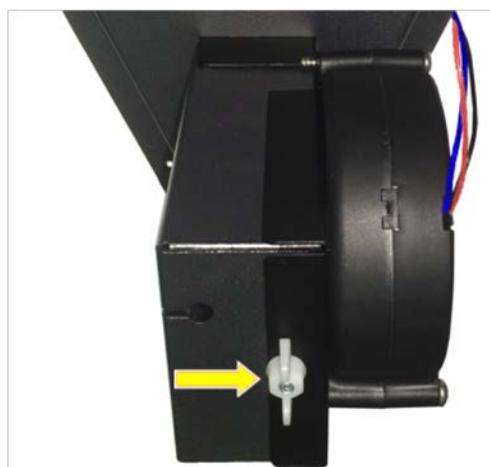


3. Slide the blower bracket upwards until the top of the blower bracket slides into the blower support. Make sure the vacuum hose is not protruding and interfering with the installation of the support - adjust the hose, if needed. It may also be necessary to squeeze the top of the bracket slightly to get it to slide into the support.

Make sure the threaded post passes through the hole at the bottom of the blower bracket.



4. Secure the blower and bracket onto the support by adding a plastic wing nut onto the threaded post.

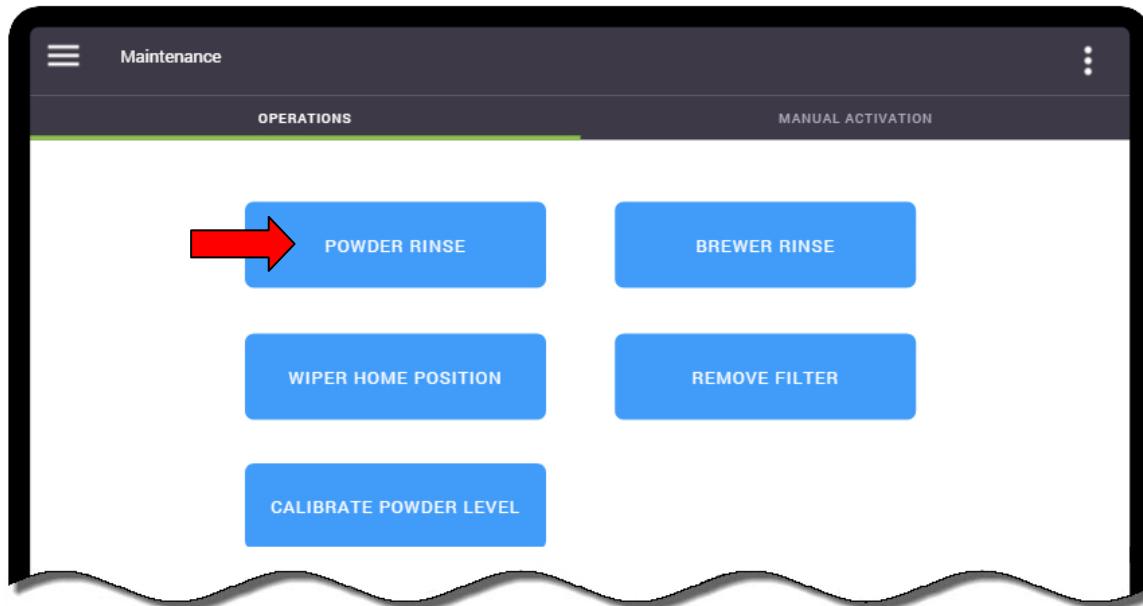


5. Connect the powder blower wiring.

Powder Rinse

After servicing the whipper system, you'll need to perform a 'Powder Rinse' to flush powder that may have fallen into any of the three whippers.

1. Go to the '**System Status**' screen and select the '**Maintenance**' tab.
2. Tap the '**Powder Rinse**' option to activate it.



This option runs a rinse cycle (to clean all three of the powder whipper systems) by sending hot water through each of the whipper units, while at the same time activating each of the whipper motors.



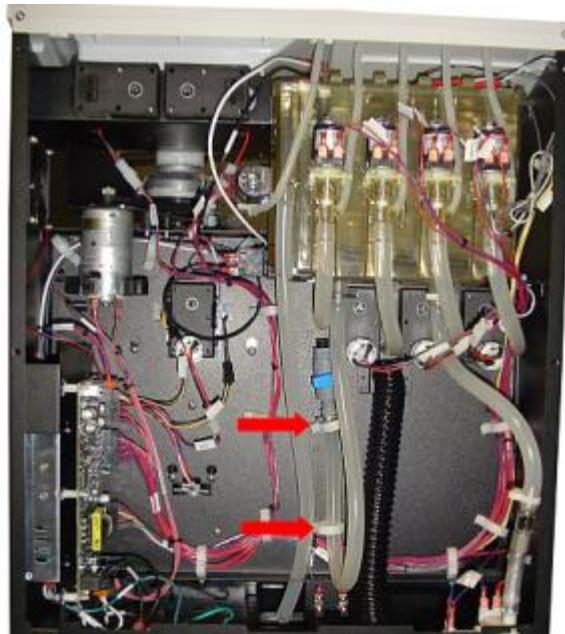
Place a cup on the cup stand prior to running this cycle as up to 12-oz of water will be dispensed once the cycle is activated.

SECTION 6

Water System

Draining the Water Tank

1. Switch off the machine power, disconnect the service cord from the wall outlet, and turn off the water supply going to the machine.
2. Remove the machine's back panel.
3. Remove the drain hose from its clips.



4. Remove the security plug from the end of the drain hose valve (if so equipped), place the hose inside a waterproof container and open the valve at the end of the hose. Water will start draining into the container.



Caution: The water draining from the tank may be extremely hot and has the potential to cause severe burns!

5. Once emptied, close the valve at the end of the hose, and re-install the security plug into the valve.
6. If you are not removing the water tank, re-install the drain hose onto its clips on the interior wall of the machine.
7. If you are servicing or removing the water tank, proceed to the next sections.

Replacing the Outlet Valve(s)

1. With the water tank drained and the service cord disconnected, remove the thermal tape from the valves, and disconnect the power wires from the valve(s) to be removed.
2. Disconnect the outlet hose from the valve(s) to be replaced.
3. To remove a valve, grasp the valve body and pull it straight out. You may need to twist it slightly to loosen it.



Caution: There may be a small amount of very hot water that spills when a valve is removed!

4. Install the new valve by sliding it into its respective port on the water tank.



Verify that the o-ring is present on the valve before installing it into the tank. Also make sure that the valve is completely seated into the water tank.

5. Pass the valve breather tube through the round retainer on the edge of the tank lid, and cut the tube so that it is at the same height as the coffee valve breather tube.



6. Connect the outlet hose onto the replacement valve.
7. Connect the power wires onto the replacement valve.
8. Re-install the thermal tape over the four valves at the rear of the tank.
9. Reconnect the service cord, turn on the water supply, and switch the machine power on.
10. Allow the water tank to fill and inspect the machine for leaks. Also inspect the outlet valve for any signs of dripping. If any leaks or dripping is present, the problem must be corrected immediately.

Removing the Water Tank

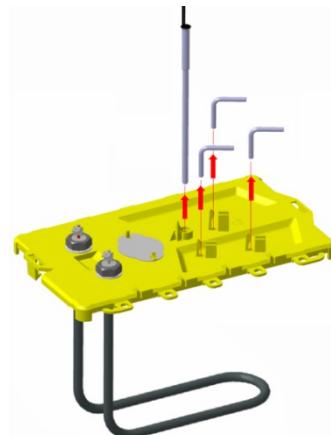
1. With the water tank drained and the service cord disconnected, remove the thermal tape from the valves, and disconnect the power wires from each of the valves.
2. Disconnect the outlet hoses from each of the outlet valves.
3. Disconnect the inlet hose (coming from the inlet valve).
4. Pull the tank towards you and partially out of the machine - you need to get access to the tank top.
5. Disconnect the wiring from the heating element.
6. Disconnect the wiring from the three level probes.
7. Disconnect the inline connector to the temperature probe.
8. Pull the water tank completely out of the machine.



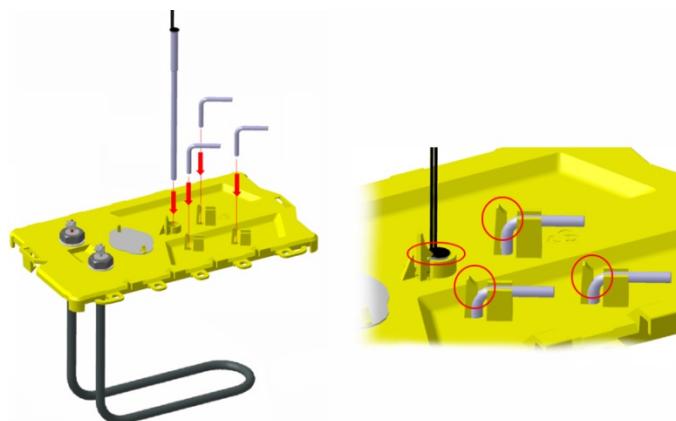
You will need to remove the overflow hose from the upper and lower openings in the metal through which the hose is routed.

Replacing the Temperature Probe and Water Level Probes

1. With the water tank removed, pull the temperature probe and/or the water level probes out through the top of the tank lid. They are simply clipped in place.



2. Slide the new temperature probe and/or water level probes completely into the tank lid until they are clipped and locked in position.

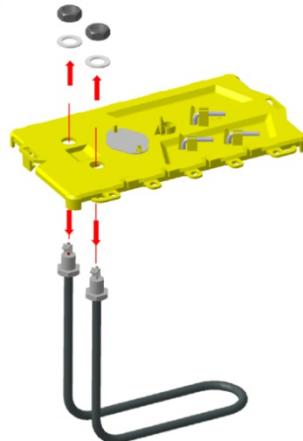


Replacing the Heating Element

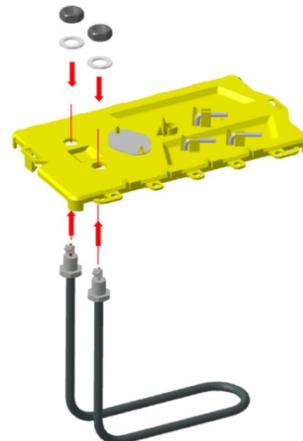


Caution: The heating element may be extremely hot! Make sure the element has cooled to a safe temperature before attempting to remove it.

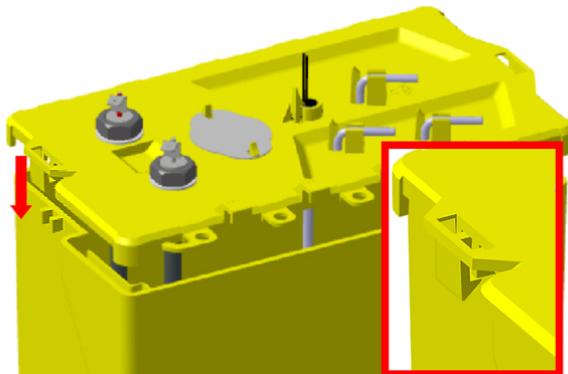
1. With the water tank **and** the tank lid removed, remove the hex nuts (and washers) used to secure the heating element to the tank lid.



2. Insert the new heating element through the bottom of the tank lid, and secure it to the top using the large hex nuts and washers.



3. Re-install the tank lid by pushing it onto the water tank body until it clips securely in place.

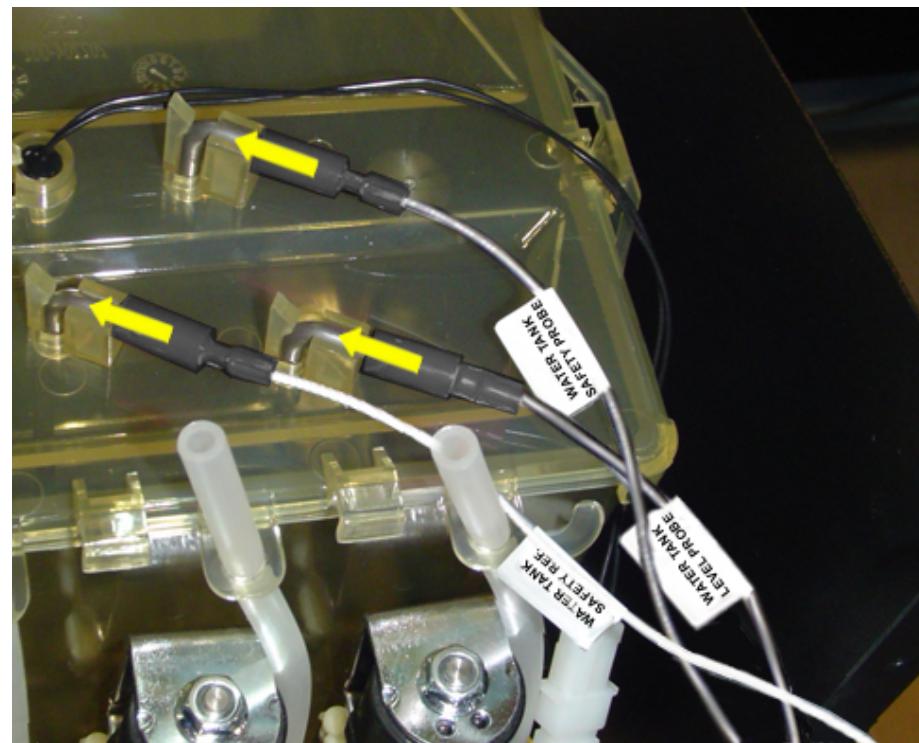


Installing the Water Tank Assembly

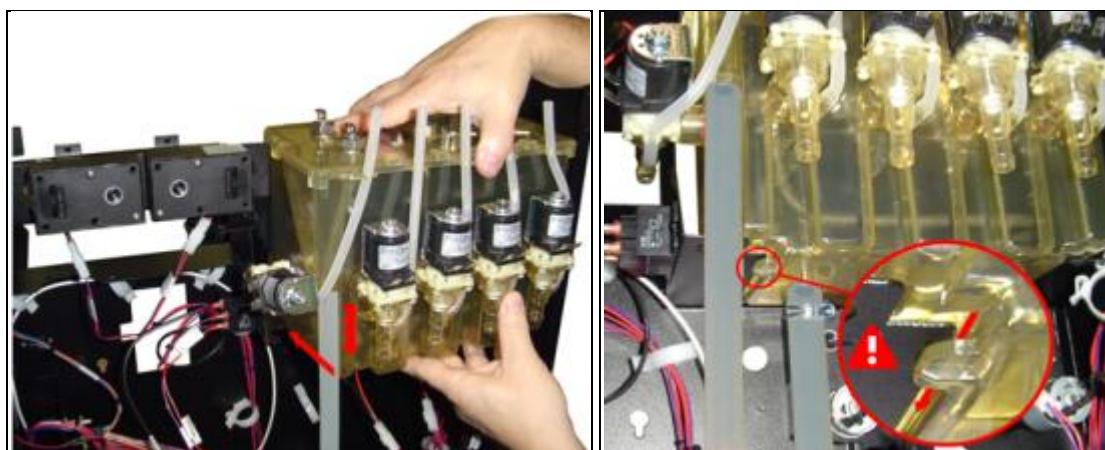
1. Connect the wiring to the heating element.



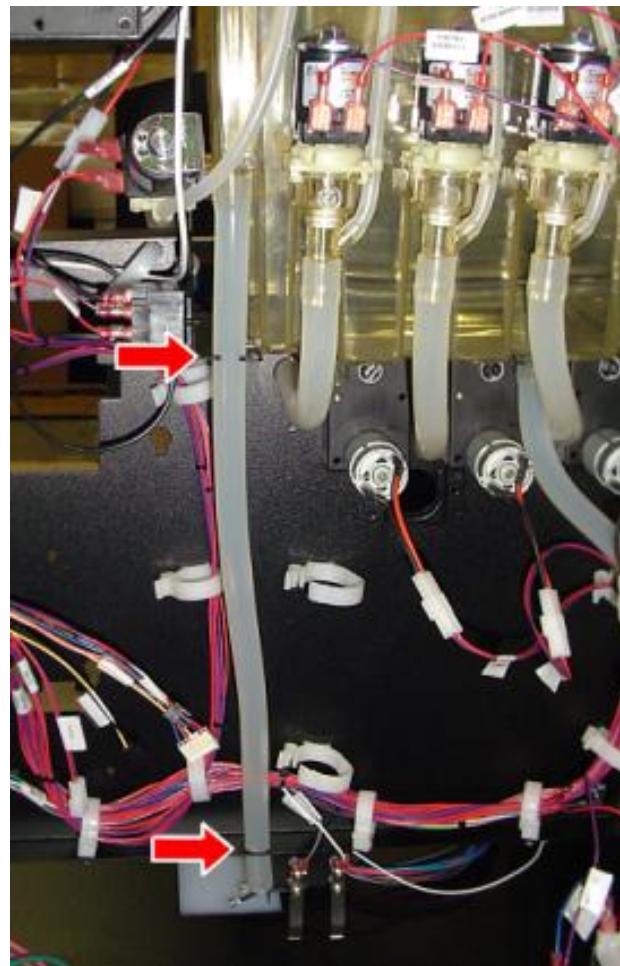
2. Connect the wiring to the water level probes (as illustrated below).



3. Lower and slide the water tank onto its shelf. Make certain the tab at the bottom of the water tank slides under the metal guide.

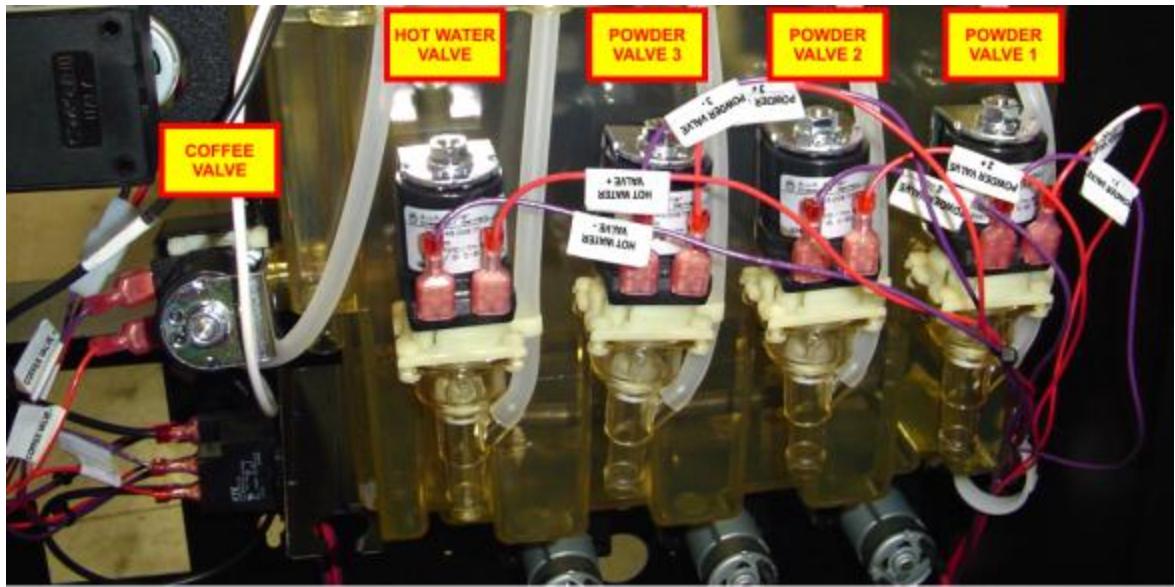


4. Route the overflow hose through its supports in the cabinet.



5. Connect the wiring to the temperature probe.

6. Connect the wiring to the five outlet valves (as illustrated below).



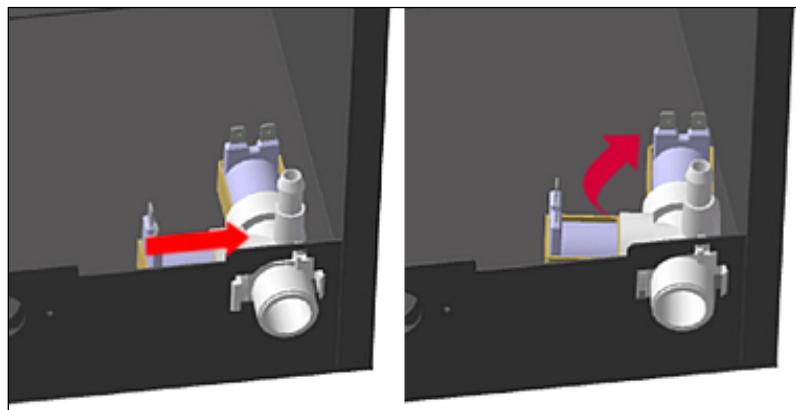
7. Connect the inlet hose to the bottom of the water tank.
8. Connect the outlet hoses to their respective outlet valves.
9. Install the thermal tape over the outlet valve wiring terminals.

Removing Inlet Valve

1. With the rear panel removed, and the water source disconnected, remove the circle clamp and the hose from the inlet valve.



2. Disconnect the wiring from the inlet valve. **Be careful not to discard or misplace the small blue jumper wire.**
3. Push the valve towards the right and turn it slightly to remove it.



To re-install the inlet, follow these same instructions in the reverse order.



When installing a new inlet valve, always secure the hose to the valve with a properly installed circle clamp.

SECTION 7

Electrical and Electronic Systems



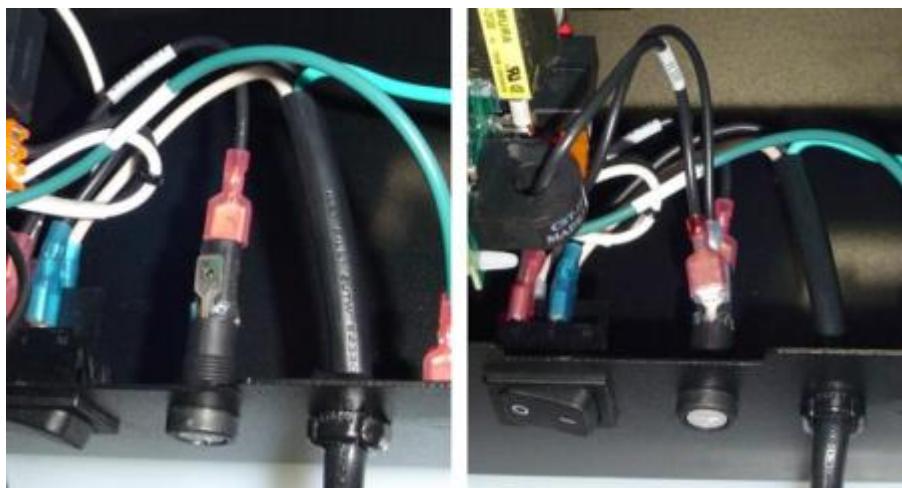
Disconnect the service cord from the wall outlet prior to attempting to replace any of the components in this section. Failure to do so can result in an electrical shock!

Replacing the 15A Fuse

1. Insert a flat screwdriver tip into the fuse holder cap.
2. While pushing in on the cap slightly, turn it counter clockwise to release it.
3. Remove the existing fuse from the fuse holder cap and replace it with a new one.
4. Insert the fuse holder cap (and fuse) into the fuse holder and turn it clockwise to lock it in place.

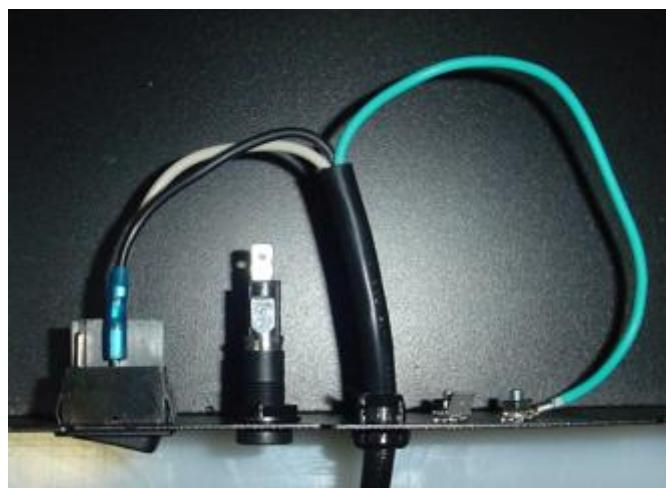
Replacing the Fuse Holder

1. Disconnect the wiring from the fuse holder.
2. Loosen the plastic hex nut that secures the fuse holder to the machine.
3. Remove the fuse holder and replace it with the new one.
4. Transfer the fuse and the cap from the old fuse holder onto the new one (if required).
5. Secure the new fuse holder to the machine with the plastic hex nut.
6. Connect the wiring to the new fuse holder.



Service Cord

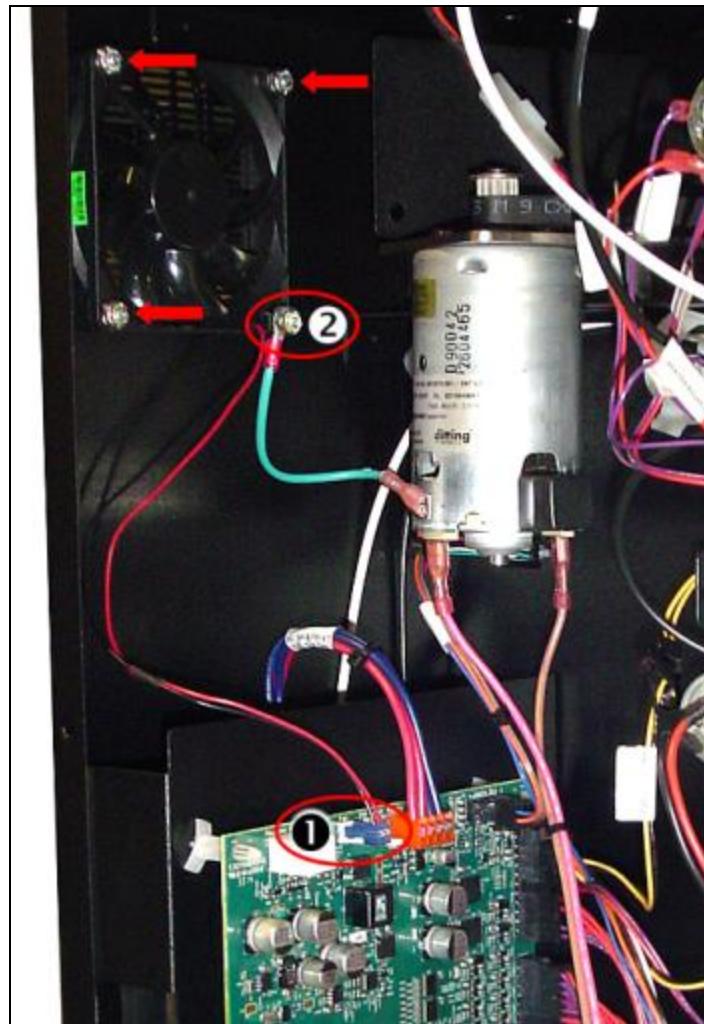
1. Disconnect the black and white service cord wires from the power switch at the rear of the machine.
2. Disconnect the green service cord wire from the ground post at the rear of the machine.
3. Compress the strain relief and pull the service cord from its opening at the rear of the machine.
4. Insert the new service cord into the opening at the rear of the machine and secure it with the strain relief.
5. Reconnect the service cord wiring.
 - i. **Black wire** (hot) → connects to the **switch tab #2**.
 - ii. **White wire** (neutral) → connects to the **switch tab #1**.
 - iii. **Green wire** (ground) → connects to the **ground post**.



Main Power Switch

1. Disconnect the wiring from the main power switch.
2. Compress the clips on each side of the switch, and push it through the opening in the metal (towards the outside).
3. Insert the new switch into the cut-out at the rear of the machine, and snap it in place to secure it - make sure the 'O' is towards the left and the '—' is towards the right.
4. Connect the wiring to the new power switch.
 - i. **Tab #2 on switch - black wire from service cord** (hot).
 - ii. **Tab #1 on switch - white wire from service cord** (neutral).
 - iii. **Tab #2a on switch - black wire to fuse holder**
 - iv. **Tab #1a on switch - white wire pair from board/power supply**

Exhaust Fan

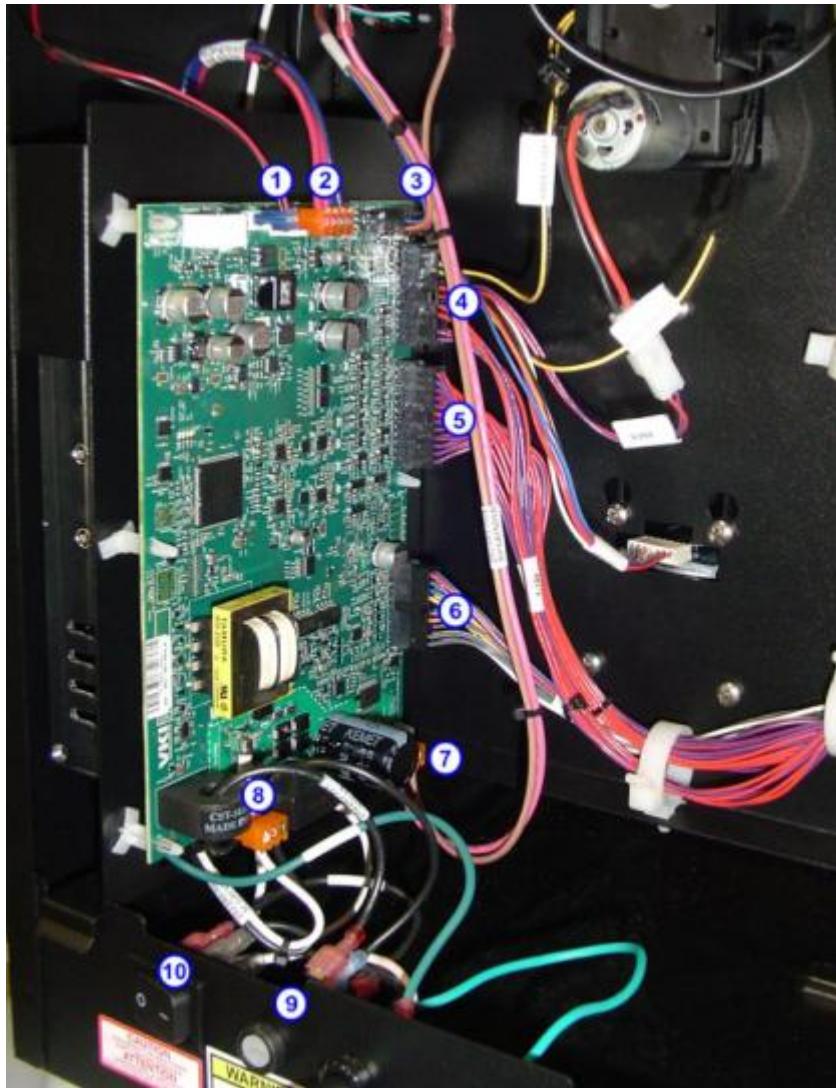


1. With the back panel removed, disconnect the exhaust fan wiring from the control board.
2. Using a 7/16 nut driver, remove the hex nut securing the ground wire and exhaust fan.
3. Remove the remaining hex nut(s).
4. Remove the exhaust fan from its mounting posts.

Removing the Control Board and Power Supply



Disconnect the service cord from the wall outlet prior to attempting to replace any of the components in this section. Failure to do so can result in an electrical shock!



The control board and the power supply are both mounted onto the same support bracket.

To replace the power supply, the control board must first be removed from the support bracket.

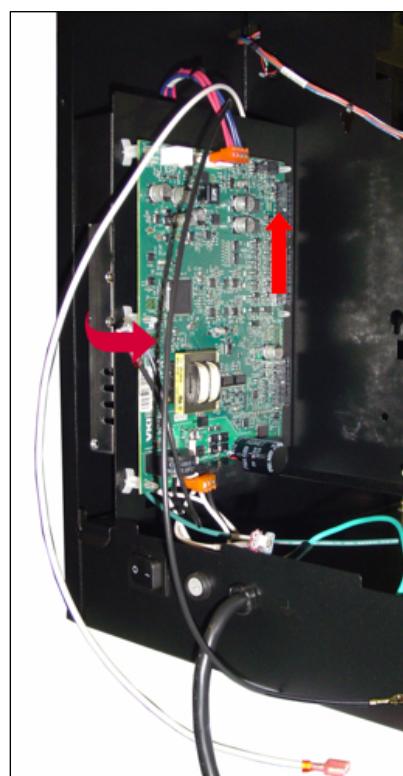
Control Board

1. With the back panel removed, disconnect all of the wiring harnesses from the control board (#1 to #8).
2. Disconnect the black wiring pair from the fuse holder (#9).
3. Disconnect the white wiring pair from the main power switch.

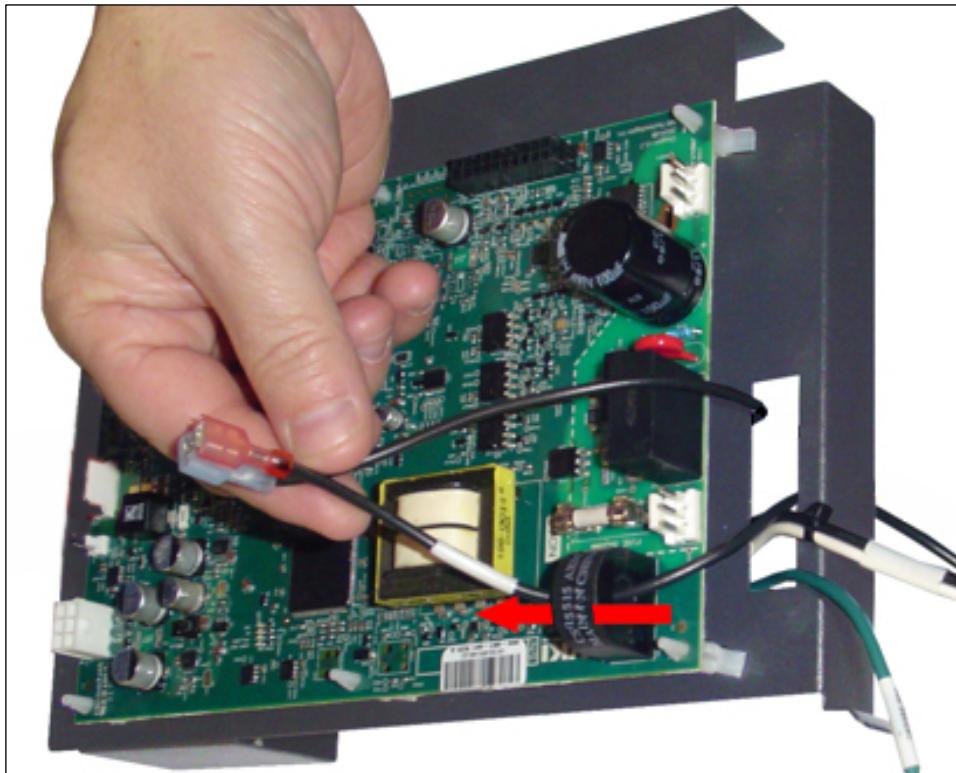
4. Disconnect the black wire (coming from the board/power supply) from the heater relay.
5. Disconnect the white wire (coming from the board/power supply) from the heating element.



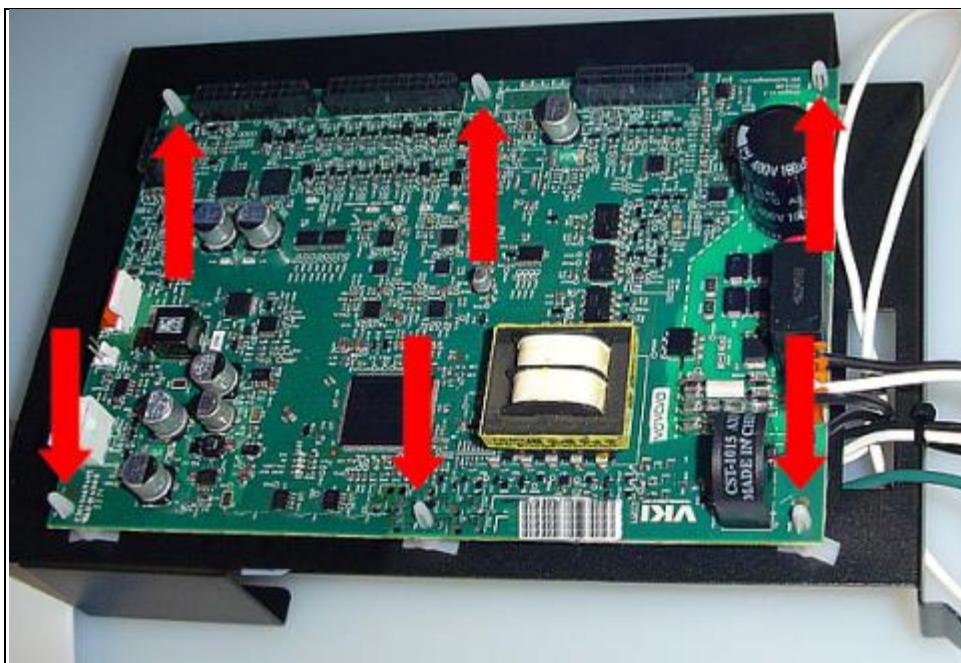
6. Remove the black and white wires (going to the heating circuit) from the wire clips.
7. Lift the board and power supply up and to the right to release it from the machine.



8. Remove the long black wire by pulling it through the center of the board-mounted choke.



9. Compress each of the board clips and lift the board off the clips to remove it.



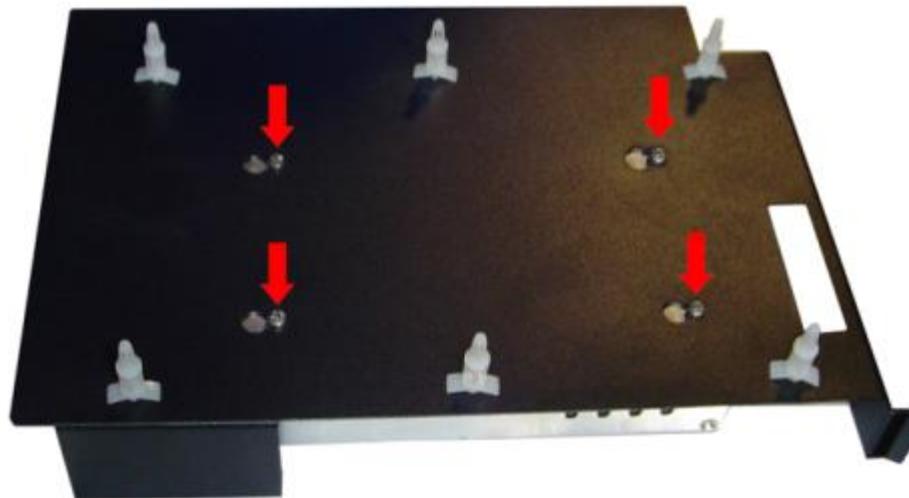
Power Supply

10. Disconnect the wiring from the upper and lower terminal blocks of the power supply.



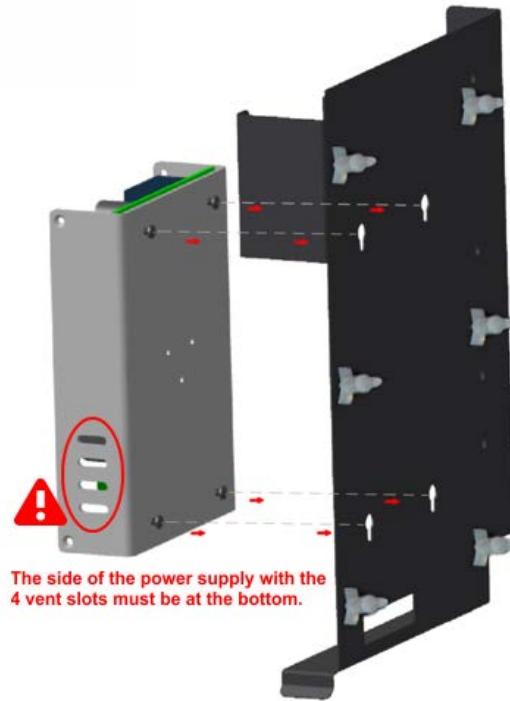
Do not lose the small screws and square washers when removing the wiring terminals from the power supply as these are not available as service parts.

11. With the control board removed, you now have access to the four screws used to secure the power supply to the support bracket. Loosen these four screws to remove the power supply from the support bracket.

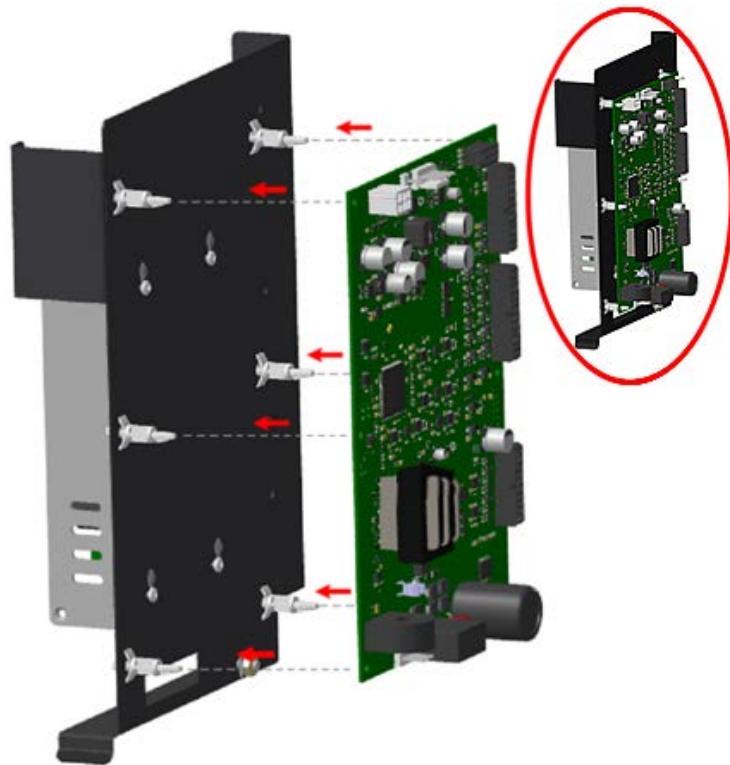


Installing the Control Board and Power Supply

1. Install the power supply onto the support bracket using four screws.



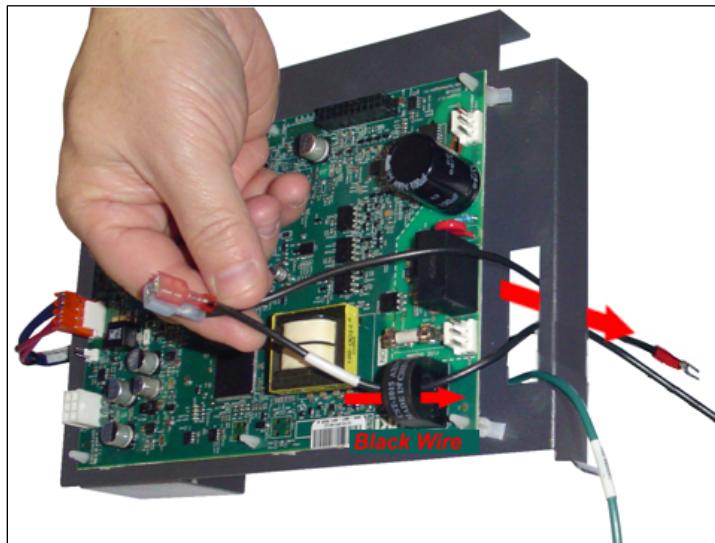
2. Install the control board onto the bracket by pushing it onto the clips.



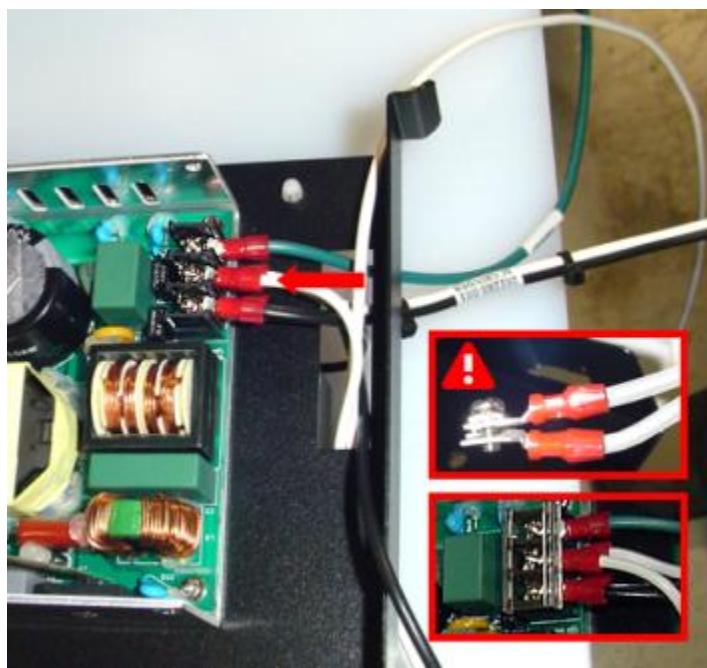
3. Reconnect the output wires to the power supply, as illustrated below.



4. Pass the long black wire through the center of the board-mounted choke and towards the power supply side.



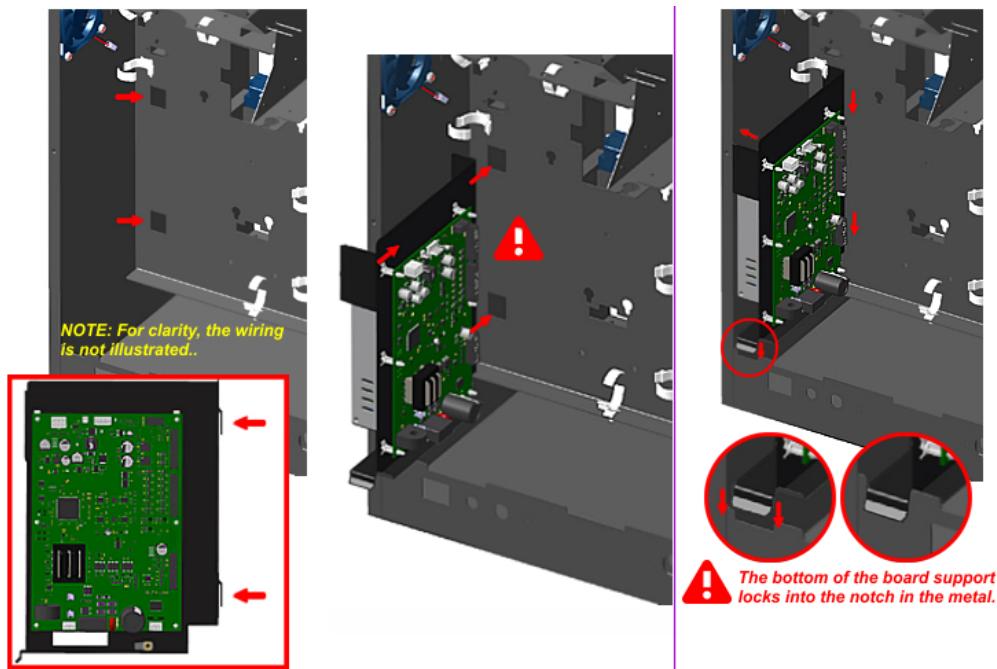
5. Connect the AC wires to the power supply, as illustrated below.



6. Route the black and white heater circuit wires around the outside of the power supply, and then upwards.



7. Install the power supply and control board assembly back into the machine. Make sure the two joggles slide into the openings on the metal wall to lock the assembly in place.



- Reconnect the black wire to the heater relay and the white wire to the heating element.



- Reconnect the black wiring pair to the fuse holder.
- Reconnect the white wiring pair to the main power switch.
- Connect the power cord to the wall outlet, but **DO NOT SWITCH ON THE POWER!**

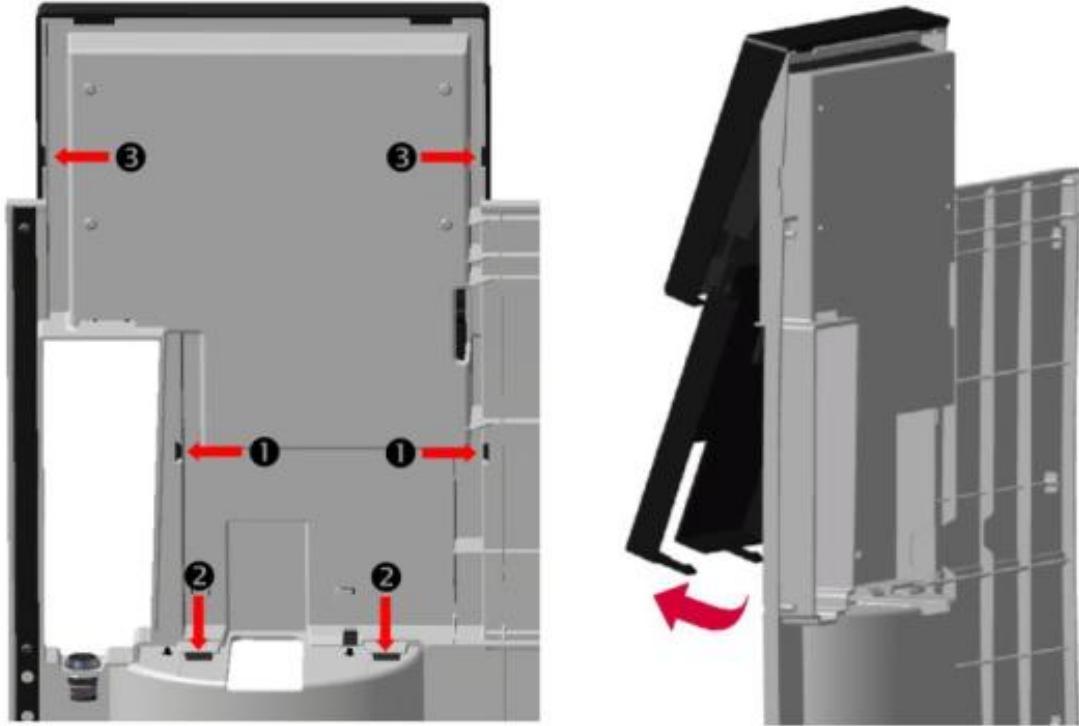


After replacing the control board, the firmware must be loaded when the machine is first powered up. **Do not power up the machine until the USB Flash drive with the proper firmware is connected to the machine.**

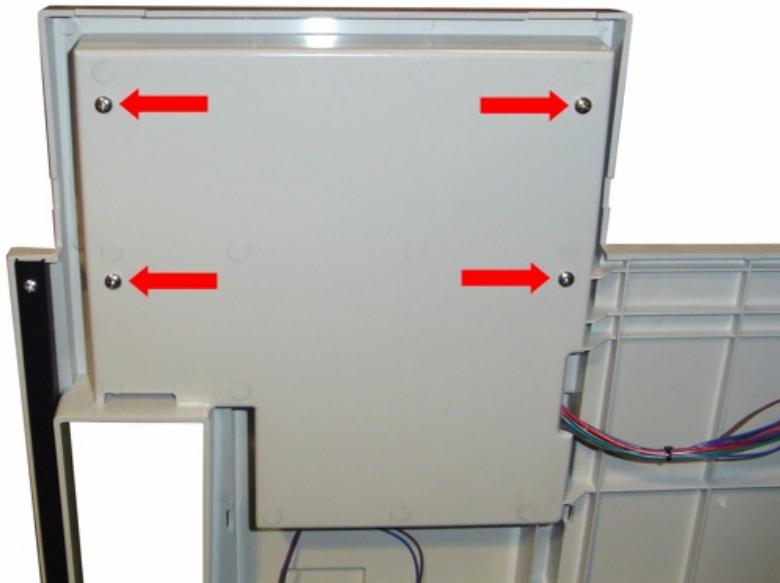
- Follow the procedure for updating the firmware ([see page 75](#)).

Replacing the HMI (Touch Panel)

1. Unlock and open the front door.
2. Remove the black door fascia - undo the clips with a flat head screwdriver in the sequence shown, and then pull the bottom of the fascia to remove it.



3. Remove the four screws securing the HMI to the front door.



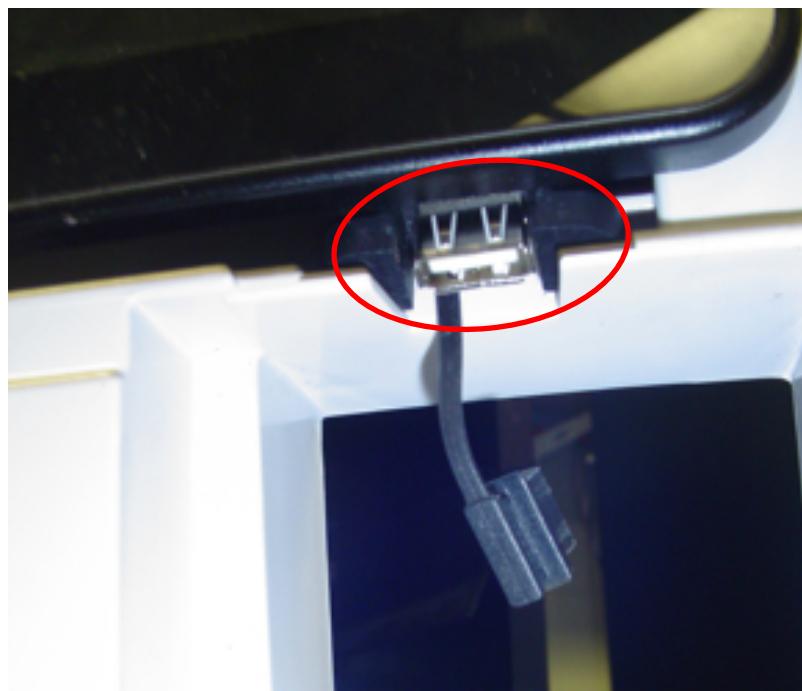
4. Pull the HMI from the door and disconnect the wiring harness from the bottom of the HMI.



5. Remove the small MicroSD card from the original HMI (push in and release to pop it out) and insert it into the new one (push in and release to lock it in place).
6. Install the antenna onto the bottom of the HMI (if missing).
7. Connect the wiring harness to the bottom of the HMI.

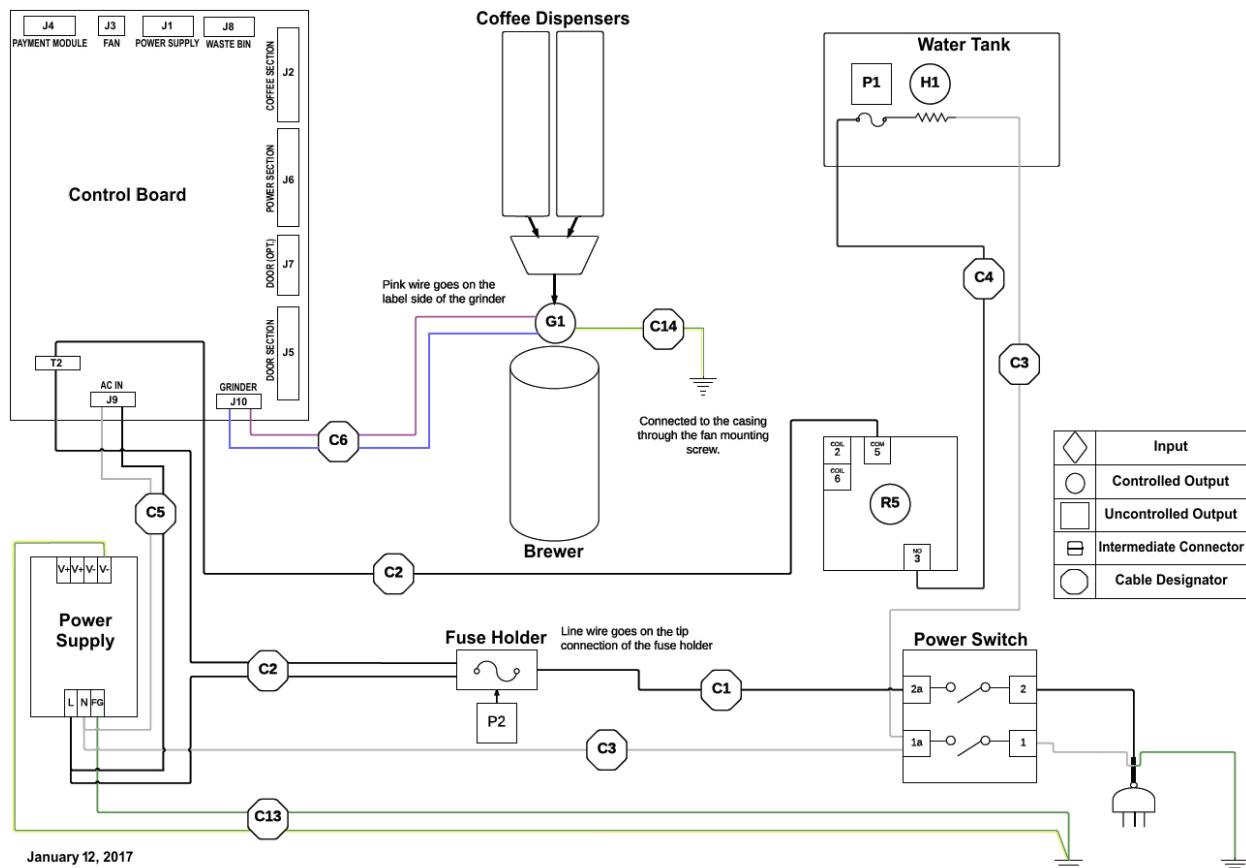
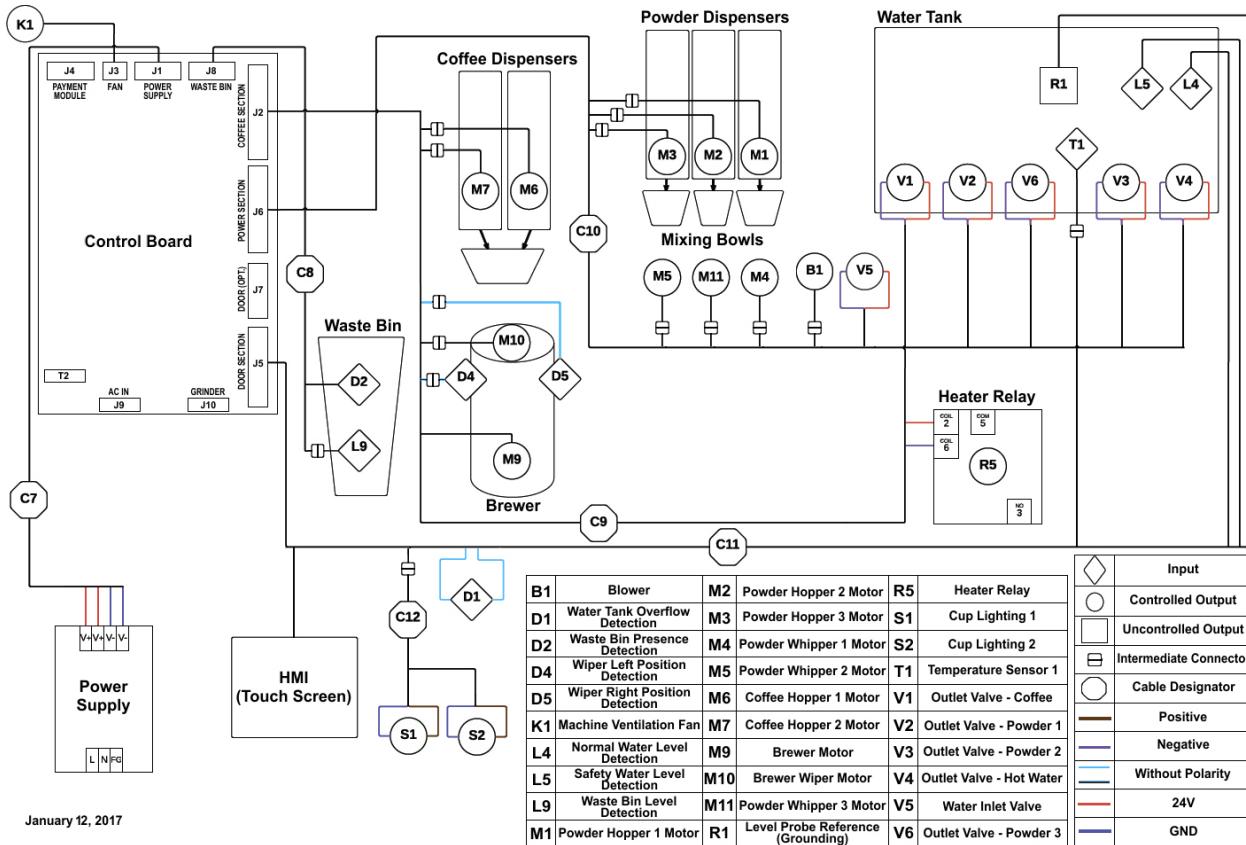


8. Place the HMI onto the door, making certain to secure the USB connector to its retainer on the door.



9. Secure the HMI to the front door using four screws.
10. Switch the machine power on.
11. Load the latest firmware into the HMI ([see page 75](#)).
12. Test the equipment and, if functioning properly, replace the black door fascia.

Wiring Diagram



Wiring Harness Layout

C1 - 202282-001 Fuse to Switch	J1	Fuse - Tip
	J2	Power Switch - 2a
C2 - 202283-001 Switch to Relay	J1	Fuse - Top
	J2	Power Supply - AC "L"
	J3	Heater Relay - COM
	-	-
	-	-
C3 - 202284-001 Switch to Heater	J1	Power Switch - 1a
	J2	Power Supply - AC "N"
	J3	Heater Element
C4 - 202285-001 Relay to Heater	J1	Heater Relay
	J2	Heater Element
C5 - 202280-001 AC - Power	J1	Power Supply - "L"
	J2	Power Supply - "N"
	J3	Control Board - AC In (J9)
C6 - 202281-001 Grinder	J1	Control Board/Grinder (J10)
	J2	Grinder + (G1)
	J3	Grinder - (G1)
C7 - 202279-001 Power Supply	J1	Control Board/Power Supply (J1)
	J2	Power Supply - V+
	J3	Power Supply - V+
	J4	Power Supply - V-
	J5	Power Supply - V-
C8 - 202278-001 Waste Bin	J1	Control Board/Waste Bin (J8)
	J2	Waste Bin Detection (D2)
	J3	Waste Bin Level Sensor (L9)
C9 - 202276-001 Coffee System	J1	Control Board/Coffee Section (J2)
	J2	Coffee Dispenser Motor 1 (M6)
	J3	Coffee Dispenser Motor 2 (M7)
	J4	Wiper Left Limit Switch (D4)
	J5	Wiper Motor (M9)
	J6	Wiper Right Limit Switch (D5)
	J7	Brewer Motor (M9)
	J8	Heater Relay - Coil 6
	J9	Heater Relay - Coil 2
	J10	Coffee Valve - (V1)
	J11	Coffee Valve + (V1)

C10 - 202275-001 Powder System	J1	Control Board/Powder Section (J6)
	J2	Powder Dispenser Motor 3 (M3)
	J3	Powder Dispenser Motor 2 (M3)
	J4	Powder Dispenser Motor 1 (M3)
	J5	Whipper Motor 2 (M5)
	J6	Whipper Motor 3 (M11)
	J7	Whipper Motor 1 (M4)
	J8	Blower (B1)
	J9	Inlet Valve- (V5)
	J10	Inlet Valve+ (V5)
	J11	Powder 1 Valve- (V2)
	J12	Powder 1 Valve+ (V2)
	J13	Powder 3 Valve- (V6)
	J14	Powder 3 Valve+ (V6)
	J15	Powder 2 Valve- (V3)
	J16	Powder 2 Valve+ (V3)
	J17	Hot Water Valve- (V4)
	J18	Hot Water Valve+ (V4)
C11 - 202277-001 Tank Top	J1	Control Board/Door Section (J5)
	J2	HMI (Touch Screen)
	J3	Cup Lighting
	J4	Water Tank Overflow Detection (D1)
	J5	Water Tank Overflow Reference (D1)
	J6	Water Tank Temperature Probe (T1)
	J7	Water Level Reference (R1)
	J8	Water Level Safety (L5)
	J9	Water Level Probe (L4)
C12 - 202277-001 Door LED	J1	C11 / J3
FAN - 202257-001	J1	Control Board/Fan (J3)
C13 - 202286-001 Power Supply Ground	J1	Power Supply Ground
	J2	Case Ground
	J3	Power Supply V-
C14 - 202327-001 Grinder Ground	J1	Case Ground (Fan Screw, K1)
	J2	Grinder Ground (G1)

SECTION 8

Updating Firmware



Never attempt to install an older version of software than the version currently installed in your equipment as it is not backwards compatible! This may result in a failure of the HMI (touch screen) and void its warranty.

Firmware updates may be released periodically for the Eccellenza Touch. These updates may consist of fixes, new options and features, customizations, etc. This section guides you through the simple process of updating your equipment to the latest firmware.



After replacing the control board, the firmware must be loaded when the machine is first powered up. Do not power up the machine until the USB Flash drive with the proper firmware is connected to the machine.

1. Load the latest firmware files onto an **empty** USB flash drive (minimum **8GB**).
2. Remove the waste bin.
3. Remove the plug from the USB connector and insert your USB flash drive into it. **Make sure to push the USB flash drive into the USB connector as far as it can go.**



4. Reboot the machine using the main power switch (switch the power off for 5 seconds and then on again).

- The updating process is automated and requires no user input. The screen reverts to command-style prompts that provide progress information on the update.

```

/dev/sda /dev/sda1
/dev/sda /dev/sda1
/dev/mmcblk0 /dev/mmcblk0boot1 /dev/mmcblk0p2 /dev/mmcblk0rpmb /dev/mmcblk0p1
/dev/mmcblk0boot0 /dev/mmcblk0p1 /dev/mmcblk0p3
----- Version 1.0.10.98 -----
CoffeeSystem fs.checksum rootsfs.tar.bz2 u-boot.imx.md5 update.sh
bar log (imx6dl-sabredtb.dtb) rootsfs.tar.bz2.md5 uImage update.sh_inand
Habey's Update u-boot.imx
log
=====
Starting Checksum ...
u-boot.imx: OK
uImage: OK
rootsfs.tar.bz2: OK

=====
VKI Coffee System

=====
Checking for existing installations ...
Product installation found.
Creating product configuration backup at '/mnt/usb/Backup'

=====
Configuration backup created.

=====
All checksum passed
=====
* start update u-boot.imx
* update u-boot.imx finished
=====
* start update imx6dl-sabredtb.dtb
* update imx6dl-sabredtb.dtb finished
=====
* start update uImage
* update uImage finished
=====
Start update rootsfs...
16% [=====.....]

```

- Once the update is complete (it may take up to 30 minutes), you are prompted to remove the USB flash drive to reboot the machine.

Remove the flash drive and the Eccellenza Touch will reboot itself twice. While it is rebooting, re-install the plug onto the USB connector and re-install the waste bin.



If the screen remains black with a “log-in” prompt, allow the machine sit undisturbed for 15 minutes or so as the upgrade may still be in progress in the background.

- It is possible that an error may be displayed on the screen after the reboot. If this is the case, simply clear the error.



If the update process was interrupted prior to completion, you must connect the USB flash drive to a computer, and delete the “Backup” folder that was created, otherwise further updates will not be possible with this flash drive.



Updating the Eccellenza Touch firmware will not overwrite or change any existing settings or customizations you may have made in the programming. These settings will be maintained.