

**NOTE:** Install instructions on back page.

**Daily Cleaning**

1. Empty drip pan as needed and wash daily in a dish detergent.



2. Rinse out the whipper chambers by placing the rinse switch (located to the right of the dispensing valves when the door is open) in the ON position ("HOT RINSE" position for CAP1 models). Dispense one to two cupfuls until the water is clear. Short bursts of dispensing may also help clean the chambers. When complete, return the rinse switch to the OFF position.



3. Remove the hoppers and refill with product.



**Weekly Cleaning**

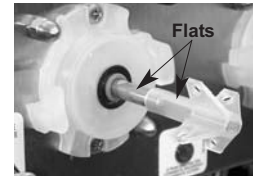
**Cleaning the Chambers – Disassembly**

**Cleaning the Chambers – Reassembly**

1. Open the door and remove the mixing funnel shroud by pulling forward while turning one quarter turn to the right. Lift off and remove.



1. Replace the whipper blade by lining up the flat inside the blade with the flat side of the motor shaft. Push blade firmly into place.



2. Remove the mixing funnel by lifting the neck of the funnel out of the whipper chamber, then tilt to the left. With one hand on the water inlet fitting on the back panel, pull the funnel out of the white ring.



2. Replace whipper chamber by positioning the medium-sized opening up and tilting 1/8 turn to the right. Put whipper chamber over whipper blade and turn to the left until it locks into place.



3. Remove the whipper chamber by rotating it 1/8 turn to the right, then pull to remove.



3. Replace the mixing funnel by positioning the large opening up and tilt it slightly to the left. Insert the water inlet pipe into the water inlet fitting on the back panel then rotate the funnel to the right until the neck of the funnel seats inside the whipper chamber opening.



4. Remove the whipper blade by grasping the whipper blade with two fingers and firmly pulling to remove.



4. Replace the shroud by placing it on the mixing funnel with the opening to the right. Turn the shroud to the left until the opening in the shroud rests inside the opening in the back panel.



5. PARTS IN CONTACT WITH FOOD MUST BE WASHED, RINSED, SANITIZED, AND AIR DRIED.



## Weekly Cleaning (cont.)

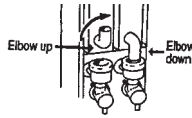
### Cleaning Hoppers – Disassembly

### Cleaning Hoppers – Reassembly

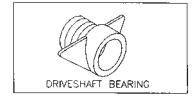
**⚠ CAUTION:** Do not wash hopper without first disassembling.

**IMPORTANT:** All components must be completely dry prior to reassembly.

**1. PIC 1, 2, 3, 4, 5, 6:** Open door and rotate elbow on hopper to the UP position to prevent spillage.



**1. PIC 1, 2, 3, 4, 5, 6:** Place driveshaft bearing inside hopper with threads going through hole in the rear of the hopper.



**2. PIC 1, 2, 3, 4, 5, 6:** Remove the hopper from the cabinet.



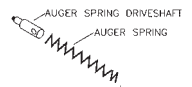
**2. PIC 1, 2, 3, 4, 5, 6:** Secure the bearing by attaching the palnut to the bearing outside rear hopper opening. Use one hand inside the hopper to push the bearing outward while turning the palnut clockwise.



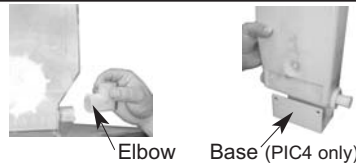
**3. PIC 1, 2, 3, 4, 5, 6:** Remove the hopper cover and empty hopper contents.



**3. PIC 1, 2, 3, 5, 6:** Install the auger spring driveshaft and the auger spring by inserting the flat end of the spring into the hole in the auger spring driveshaft.



**4. PIC 1, 2, 3, 5, 6:** Pull off the elbow.



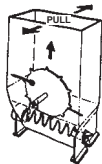
**4. PIC 1, 2, 3, 4, 5, 6:** Insert assembly into lower front hopper opening, making sure the threaded end of the auger spring driveshaft completely inserts into the plastic driveshaft bearing in the rear of the hopper. The driveshaft bearing threads should be accessible from the outside rear of the hopper.



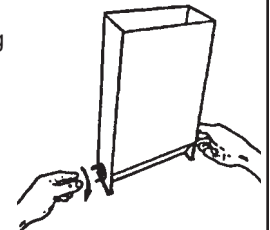
**5. PIC 1, 2, 3, 5, 6:** Remove the auger pinwheel by pulling it forward while stretching out the sides of the hopper.

**PIC 4:**

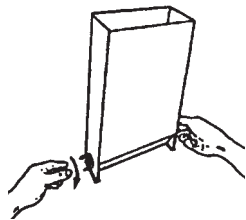
**Thin hopper:** Remove the auger pinwheel by pulling it forward while stretching out the sides of the hopper.  
**Wide hopper:** Remove wing nut and flat washer on outside of hopper and remove pinwheel assembly (gear w/ spring and pinwheel w/ 2 springs).



**5. PIC 1, 2, 3, 4, 5, 6:** Place the washer over the driveshaft bearing followed by securing the drivelinek onto the driveshaft bearing by turning counterclockwise. Secure the auger spring with one hand while attaching the drivelinek with the other.



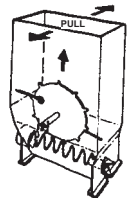
**6. PIC 1, 2, 3, 4, 5, 6:** Remove the drivelinek and washer at the rear of the hopper by holding the auger spring with one hand at the front of the hopper while turning the drivelinek clockwise with the other hand.



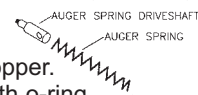
**6. PIC 1, 2, 3, 5, 6:** Replace the auger pinwheel making sure the pins are securely positioned inside the locator holes in the hopper.

**PIC 4:**

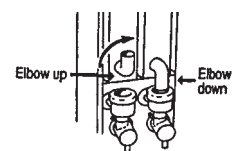
**Thin hopper:** Replace the auger pinwheel making sure the pins are securely positioned inside the locator holes in the hopper.  
**Wide hopper:** Replace pinwheel assembly by inserting gear through the pinwheel and inserting threads through the hopper wall.  
**For either hopper:** Turn coupling and make sure pinwheel is properly installed and turns freely.



**7. PIC 1, 2, 3, 5, 6:** Remove the auger spring and auger spring driveshaft by pulling out through the lower front opening of the hopper.



**7. Replace the elbow in the UP position.**

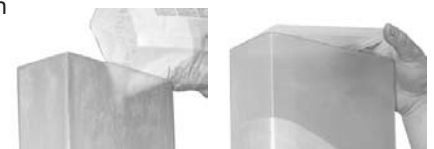


**8. PIC 1, 2, 3, 5, 6:** Remove the palnut at the rear of the hopper by turning it counterclockwise then remove the driveshaft bearing from the inside of the hopper.

**PIC 4:** Remove the nuts at the front and rear of the hopper by turning counterclockwise, then remove the bearings from the inside of the hopper.



**8. Fill the hopper with product and replace the cover.**

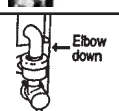


**9. Reinstall hopper into the machine, making sure it is properly positioned inside the notches under the hopper.**



**9. PIC 1, 2, 3, 4, 5, 6:** All parts in contact with food must be washed, rinsed, sanitized, and air dried.

**10. Turn the elbow down toward the mixing funnel, making sure it is lined up over the funnel opening.**



## How to Dispense a Cup of Cappuccino

**Models with Manual Dispense Switches**  
(Refer to serial tag to verify model number of your machine)

**Models with Portion Control**  
(Single portion or 3 portion per head)  
(optional on PIC 2, 3 & 4 only)

- 1.** Place cup under the selected drink dispense nozzle.



- 1.** Place cup under the selected drink dispense nozzle.



- 2.** Push and hold the appropriate switch on the touchpad until cup is 2/3 full and then release switch.

Dispense Switch



- 2.** Push appropriate switch on the touchpad, then release to dispense one preset serving. (See **Portion Control Adjustment** to set portion size)

Dispense Switch



**NOTE:** Portion may be cancelled by push and release of the switch during dispensing.

**CAUTION:** Cup must rest flat on tray with a 1/4" (6 mm) clearance between cup and spout. Contents can cause severe burns if handled improperly.

English

## Changing the Lightbulb on Models with a Backlit Merchandiser

(Refer to serial tag to verify model number of your machine.)

**⚠ WARNING:** Disconnect machine from branch electrical supply before changing the lightbulb.

**NOTE:** The machine uses a F8T5 12" 8 watt replacement bulb.

- 1.** Remove the front merchandiser photo and cover by grasping the edges of the merchandiser.



- 4.** Gently insert both ends of the bulb into the socket and turn the bulb 1/4 turn to the right until the bulb locks into place.



- 2.** Remove the old lightbulb by gently turning the lightbulb 1/4 turn to the left and pulling the bulb from the socket. On PIC1K and CAP1 models, simply lift off and remove old lightbulb.



- 5.** Replace the merchandiser photo and cover.



- 3.** Install the new bulb by lining up the pins on either end of the bulb parallel with the socket opening. On PIC1K and CAP1 models, simply lower the new bulb into the socket.







## Portion Adjustment

If machine is a manual dispense, there are no portion control adjustments to be made. (Please refer to serial tag to reference model number.)

### Setting Single Portion Control

### Setting Three Portion Sizes Per Head (optional on PIC 2/3/4 only)



<p><b>1.</b> Place a cup under the selected drink dispense nozzle.</p> 	<p><b>1.</b> Place a cup under the selected drink dispense nozzle.</p> 
<p><b>2.</b> Press and <u>hold</u> the dispense switch.</p> 	<p><b>2.</b> Press and <u>hold</u> the size button on the touch pad that you wish to program or set. (Hold button throughout entire procedure). Then press and <u>release</u> the manual (top-off) button (*). There will be a 10 second delay before the machine dispenses.</p> 
<p><b>3.</b> After a 10 second time delay, the machine is triggered into program mode and will begin dispensing.</p>	<p><b>3.</b> Continue pressing the size button until cup is approximately 2/3 full, then release the switch to prevent overflow. The elapsed portion dispense time is saved to memory and will remain until the dispense switch is reprogrammed.</p>
<p><b>4.</b> Continue pressing the button until cup is approximately 2/3 full, then release the switch to prevent overflow. The elapsed portion dispense time is saved to memory and will remain until the dispense switch is reprogrammed.</p>	<p><b>4.</b> Check the portion size by placing an empty cup under the desired dispense nozzle, then press and release the dispense switch. The machine will dispense the preprogrammed portion size.</p>
<p><b>5.</b> Check the portion size by placing an empty cup under the desired dispense nozzle, the press and release the dispense switch. The machine will dispense the preprogrammed portion size.</p>	<p><b>5.</b> If the portion size is incorrect, repeat above steps until the desired portion size is achieved. Each portion size for each head needs to be set separately.</p>
<p><b>6.</b> If the portion size is incorrect, repeat above steps until the desired portion size is achieved. Each dispense switch needs to be set separately.</p>	<p><b>6.</b> If the portion size is incorrect, repeat above steps until the desired portion size is achieved. Each portion size for each head needs to be set separately.</p>

English

## Drink Strength Adjustment (Refer to Figures A and B)

**Tools Required: #2 Phillips Screwdriver**

**⚠ Warning: Risk of Electric Shock! Always turn off power to machine while servicing or making internal adjustments to machine.**

<p><b>1.</b> Dispense a drink to determine if drink is too strong or too weak.</p> 	<p><b>3.</b> Remove upper front splash cover below dispense heads in front of machine.</p> 
<p><b>2.</b> Turn off power to machine at power switch.</p>	<p><b>4.</b> Using a flat head screwdriver, adjust individual dispense heads by rotating appropriate adjustment knob. (See Figures A and B on page 7). Turn on power to machine and dispense a drink to determine if drink strength is acceptable, turn off power to machine and repeat adjustment steps until desired drink strength is achieved.</p>

**NOTE:** Clockwise rotation will result in a stronger drink and counterclockwise will result in a weaker drink.

**NOTE:** Water flow rate is factory preset at approximately 0.80 ounces per second.

## Portion and Drink Strength Adjustment for Model PIC2J & PIC3J (Refer to Figure C)

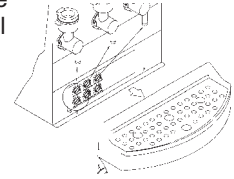
**⚠ Warning: Risk of Electric Shock! Always turn off power to machine while servicing or making internal adjustments to machine.**

- 1.** Dispense a drink to determine if drink is too strong or too weak.



- 2.** Turn off power to machine at power switch.

- 3.** Drink strength and portion size controls will be found behind the drain tray. For portion size adjustment, turn dial clockwise to increase dispense volume. To decrease volume, turn dial counterclockwise. For drink strength adjustment, turn dial clockwise to increase drink strength. To decrease strength turn dial counterclockwise. Turn on power to machine and dispense a drink to determine if drink strength or portion is acceptable. If drink strength or portion is not acceptable, turn off power to machine and repeat adjustment steps until desired drink strength or portion is achieved.



**NOTE:** Clockwise rotation will result in a stronger drink and counterclockwise will result in a weaker drink.

**NOTE:** Water flow rate is factory preset at approximately 0.80 ounces per second.

**NOTE:** ONLY if necessary; to adjust flow rate, remove left side upper panel. Use flat head screwdriver and turn knob on respective dump valve.

**⚠ WARNING: Do not adjust flow rate above the factory setting to prevent funnel overflow.**

### Water Flow Rate Adjustment

**NOTE:** ONLY if necessary; to adjust flow rate, remove:

- Upper rear panel for PIC1K and CAP1.
- Left upper panel for PIC2-3.
- Left upper panel for Left #1, #2 and #3 heads for PIC4-6.
- Right upper panel for #4 head and hot water for PIC4.
- Right upper panel for #4 - #6 heads for PIC5-6.

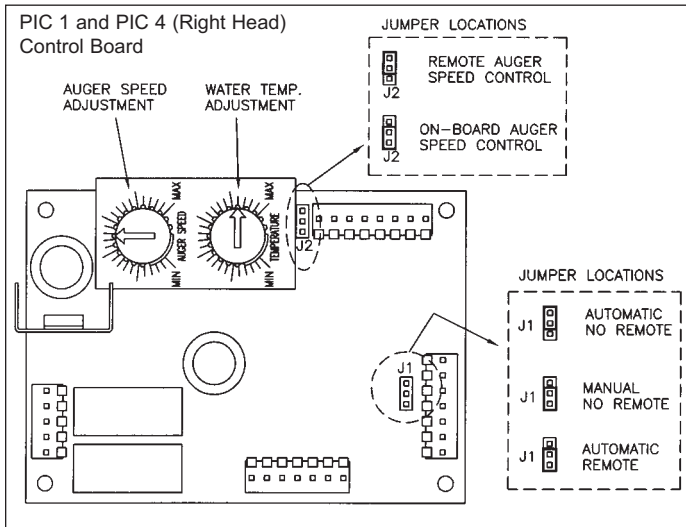
Use flat head screwdriver and turn knob on respective dump valve.

**⚠ WARNING: Do not adjust flow rate above the factory setting to prevent funnel overflow.**

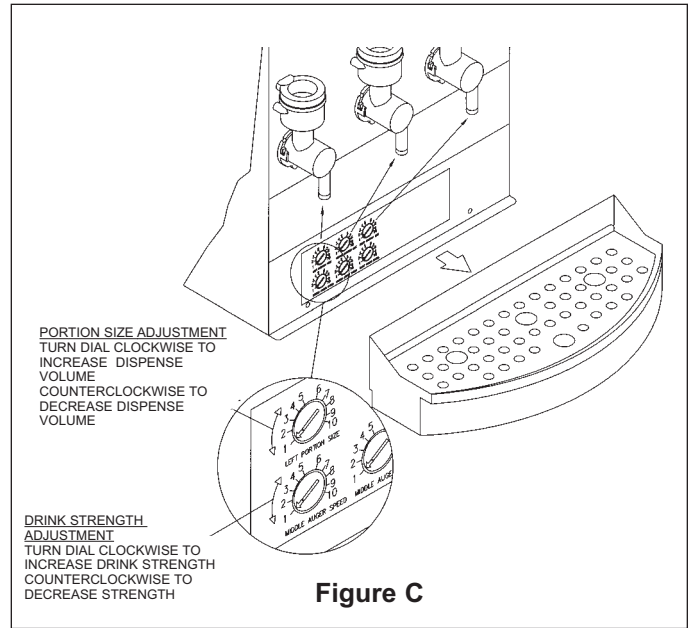
For Model PIC1K W, two valves are on the rear - lower valve is for hot water spout. It may be adjusted as high as 1.3 oz/second (38 ml/second).

On CAP1 models, the water flow rate for Cold (Ambient) drinks might need adjusted to reach recommended flow rate of 0.80 oz/second (23.7 ml/second). To adjust the cold water flow rate, remove cover panel in rear/bottom of machine and turn needle valve knob. After adjusting knob, with switch in "COLD DRINK" position, run a dispense cycle and check flow rate. Repeat until recommended flow rate is achieved.

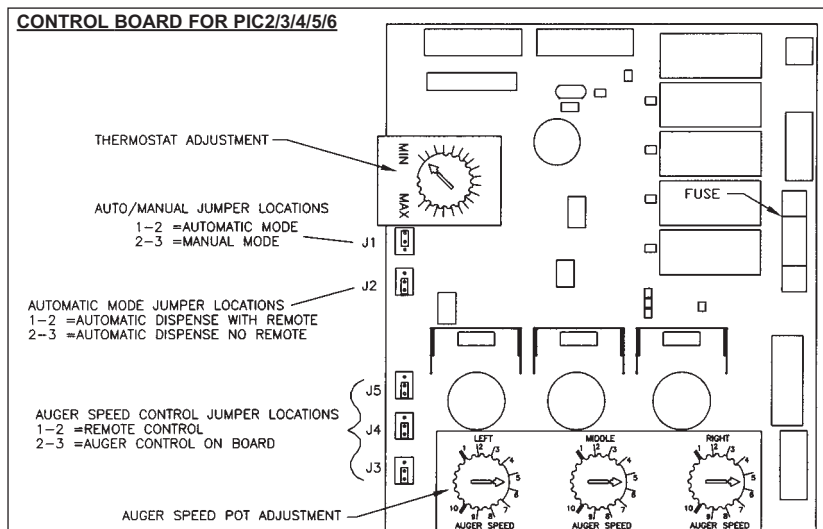
# Drink Strength Adjustment (cont.)



**Figure A** Operates right head on PIC4.  
Thermostat dial is not used on PIC4 right controller.



**Figure C**



**Figure B** Two controllers used for PIC43, PIC5, PIC6.  
Thermostat dial is not used on PIC43, PIC5, PIC6 right controller.  
On Right Controller: Left dial operates #4 head, middle dial operates #5 head, and right dial operates #6 head.

English

## Prepare for Shipment

**Important:** Always completely empty water tank and **POWDER HOPPERS** prior to shipping unit. (See Draining the Tank and Cleaning the Hoppers section).

**NEVER SHIP UNIT WITH POWDER IN HOPPER OR WATER IN TANK – THIS WILL CAUSE IRREPARABLE DAMAGE.**

## Draining the Tank

Always empty the tank before shipping.

**⚠ WARNING:** Draining of the tank should be performed by a qualified service technician. The tank contains very hot water. May cause severe burns.

**NOTE:** PIC 1 contains 2 gallons of hot water.  
PIC 2, PIC 3 & PIC 4 contain 3-1/2 gallons of hot water.  
PIC 5 and PIC 6 contain 5-1/2 gallons of hot water.

- 1.** Prepare a heat resistant container to drain the tank water into.



- 5.** Pinch hose with fingers and remove the hose clamp and plug.



- 2.** Unplug the machine.



- 6.** Allow the tank to drain completely.

**NOTE:** It may be necessary to pinch the hose and stop the water before container is full. Carefully re-install plug, then empty container. Repeat steps 4-6 to completely drain tank.



- 3.** Remove the drain tray and front access panel.



- 7.** Once the tank is empty, securely replace the plug and clamp on the end of the hose. Reposition the drain hose inside the hose clip.



- 4.** Locate the silicone drain hose on the left side wall. Put the end of the drain hose into the container. Secure the end of the drain hose (i.e. with tape) into the container.



- 8.** Reassemble the front access panel and drain tray.





# PIC Preventative Maintenance Checklist (Every 6 to 12 months)

A preventative maintenance visit should be performed every 6 to 12 months, depending on usage. The following procedures should be performed during a preventative maintenance visit.

**Parts Required:** One PM parts kit (PIC1 - Qty1 - 62707, PIC2 - Qty2 - 62707 or Qty1 - 60933, PIC3 - Qty1 - 60933, PIC4 - Qty1 - 60933 and Qty1 - 62707, PIC5 - Qty2 - 60933, PIC6 - Qty2 - 60933).

**Tools Required:** 11/32 nut driver, needle nose pliers, phillips head screwdriver, food grade lubricant.

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

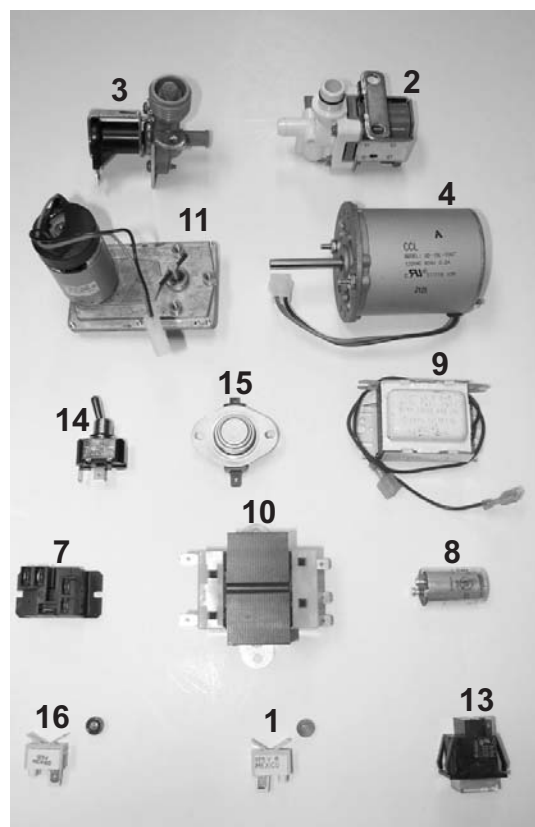
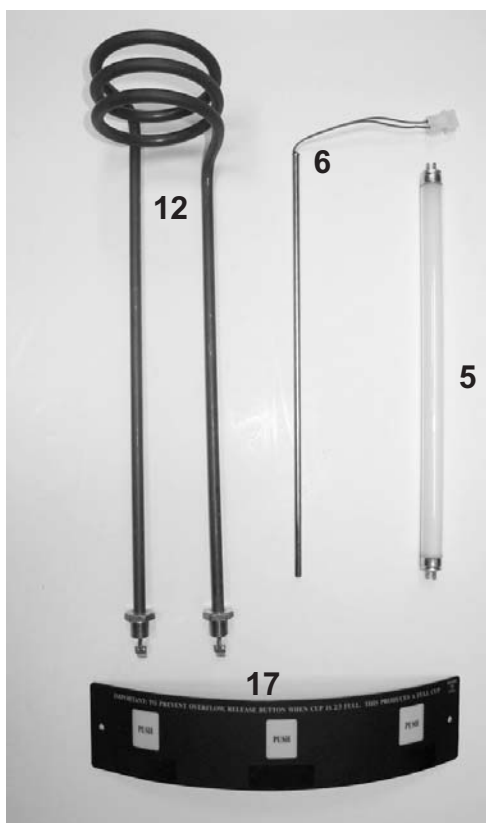


**WARNING – Risk of electric shock and burns. Disconnect power before servicing. Use care in handling hot liquids.**

1. Document model and serial number of equipment above.
2. Disconnect unit from power supply and turn power off. Then remove all access panels.
3. Shut off the water supply valve to the machine.
4. Open front door of unit and remove product hoppers. Clean hoppers following procedures on the decal on panel behind hoppers or as stated in instruction manual.
5. Remove the plenum chamber access panel, if so equipped (located below hoppers on newer units). Wipe out exposed plenum.
6. Locate the tank drain hose. It is located behind the bottom access panel. It is a white silicone tubing that has a 3/8" stainless steel barb plug and a black 5/8" hose clamp on it.
7. Prepare a heat resistant container to drain the tank water into. Unplug the machine. Remove the drain tray and front access panel. Locate the silicone drain hose on the left side wall. Put the end of the drain hose into the container. Secure the end of the drain hose (i.e. with tape) into the container. Pinch hose with fingers and remove the hose clamp and plug. Allow tank to drain completely. Note: It may be necessary to pinch the hose and stop the water before container is full. Carefully re-install plug, then empty container. Repeat process until tank is drained completely. Once the tank is empty, securely replace the plug and clamp on the end of the hose. Reposition the drain hose inside the hose clip. Reassemble the front access panel and drain tray. Refer to Draining the Tank section on page 8.
8. Remove the mixing funnel shroud and mixing funnel from each chamber. Remove and discard the o-ring on the mixing funnel. Set the shroud and funnel aside.
9. Remove each whipper chamber and whipper blade. Check for wear and replace if necessary. Then remove and discard the small whipper shaft o-rings from each dispense head.
10. Remove the two screws from each whipper base and save the screws. Discard the old whipper base and slinger washer, and replace with the new parts in the PM kit.
11. Clean the whipper motor shaft and clean all dried product in this area under where the whipper base was located.
12. Install the new slinger washer onto the whipper motor shaft, and up to hopper mounting bracket.
13. Lubricate inside of whipper base with a food grade lubricant. Then install whipper base over the whipper motor shaft and **check alignment of holes. If alignment is off, rotate base 180° to make sure holes line up.** Hold base securely, and carefully tighten mounting screws.
14. Check whipper motor shaft to ensure it can turn freely using fingers. If shaft is hard to turn, remove screws, rotate base 180°, and re-tighten.
15. Install the new, red, small o-rings, along with the whipper blades, and whipper chambers. Clean the funnel shrouds and funnels. Install each new funnel o-ring and lubricate. Then install funnel and shroud. When complete, put the plenum chamber access panel back in place, if so equipped.
16. Remove plenum through side access hole and remove the plenum hose(s) from the blower to the plenum chamber. Clean the plenum and either clean or replace the hose(s) (part# 61123, not in kit). Re-install clean parts.
17. Remove the dump valves located behind side access panels, by loosening the dump valve bracket nuts with the 11/32 nut driver and lifting bracket up. Then pull dump valve from grommet and then remove the grommets from the tank with needle nose pliers and discard. Then remove the o-rings from the dump valves and discard. Replace with new tank grommets and new o-rings for each valve. Re-install the dump valves and secure back onto the tank. Tighten nuts on dump valve bracket.
18. Locate power supply and verify proper electrical supply to unit.
19. Find the water supply line. Turn on water supply, and verify adequate water flow.
20. Turn power supply back on. Then turn main power switch to "on".
21. Verify water tank in unit is filling. After the tank is full, verify that the heating cycle has started.
22. Allow unit to fill and shut off. Check around dump valves and any tubing for signs of water leaks.
23. Replace all access panels and reinstall hoppers inside the unit. Verify nut on back of hopper is secure.
24. Verify each dispense head is operating properly and that the settings are correct. Adjust if necessary.
25. Check for proper product temperature and check mix ration for proper setting, and adjust if necessary.
26. Review proper care, cleaning and maintenance procedures with store personnel.

## PIC Series Parts List

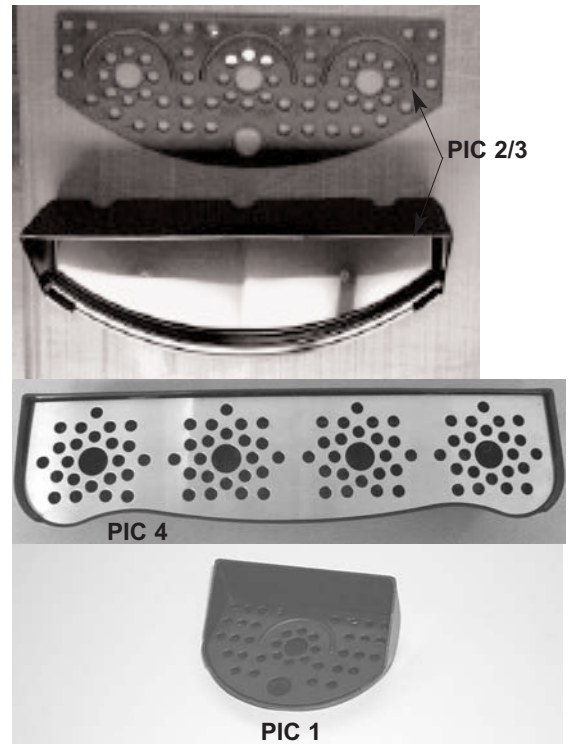
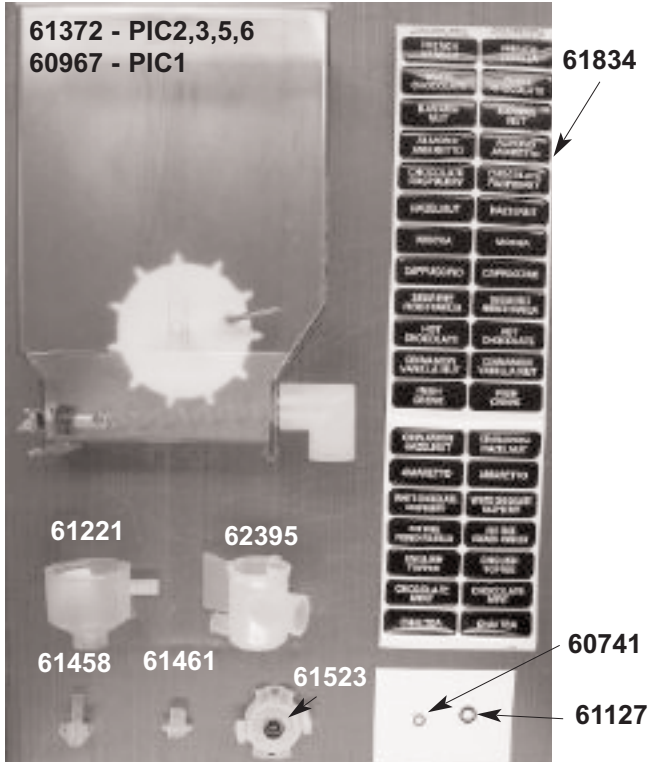
English



Item #	PIC 1K / PIC 2 / PIC 3 / PIC 5 / PIC 6 / CAP1					PIC 4	Description
	200V "J"	100V "J"	230V/50 "E"	240V/60 "Q"	120V/60 "Std"	120V/60	
1	70271	61167	70271	05096	05096	05096	Red Lamp
2	61109	61165	61109 A71684 (PIC1KW)	61102	61102	61102	Dump Valve
3	61105	61104	61105 61631 (CAP1)	61104	61104 61146 (CAP1)	61104	Inlet Valve
4	61117	61116-01	61117	61116-01	61116-01	61116-01	Whipper Motor
5	61118	61118	61118 60941 (PIC1K/CAP1)	61118	61118 62937 (PIC 5/6) 60945 (PIC1K/CAP1)	61118	Light Bulb
6	61128	61128	61128	61128	61128	61128	Thermistor
7	61131	61131	61131	61131	61131	61131	Heater Relay
8	61194	61194	61194	61194	61194	61194	Starter
9	61169	61166	61468	61196	61196	61196	Ballast
10	61482	61482	61470	61481	61481	61481	Transformer
11	61618	61618	61618	61618	61618	100090	Auger Motor Assy - 145 RPM
	65057	65057	65057	65057	65057	63177	Auger Motor Assy - 30 RPM
	65046	65046	65046	65046	65046	65046	Auger Motor - 220 RPM
	65047	65047	65047	65047	65047	100089	Auger Mtr Shaft - 220 RPM
12	61107	61626	61107	61107	61626 - 1650 W 61280 - 1400 W	61626 - 1650 W 61280 - 1400 W	Heating Element
13	63195*	63195*	63195*	63195*	63195* 62914, 62915 (PIC5/6)	63195*	Brew Dispense Switch
14	Rinse: 61847 Power: 61466	Rinse: 61847 Power: 61847	Rinse: 61847, 63191 (CAP1) Power: 61466	Rinse: 61847 Power: 61466	Rinse: 61847, 63191 (CAP1) Power: 61487	Rinse: 61847 Power: 61487	Switch - Power/Rinse
15	62305 62237 (PIC1K/CAP1)	62305 62237 (PIC1K/CAP1)	62305 62237 (PIC1K/CAP1)	62305 62237 (PIC1K/CAP1)	62305 62237 (PIC1K/CAP1)	62305	Hi Limit Thermostat
16	61125	61168	61125	62436	62436	62436	Green Lamp
17	PIC13/CAP13: 63463; PIC 2: 62429; PIC 2A: 62430; PIC 23A: 62433; PIC 3: 62431; PIC 3A: 62432; PIC 33A: 62415; PIC43A: 62800						Touchpads

\* PIC-1 and PIC-4 only. See touchpads for other models.

## PIC Series Parts List



Part #	Description
60741	Whipper O-ring Red
61127	Funnel O-ring Blue
61221	Whipper Funnel
61223	Hopper Elbow
61278	.406" Pitch Auger
61302	.718" Pitch Auger
61224	.531" Pitch Auger Standard
61315	Hopper Lid
61316	Pinwheel Agitator
61372	Single Pinwheel Hopper Assy
61437	Knurl Screw
61458	Whipper Blade
61461	Button Restrictor
61523	Whipper Blade Assembly
61834	Decal, Flavor Tags
62395	Whipper Chamber

Above parts used on PIC 1/2/3/5/6 only

Model	Drip Tray	Drip Grid
PIC 1	62335	61617
PIC 1 E & J	61706	61617
PIC 2 / PIC 3	62336	61892
PIC 2 / PIC 3 E & J	61198	61892
PIC 4	62662	62545
PIC 5	62833	62921
PIC 6	62866	62922
CAP1	62335L	61617L
CAP1E	61706L	61617L

**PIC 4 5.5 lb. Hopper**  
 P/N 62639 – Cappuccino  
 P/N 63078 – Soluble



**PIC 4 11.5 lb. Hopper**  
 P/N 62640 – Cappuccino



**PIC 4 Hopper Layout**



**PIC Preventative Maintenance Kit – Part # 60933**

61243 Grommet

61334 Washer

61365 O-ring

61127 O-ring

60741 Shaft O-ring

61458 Blade

61523 Whipper Base Assy.

61524 Whipper Chamber Assy.

**GRINDMASTER CORPORATION**

Cratches Powdered Cappuccino  
 Preventative Maintenance Checklist  
 Model # \_\_\_\_\_  
 Serial # \_\_\_\_\_  
 Date \_\_\_\_\_  
 PM Completed by \_\_\_\_\_  
 Of Company \_\_\_\_\_

A preventative maintenance visit should be performed every 6 to 12 months, depending on usage. The following procedures should be performed during a preventative maintenance visit.  
 Note: If your PIC2 or PIC3 style unit has a serial number of 35453VK or below, verify that the unit is equipped with a new lower drip tray (Part# 62336) - If it is not, we recommend replacing the drip tray using one drip tray conversion kit (Part # 62396) as part of your PM routine.

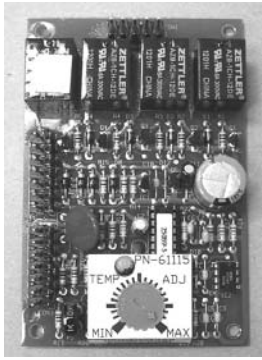
**PIC Preventative Maintenance Checklist (Every 6 to 12 Months)**

Parts Required: One PM parts kit (Part # 60933) can be used to complete a Model PIC3 PM visit.  
 Tools Required: 11/32 nut driver, needle nose pliers, philips head screwdriver, food grade lubricant

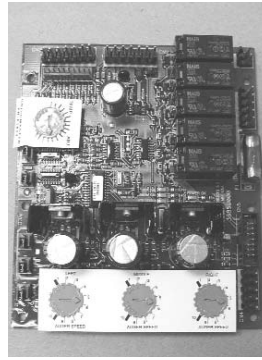
The following procedures should be performed by a qualified service technician.  
**WARNING** – Risk of electric shock and burns. Disconnect power before servicing. Use care in handling hot liquids

1. Document model and serial number of equipment above. If drip tray conversion kit is required (see note above), discard old drip tray (saving the drip tray grid). Install the new lowered drip tray. Place the new warning label from the drip tray conversion kit on the front splash panel in the same place as the old label. Replace the old whipper chambers with the new whipper chambers included in the kit.
2. Disconnect unit from power supply and turn power off. Then remove all access panels.

60934 Instruction Sheet



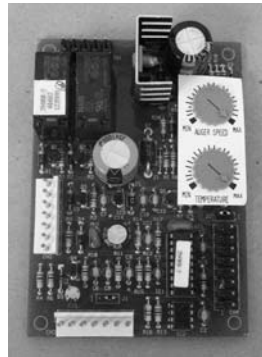
61115  
PIC controller  
AC motors –  
old machines



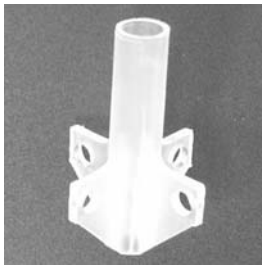
61800  
PIC 2/3/4/5/6 Controller  
**NOTE:** PIC43A, 5 & 6 use  
2 controllers  
62300  
PIC2A, PIC3A, & PIC4A



61243  
Dump Valve Grommet



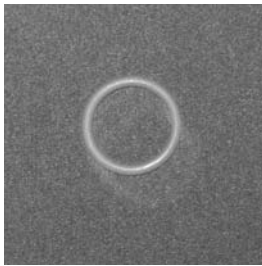
61632  
Controller –  
PIC 1, PIC 4  
**NOTE:** PIC 4 uses two controllers  
(61632 and 61800)



61458  
Whipper Blade



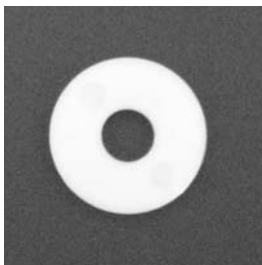
61523  
Whipper Base Assy.



61365  
O-ring for  
Dump Valve



61524  
Whipper Chamber Assy.



61334  
Slinger Washer



61127  
O-ring for Funnel

# Troubleshooting Guide

Only a qualified service technician should perform Electrical and mechanical adjustments or repairs. Always disconnect power before attempting any maintenance procedures.

English

PROBLEM	PROBABLE CAUSE	CORRECTIVE ACTION
No powder dispensed into mixing funnel	<ul style="list-style-type: none"> <li>Rinse switch turned to "RINSE ON" position</li> <li>Powder hopper dispense outlet clogged</li> <li>No or low powder level in hopper</li> <li>Hopper drivelinek not engaged with motor</li> <li>Hopper elbow is not directed into the mixing funnel</li> </ul>	<ul style="list-style-type: none"> <li>Flip rinse switch to "RINSE OFF" position</li> <li>Refer to Cleaning of Hoppers section</li> <li>Refill hopper</li> <li>Remove and reinstall hopper and ensure engagement with motor</li> <li>Turn down dispense elbow; line it up with mixing funnel</li> </ul>
Machine will not dispense any product (water or powder)	<ul style="list-style-type: none"> <li>Power turned "OFF" to machine</li> <li>Dispense cycle watchdog timer has tripped</li> <li>Faulty transformer</li> <li>Faulty control board</li> </ul>	<ul style="list-style-type: none"> <li>Ensure power switch is in "ON" position, machine is plugged in and water is turned on</li> <li>Reset machine by flipping power switch "OFF" then "ON" once (the maximum run time per head is limited to 40 seconds before watchdog timer disables the dispense heads)</li> <li>Contact factory for assistance</li> <li>Contact factory for assistance</li> </ul>
Product not whipping	<ul style="list-style-type: none"> <li>Whipper blade broken or missing</li> </ul>	<ul style="list-style-type: none"> <li>Verify blade is in place. Replace if broken or missing</li> </ul>
Water overflows mixing funnel	<ul style="list-style-type: none"> <li>Water flow too fast</li> <li>Whipper chamber outlet restricted</li> <li>Whipper blade broken or missing</li> </ul>	<ul style="list-style-type: none"> <li>Contact factory for assistance</li> <li>Dump valves to be adjusted</li> <li>Remove obstruction</li> <li>Verify blade is in place. Replace if broken or missing</li> </ul>
Drink is too weak or strong		Refer to Drink Strength Adjustment section (page 5)
Drink is too hot or cold		Refer to Thermostat Adjustment section in Service Manual.
No hot water from dispense head	<ul style="list-style-type: none"> <li>Check for flashing lights on controller</li> <li>Water level in tank is below water probe</li> <li>Thermostat not adjusted</li> <li>Faulty heater relay</li> <li>Dump tube from water tank is kinked</li> <li>Water shorting out probe connections</li> </ul>	<ul style="list-style-type: none"> <li>Refer to Controller Diagnostics section in Service Manual</li> <li>Ensure that water supply to machine is "ON" and reset power to machine</li> <li>See Thermostat Adjustment section in Service Manual</li> <li>Replace heater relay</li> <li>Check tubing for obstructions</li> <li>Dry connections on tank</li> </ul>
Water tank boils water	<ul style="list-style-type: none"> <li>Check for flashing lights on controller</li> <li>Thermostat adjustment set too high</li> <li>Faulty heater relay</li> </ul>	<ul style="list-style-type: none"> <li>Refer to Controller Diagnostics section in Service Manual</li> <li>Refer to Thermostat Adjustment section in Service Manual</li> <li>Replace heater relay (see Service Manual)</li> </ul>
No water dispensed from dispense nozzle	<ul style="list-style-type: none"> <li>Water supply to machine turned "OFF"</li> <li>Check for flashing lights on controller</li> <li>Faulty dump valve</li> </ul>	<ul style="list-style-type: none"> <li>Turn "ON" water supply to machine</li> <li>Refer to Controller Diagnostics section in Service Manual</li> <li>Replace dump valve (see Service Manual)</li> </ul>
Water overflows from water tank	<ul style="list-style-type: none"> <li>Leaky inlet water valve</li> <li>Faulty level probe connection</li> <li>Faulty level probe due to mineral build-up</li> <li>Inlet water pressure too high (greater than 120 psi)</li> </ul>	<ul style="list-style-type: none"> <li>Replace inlet water valve</li> <li>Check level probe connections</li> <li>Replace probe</li> <li>Install pressure regulator to water inlet</li> </ul>
Machine inadvertently dispenses from dispense heads	<ul style="list-style-type: none"> <li>Wet wiring connections on harness or controller</li> </ul>	<ul style="list-style-type: none"> <li>Allow connections to dry</li> </ul>
Drink is cold and ready light is on	<ul style="list-style-type: none"> <li>Check for flashing lights on controller</li> </ul>	<ul style="list-style-type: none"> <li>Refer to Controller Diagnostics section in Service Manual</li> </ul>

If you still need help, call our service department at (800) 695-4500 (USA and Canada only) or (502) 425-4776 (Monday through Friday, 8 am - 8 pm EST) or an authorized service center in your area. Please have the model and serial numbers ready so that accurate information may be given.

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

# Installation

## Water Inlet Connection

The National Sanitation Foundation requires the following for an NSF approved water hook-up:

1. A quick disconnect water connection or enough coiled tubing so the machine can be moved for cleaning underneath.
2. An approved backflow prevention device, such as a double check valve to be installed between the machine and water supply. A 1/4" male flare adapter is provided (packed inside the drain tray) to be attached by the installer to the back of the machine for hook-up to water supply.
4. Installation to a water filter system is required to prevent lime and scale build up in the machine.
5. Water pipe connections and fixtures directly connected to potable water supply shall be sized, installed, and maintained in accordance with Federal, State, and Local codes.

## Start-up Procedure for Standard Units

**NOTE:** NSF requires installation of 4" legs for PIC 2,3,4,5,6.

1. Install drip tray in front of machine.
2. Connect the 1/4" male flare fitting to the inlet valve on the back of the machine.
3. Flush the water line to purge any debris from the supply line.
4. Connect a 1/4" water line to the 1/4" male flare connection and turn the water supply on.
  - a. Minimum water pressure to the machine: 20 psi
  - b. Maximum water pressure to the machine: 100 psi
5. Plug the power cord into a proper electrical outlet.
6. Turn the power switch to the "ON" position and allow the water tank to fill. The machine will make a subtle hissing sound when this occurs. Allow 3-4 minutes (5 minutes for PIC 5 or PIC 6) for fill time depending on inlet water pressure.
7. After the water tank has filled, allow 15-45 minutes (45-60 minutes for PIC 5/6) for the water to reach operating temperature. (Green ready light will illuminate when tank is up to preset temperature.)
8. Remove the powder hoppers, rotate the dispense elbow to the "up" position, and fill with desired powder product. **IMPORTANT:** Check to make sure that the auger inside the hopper is correctly installed prior to filling. Reinstall powder hoppers. Turn dispense elbow down toward the mixing funnel.
9. Peel protective film off photo merchandiser cover.
10. Install flavor decals as needed. (Place one on each hopper, and place the corresponding decal on the dispense section of the front door of the unit)

**NOTE:** If water supply is allowed to run dry, watchdog timer circuit may disable fill circuit. If this occurs, ensure adequate water supply for machine, then reset machine by turning power switch "OFF" for 1 second and then turning the power switch back "ON".

**NOTE:** Watchdog timer might engage on initial fill on PIC 5 and PIC 6.

## Start-Up Procedures for Pump Units (PIC 2P & PIC 3P only)

**NOTE:** Pump units are not designed to be plumbed to pressurized water source.

1. Place a five gallon water container within 3 feet vertically and 2 feet horizontally of the machine.
2. Drop the hose at the rear of the machine into the water container (The hose should extend to approximately 1" from the bottom of the water container.)

**NOTE:** Do not let the end of the hose touch the bottom of the container. Shorten the hose if necessary. If you need a longer hose, remove the back access panel, unclamp existing hose, replace with longer hose and replace clamp.

3. Proceed with fifth step under Start Up for Standard Units.



**Grindmaster Corporation**  
 4003 Collins Lane • Louisville, KY 40245 USA  
 (502) 425-4776 • (800) 695-4500 (USA & Canada only)  
 FAX: (502) 425-4664  
 www.grindmaster.com

