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# Zuma Brewer

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## Operation and Service Manual

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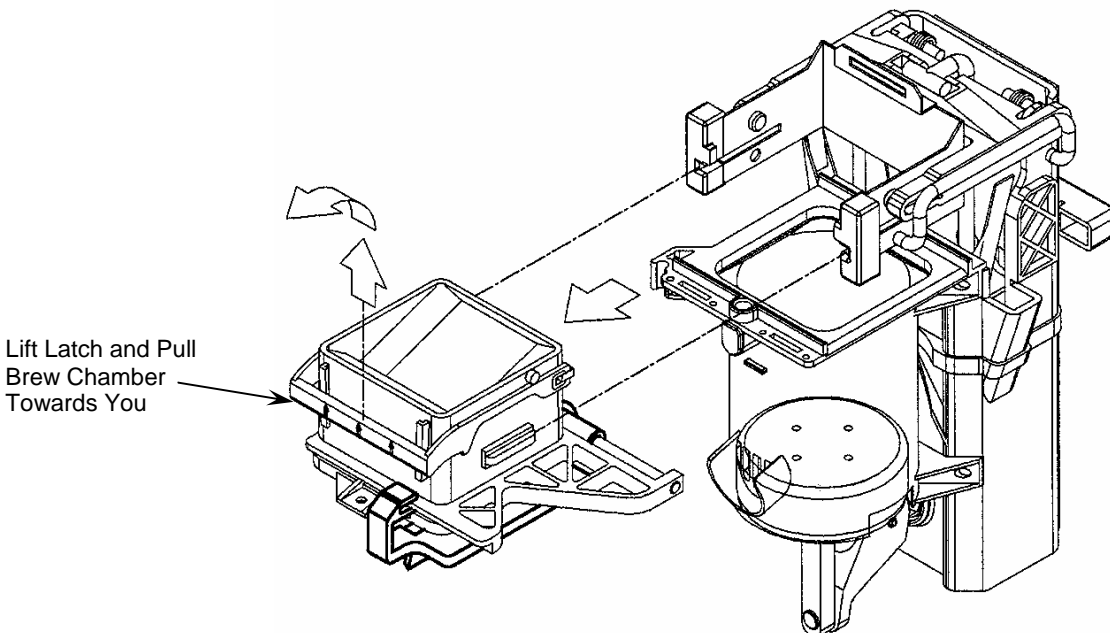
# ZUMA BREWER - OPERATION & SERVICE MANUAL

## OPERATING GUIDELINES

**NOTE:** The maximum capacity of this brewer is approximately 325 ml (11 oz.). **Do not attempt to exceed this value.** Doing so may create flooding/overflow problems with the brewer.

There are certain operating guidelines and preventative maintenance procedures that must be followed to ensure the Zuma brewer functions properly and efficiently. These guidelines and procedures are listed below, and are also detailed in this guide. It is important that you read this guide to familiarize yourself with this brewer and these procedures.

- Over time, coffee oils and fine grounds (the size of dust particles) as well as minerals in the water will accumulate on the brewer screen assembly. This accumulation will decrease the porosity of the screen, resulting in brewer flooding. The Zuma brewer screen must be kept clean to prevent this from occurring.
- The correct removal and installation procedure for the brew chamber is crucial. Although the assembly can be easily removed for cleaning (by lifting up the latch bar in front of the chamber), the re-installation requires some precision. The wiper assembly on the chamber **must** be inserted between the two stainless steel arms located at the rear of the brewer. These two arms can be easily located once the brew chamber assembly is removed. **Failure to properly align the brew chamber during installation may result in excessive brewer damage.**



- If a leak develops between the top of the brewer cylinder and the bottom of the brew chamber, it may be necessary to add small metal shims onto the H-frame to correctly seal the brewer.
- To properly clean and de-stain the brewer without damaging the components, rinse the brewer using **only** a VKI approved brewer cleaner. The use of any other types of cleaning agents may cause damage to plastic and rubber components on the brewer.
- **Never, under any circumstances, turn the Zuma brewer in a backwards direction.** Doing so will damage the bearings on the cam.

# ZUMA BREWER - OPERATION & SERVICE MANUAL

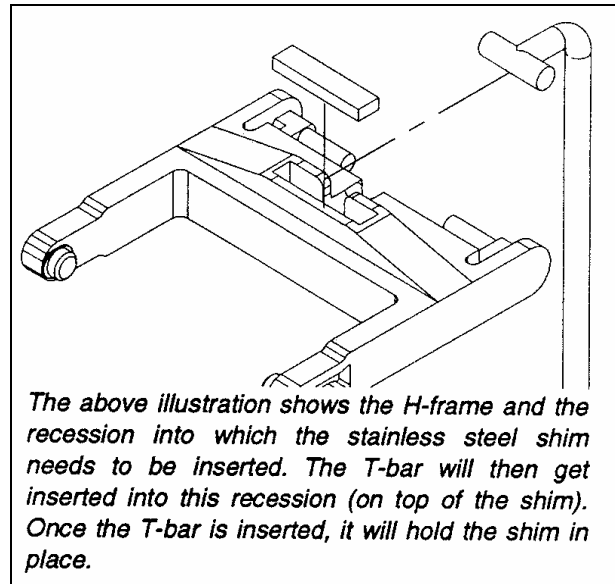
The following describes some of the general maintenance procedures that must be followed to keep the Zuma brewer functioning properly at all times. All of these procedures are simple and can be done in just minutes.

## BREW CHAMBER TENSION ADJUSTMENT

During a brew cycle, if a leak develops between the brew chamber and the screen assembly, some minor adjustments may be required. This leaking is an indication that the brew chamber is not closing tightly enough.

If this is the case, the following procedure should be performed,

1. Press the red "LOAD FILTER TAPE" button to open the brewer, and remove the brew chamber by lifting the latch bar and pulling it towards you.
2. Push down on the H-frame, and lift the vertical rod (T-bar) out of its recession.
3. Add a stainless steel Zuma brewer shim (full shim - K011950 or half-shim - K011191) into the recession, and re-insert the T-bar.
4. Re-install the brew chamber and test the brewer by making several cups of coffee.



**NOTE:** In most cases, this simple procedure is enough to stop the leaking. However, if the brewer still leaks at this point, repeat the above procedure and add one more shim. If the problem is still not corrected, remove all the stainless steel shims, turn the T-bar one complete rotation clockwise, then re-insert it into the recession on the h-frame.

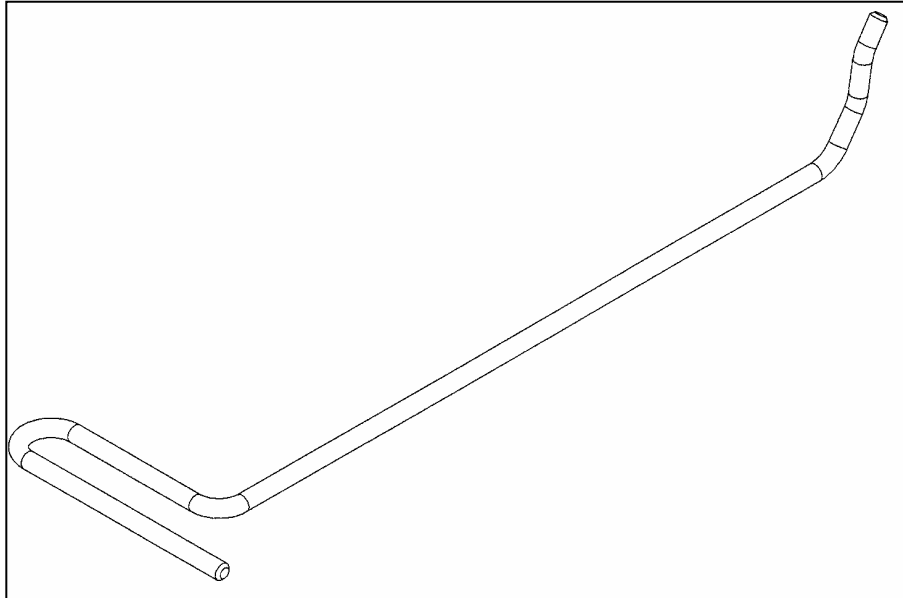
**CAUTION:** *Do not over-tighten the T-bar as too much pressure will cause damage to the brewer. If wiper blade throws the coffee patty against the side of the machine, the T-bar is too tight.*

## ZUMA BREWER SCREEN ASSEMBLY MAINTENANCE

### Screen Assembly Extractor Tool

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The screen assembly on the Zuma brewer can be very easily removed for cleaning or replacement with a special screen extraction tool to properly do this. The part number of the Zuma Screen Extractor Tool is **K023029**.



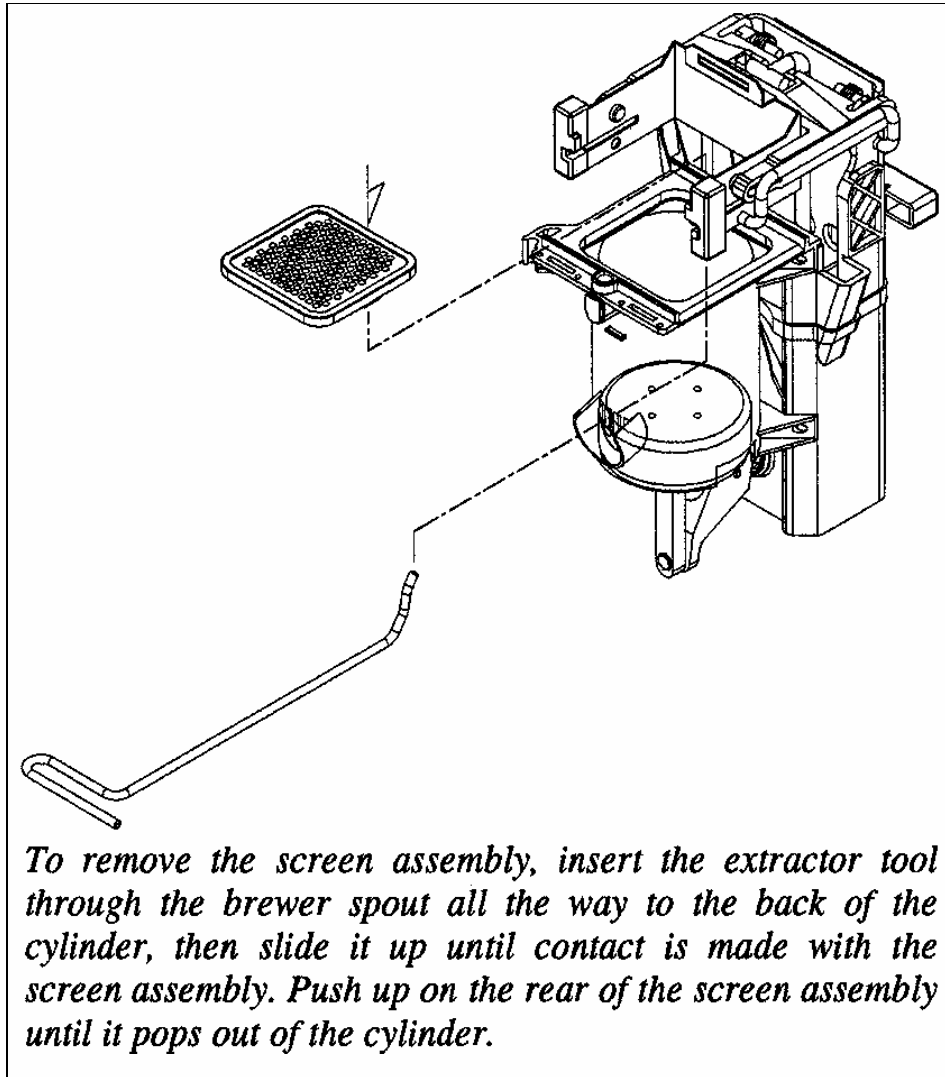
Zuma Screen Extractor Tool

### Removing the Brewer Screen Assembly

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The following describes the correct procedure for removing the Zuma brewer screen assembly. It is recommended you remove the brewer from the machine to remove the screen assembly. Once the screen is removed, it should be thoroughly cleaned before it is re-installed.

1. Press the red <LOAD FILTER TAPE> button on the control panel to open the brewer.
2. Remove the brewer from the machine.
3. Remove the brew chamber assembly by lifting the latch bar and pulling the brew chamber towards you.
4. Insert the Zuma screen extractor tool through the pour spout with the tip pointing upwards (as illustrated in the diagram on the following page).
5. Gently push the extractor tool against the rear of the cylinder and slide it up until contact is made with the screen assembly frame.
6. With the tool, push up on the bottom, rear center of the screen assembly to remove the screen. Please note that some pressure will be required to pop the screen assembly loose.



## Cleaning the Brewer Screen Assembly

The Zuma brewer filter screen needs to be cleaned periodically to allow liquid to easily flow through it. Over time, coffee dust, oils and minerals from the water will accumulate on the screen making it less porous, eventually resulting in brewer flooding. It is recommended that the screen be cleaned every 1000-2000 cups, even if it appears to be working properly.

Using the Zuma screen extractor tool, remove the screen from the brewer to clean it. We recommend soaking the screen in a solution of ***one part bleach to ten parts water*** for a ***maximum*** of 30 minutes, as prolonged contact with bleach may damage the screen assembly. Once this is done, the screen should then be thoroughly rinsed with dish soap and warm water to remove any leftover residue.

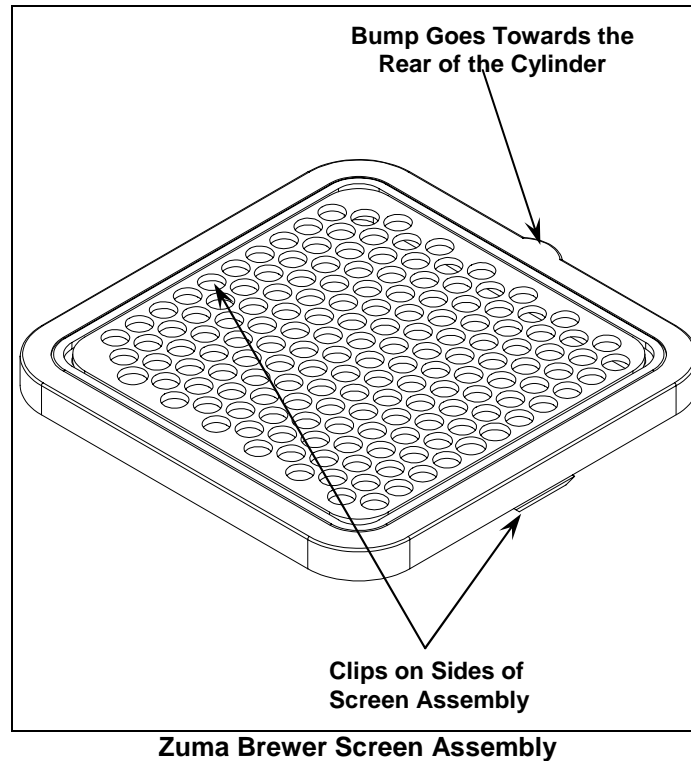
**NOTE:** Periodically performing an automated brewer rinse cycle is still required to clean the brewer screen as well as other brewer components.

# ZUMA BREWER - OPERATION & SERVICE MANUAL

## Installing the Screen Assembly

1. Line up the screen assembly in the recession on top of the brewer cylinder. Make certain that the bump on one of the sides of the screen assembly is pointing to the rear of the brewer cylinder.

**NOTE:** The screen has to be inserted in a particular way. There are clips on each end of the screen assembly. These clips must be pointing downwards, and to the right and left sides of the cylinder. If they do not, the screen assembly cannot be locked in place.



2. With the clips properly lined up, push down on the screen assembly until it locks in place.
3. Re-install the brew chamber in the brewer. Make certain that the wiper assembly is inserted between the two stainless steel arms at the rear of the brewer.
4. Re-install the brewer into the machine.

# ZUMA BREWER - OPERATION & SERVICE MANUAL

## Using the Brewer Rinse Cycle

The Vista 2/3 is equipped with a rinse cycle for both the brewer and the chocolate components. This automated feature allows for simple periodic cleaning of these components. To access the rinse cycles, press the "RINSE CYCLE" button on the control panel inside the door and the following message will appear on the display,

**RINSE CYCLE  
CHOCO. OR COFFEE**

At this point, the words "CHOCO." and "COFFEE" will flash, alternating from one to the other. This is to advise you that it will be necessary to select the type of rinse that is required. To rinse the brewer, press the "COFFEE" button on the front selection panel.



***WARNING:*** Before proceeding with the rinse cycle, a waterproof container must be placed below the pour spouts as rinse water will be dispensed from these spouts.

### To rinse the brewer:

1. Add VKI approved brewer cleaner to the brew chamber and activate the brewer rinse cycle by pressing the "RINSE CYCLE" button on the control panel inside the front door.

**NOTE:** To cancel the rinse cycle if it was pressed accidentally, press any button (except the "START" button) on the front selection panel. This will exit the rinse cycle and return the unit to the "standby" mode.

- a) It will now be necessary to select the type of rinse cycle required. For a brewer rinse, press the "COFFEE" button on the front selection panel to begin the cycle.
- b) The piston will now move to the top of the cylinder, water will pour in, and the brewer will pause for about 5 minutes. During this time, the cleaner will break down all the oils and stains that have accumulated on the brewer.

**NOTE:** To cancel the five-minute pause and proceed to the seven rinse cycles, press the "START" button. For proper brewer cleaning, it is recommended that the full cycle be performed.

- c) After the 5 minutes have elapsed, the brewer will cycle, dumping the cleaner into the waste container in the process. The brewer will then automatically cycle water seven consecutive times to rinse the cleaner from the brewer. After the rinse cycle is completed, the brewer will stop and the machine will automatically exit the rinse mode.

**NOTE:** To cancel the seven rinse cycles, press the "START" button. For proper brewer cleaning, it is recommended that the full cycle be performed.

- d) After the rinse cycle is complete, brew a few cups of coffee to re-lubricate the brewer.

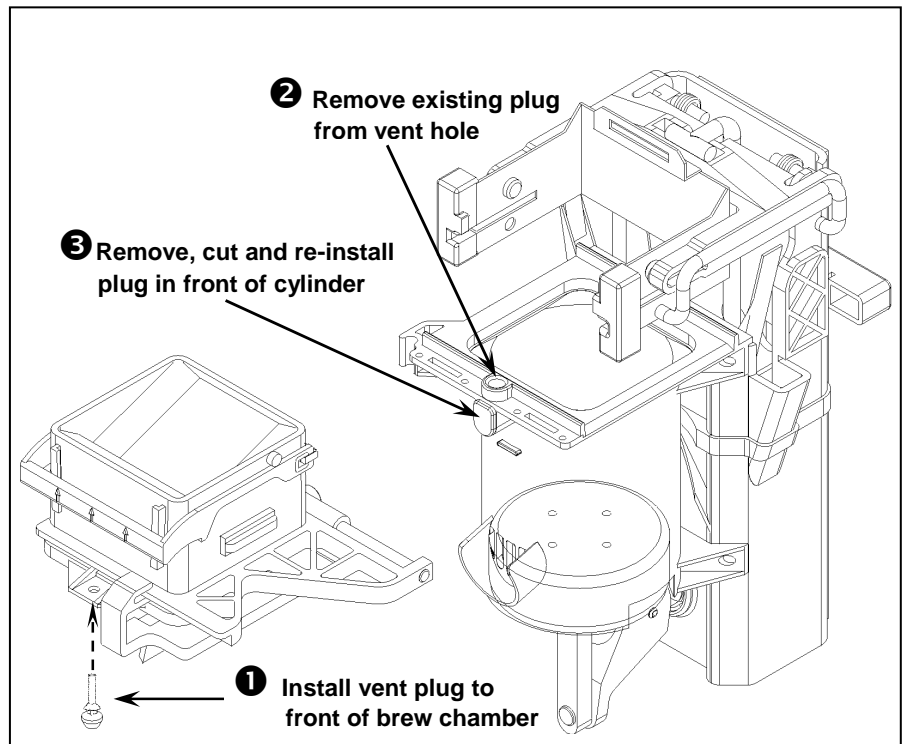
# ZUMA BREWER - OPERATION & SERVICE MANUAL

## Important Information about Using a Zuma Brewer in Vista 2 Machines with D-Series & G-Series Rear Boards

On newer Zuma brewers with a sealed breather vent on the front of the cylinder, you may experience some cycle problems if installed in an older Vista 2 with a D-series or G-series rear board. If a large cup of coffee is brewed on a newer Zuma brewer with a sealed breather vent, liquid may remain in the cylinder as the brewer cycles back to the home position. After a few cups, liquid may accumulate in the cylinder and cause inconsistent coffee levels and possibly cup overflows. The sealed Zuma breather vent causes the brewed coffee to drain out of the cylinder slower than the older non-modified Zuma brewer (prior to October 1997, without the plugged breather vent), creating this situation. This may also apply to Vista 3 machines with very early NT1 software (prior to software version 2.6).

To use a Zuma brewer in Vista 2 with a D-series or G-series rear board, you need to make the following modifications.

1. Install a vent plug onto the front of the brew chamber. The part number of the vent plug is M014219.
2. Remove the existing silicone plug from the vent hole on top of the brewer cylinder.
3. Remove the existing silicone plug from the front of the brewer cylinder, cut the depth of the plug in half, and re-install it.



This is not a problem on Vista NT2 equipment (with software version 4.3 or higher), as the piston stops when it goes below the cylinder pour spout. This gives the liquid time to completely drain, preventing any accumulation.

We recommend that you use the latest software versions for all NT or NT2 equipment. This ensures that the equipment always uses the correct Zuma brewer cycle, as well as eliminates any potential problems that may exist with earlier software versions.

Unfortunately, this extra 'pouring pause' feature designed specifically for the Zuma brewer cannot be incorporated into D-series or G-series boards. However, if a non-modified Zuma brewer (without a plugged breather vent) is used, the brewed coffee will drain from the cylinder more quickly, reducing the chances of liquid accumulation. For this reason, we recommend that only Zuma brewers that have not been modified be used in equipment with D-series and G-series rear boards.



## Zuma Brewer Adjusting and Handling Procedures

For the past few weeks, we have been analyzing the Zuma brewers that have been returned to us for repair. The majority of these brewer were received with damaged bearings and vertical rod housings. Our analysis indicates that in most cases, too much tension was placed on the brew chambers. When the chambers are overtightened, there is too much pressure placed on both the bearings and the vertical rod housings, resulting in damage to these components.

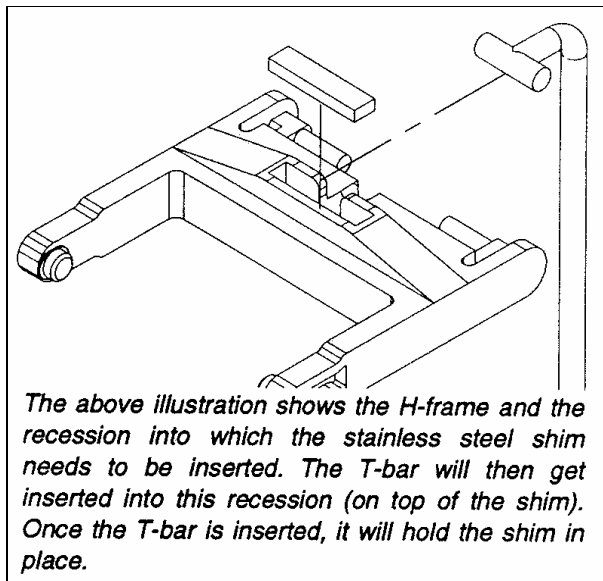
This document was created to guide you through the adjusting and handling procedures that are essential for keeping the Zuma brewers operating efficiently. Following these procedures will reduce the risk of damage to the brewers.

**It is imperative that this information be shared with all your service staff. Please post this document in an area that is accessible to everyone.**

### Brew Chamber Tension Adjustment

- When adjusting the tension on the brewer, add full shims (K011950) or half shims (K011191) between the T-bar and the H-frame, as illustrated below. These shims must be added one at a time. **Do not add several shims at once as the tension may be increased too much.**

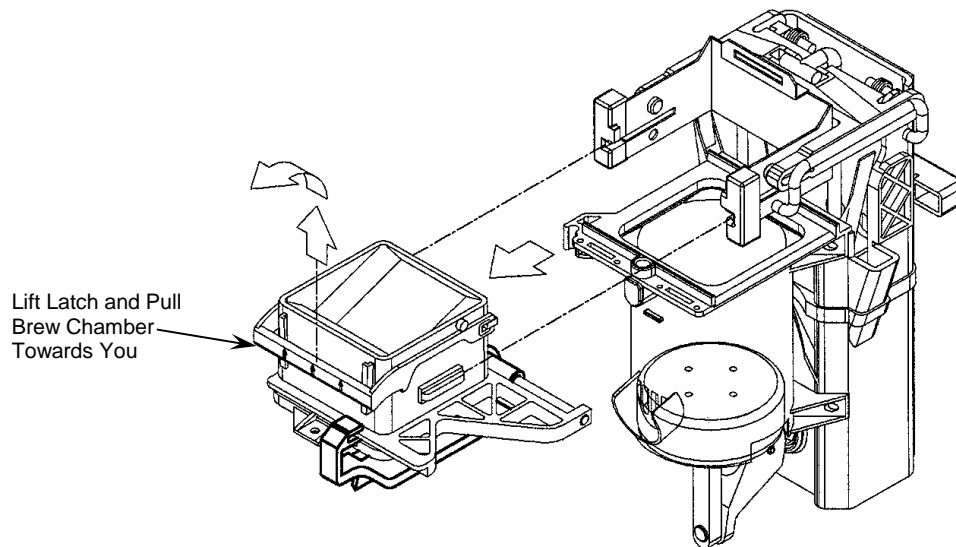
In most cases, this simple procedure is enough to stop the leaking. However, if the brewer still leaks at this point, repeat the procedure and add one more shim (**start with one half shim** – if that's not enough, remove the half shim and add one full shim).



- **Turning the T-bar should be avoided and should only be done as a last resort.** If the brewer tension is still too loose after installing two **full** shims, remove the two shims and **only once they are removed** should you turn the T-bar **one** rotation clockwise.
- If the wiper is hitting the coffee paddy as it moves towards the left, this indicates that the brew chamber is not rising high enough. Either something is interfering with the upward motion of the chamber, or the chamber tension is too tight.
- If the tension is adjusted properly and the brewer is flooding, **do not tighten the brew chamber even more.** Increase the bottom pause, lower the water temperature or replace the filter screen. If the problem persists, check the brewer to make certain there is no loss of vacuum, usually caused by a cracked brew chamber or cylinder, a worn or scored cylinder, or a worn Teflon seal.

## **Brew Chamber Installation**

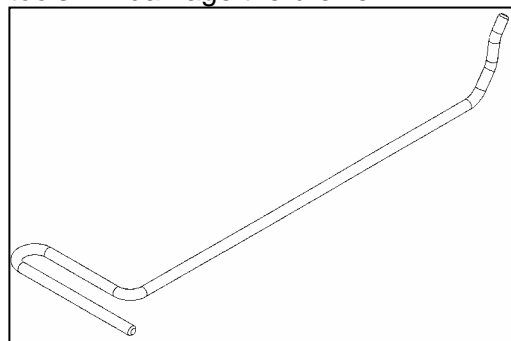
- The correct removal and installation procedure for the brew chamber is crucial. Although the assembly can be easily removed for cleaning (by lifting up the latch bar in front of the chamber), the re-installation requires some precision. The wiper assembly on the chamber **must** be inserted between the two stainless steel arms located at the rear of the brewer. These two arms can be easily located once the brew chamber assembly is removed. **Failure to properly align the brew chamber during installation may result in excessive brewer damage.**



- When re-installing the brew chamber, make certain it is properly locked in position. Gently grip the top of the brew chamber (**not** the release latch) and pull it slightly. If it is not properly locked in place, you will be able to pull it out. **Failure to lock the brew chamber in place will result in the chamber moving forwards, and then coming down on top of the plastic cylinder lip in front of the filter screen.** This can damage the brew chamber, cylinder, the arms and bearings and/or the vertical rod housing.

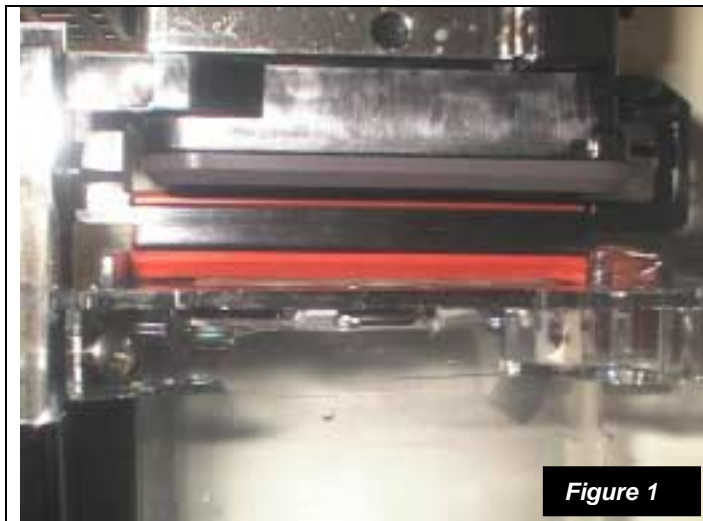
## **General Maintenance and Adjustments**

- **Never turn the brewer backwards.** This will damage the arms and bearings and possibly the cam.
- Use **only** the VKI designed screen extraction tool (illustrated below) to remove the re-useable filter screen. The use of any other tools will damage the brewer.



- When performing a brewer rinse, **use only VKI approved powder cleaner.** Any other chemicals or detergents may damage the brewer. **Do not, under any circumstances, soak the brewer's plastic parts in brewer cleaner** for prolonged periods of time (**maximum is 30 minutes**).

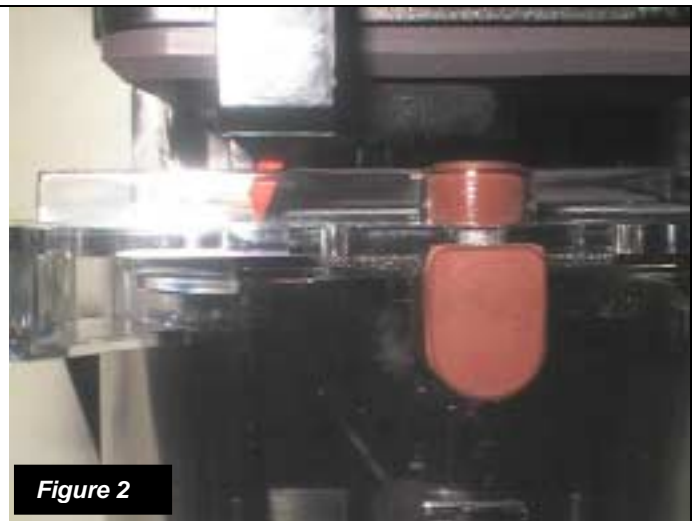
## Zuma Brewer – Brew Chamber Tension Adjustment



**Figure 1**

### Too Loose – Side View

The wiper is not touching the surface of the cylinder and filter screen.



**Figure 2**

### Too Loose – Front View

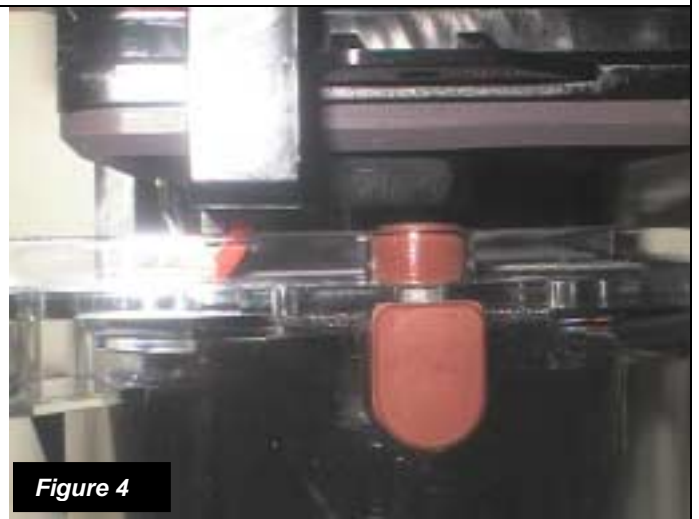
No bend on the wiper because it is not touching the surface of the cylinder and filter screen.



**Figure 3**

### Perfect Tension – Side View

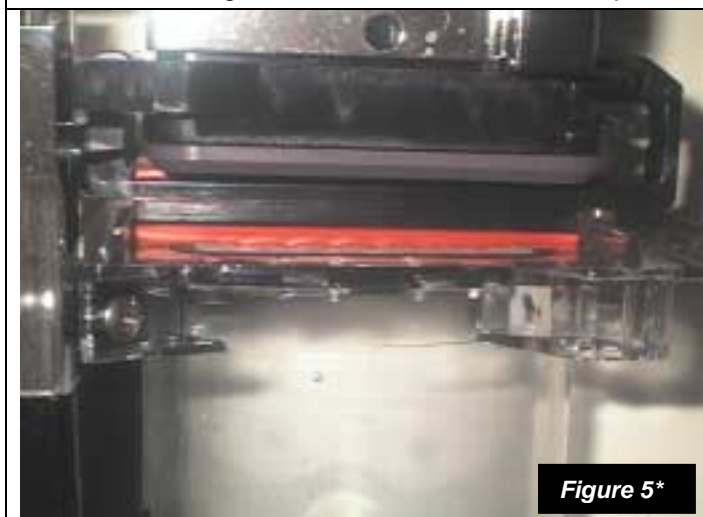
The wiper is gently touching the surface of the cylinder & filter screen. A slight deformation is seen on the wiper.



**Figure 4**

### Perfect Tension – Front View

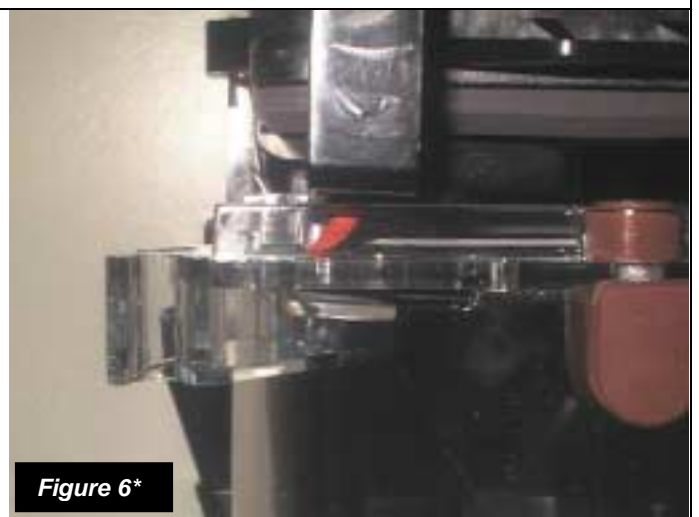
Slight bend on the wiper. All coffee grounds will be removed from the surface of the filter screen.



**Figure 5\***

### Too Tight – Side View

The wiper is stretched and extremely deformed. The brewer is under extreme pressure.



**Figure 6\***

### Too Tight – Front View

Very pronounced bend on the wiper. The wiper arm and vertical rod housing are under extreme pressure.

## BREWER TENSION IS TOO LOOSE

**Figure 1** As the wiper moves across the top of the cylinder, it does not make contact with the filter screen. This will leave a layer of coffee grounds on the screen. A brewer adjusted this way may also leak when the brew chamber is closed. If the leak is severe enough, it can result in a loss of vacuum and possible brewer flooding on larger cup sizes.

**Figure 2** Because the wiper is not making proper contact with the top of the cylinder and filter screen, there is very little or no bend on it. In some cases, this may result in a layer of coffee grounds remaining on the surface of the screen.

## BREWER TENSION IS PROPERLY ADJUSTED

**Figure 3** When a Zuma brewer is properly adjusted, the wiper will gently slide across the top of the cylinder, cleaning the surface of the filter screen. A slight deformation of the wiper can be seen as it moves across the top of the cylinder and filter screen.

**Figure 4** As the wiper moves to the right side, the used coffee grounds will be transported to the waste container. The coffee grounds will gently drop off the right-most edge of the brewer, directly into the waste container. The filter screen will be clean of coffee grounds.

## BREWER TENSION IS TOO TIGHT \*

**Figure 5\*** When the brew chamber is too tight, the wiper begins to stretch and becomes noticeably deformed. If you look carefully at the photo, you will notice the rippling effect this has at the bottom of the wiper. The brewer is under extreme pressure at this point and the sound of the brewer motor may change to indicate that there is a larger load on it. Permanent damage to the wiper may also result.

**Figure 6\*** As the wiper moves across the top of the cylinder and filter screen, there will be a very pronounced bend on it. When it passes over the right-most edge of the brewer cylinder, and the pressure gets released from the wiper, coffee grounds will be flung towards the right wall of the machine. After only a few cycles, heavy grounds accumulation can be seen around the waste container and on the right wall of the unit.

Throughout the complete cycle, the bearing on the wiper arm is under extreme pressure, causing the complete arm assembly to twist. The vertical rod is also under extreme pressure when the brew chamber closes. At this point, there is a very high risk of damage to both of these components. The bearing on the wiper arm will eventually break or snap off, and the pressure being exerted on the vertical rod will stress the plastic vertical rod housing causing it to initially crack, then break.

*\*Please note the Zuma brewer used in **Figure 5** and **Figure 6** was only slightly overtightened. If the tension is higher than that used in the example, damage to the brewer components will occur much quicker and will be more severe.*

### The following signs are an indication that the tension on the Zuma Brewer may be too tight:

- The wiper has a pronounced bend as it passes over the top of the brewer cylinder and filter screen.
- The wiper carriage looks like it is getting crushed between the brew chamber and the top of the brewer cylinder.
- The motor sounds like it is straining due to a heavy load.
- The wiper is hitting the top of the coffee paddy as it passes over it (while moving towards the left side).
- Heavy coffee grounds accumulation around the waste container and on the right wall of the machine.

# ZUMA BREWER CAST ALUMINUM ARM UPGRADE INSTRUCTIONS

## 1. Remove the old Zuma brewer arms.

- a) Open the brewer and remove the brew chamber.
- b) Rotate the T-bar 180° to allow the H-frame to open completely.
- c) Make sure the crank arm is at about the 5 o'clock position.
- d) Remove the two 'C'-clips that secure the wipe arm and unwipe arm shafts in place. These clips are located on the front of the brewer mainframe, just below the brew cylinder (Figure 1).
- e) From the front of the brewer, push the two arm shafts out the back of the brewer. These will free the two older arms (Figure 1).
- f) From the top of the brewer, push the arms out the bottom of the brewer.
- g) Once done, the wipe arm spring and two plastic bushings will fall out of the brewer. The two bushings can be discarded, **but the spring is still required.**

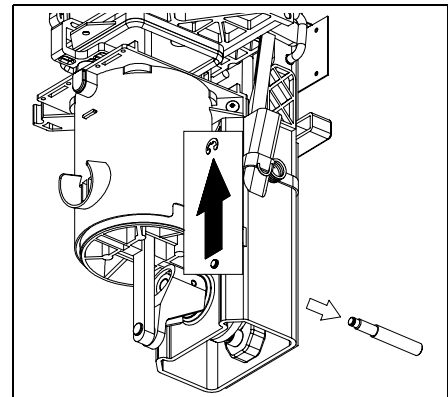


Figure 1 – Remove c-clips and arm shafts

## 2. Install the new Zuma brewer arms.

- a) Position the spring onto the wipe arm boss (round protrusion) as illustrated (Figure 2).
- b) Slide the wipe arm into the brewer from the bottom.
- c) Secure the wipe arm (and spring) in place by installing the wipe arm shaft.
- d) Secure the wipe arm shaft in place by installing the 'C'-clip.
- e) Slide the spring hook tool (p/n – M027019) through the top right of the brewer towards the wipe arm spring (Figure 3).
- f) Hook the smaller end of the wipe arm spring and pull upwards on the tool. This will rotate the spring into position and allow you to secure the end of the spring (small hook) onto the inner part of the wipe arm (Figure 3).
- g) Turn the brewer shaft until the crank arm is in the 9 o'clock position.
- h) Slide the unwipe arm into the brewer from the bottom.
- i) Place the loop of the spring onto the boss (round protrusion) of the arm. You may need to use a small screwdriver to lift the spring onto the boss.
- j) Secure the unwipe arm (and spring) in place by installing the unwipe arm shaft.
- k) Secure the unwipe arm in place by installing the 'C'-clip.
- l) Turn the brewer shaft until the crank arm is in the 5 o'clock position.
- m) Slide the spring hook tool through the top left of the brewer towards the unwipe arm spring (Figure 4).
- n) Hook the end of the unwipe arm spring and pull upwards on the tool. This will allow you to secure the end of the spring (small hook) onto the inner part of the unwipe arm (Figure 4).
- o) Re-install the H-frame and the brew chamber.
- p) Test the brewer to verify the operation of the arms and the tension on the brew chamber. Make any necessary adjustments.

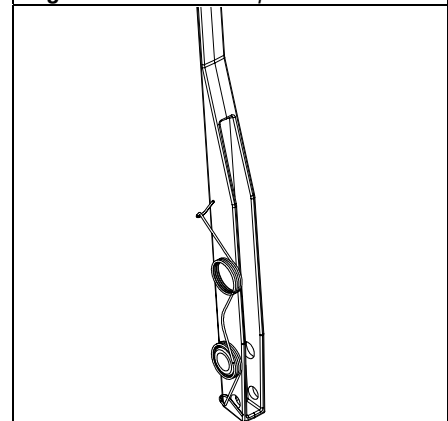


Figure 2 – Position spring on wipe arm

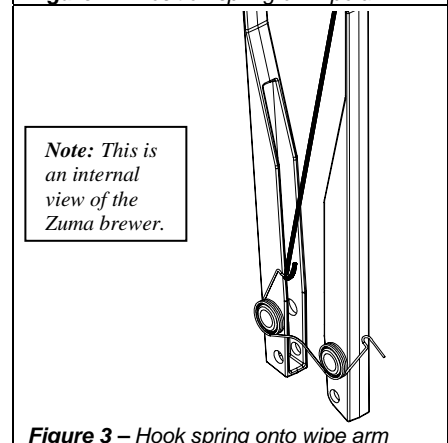


Figure 3 – Hook spring onto wipe arm

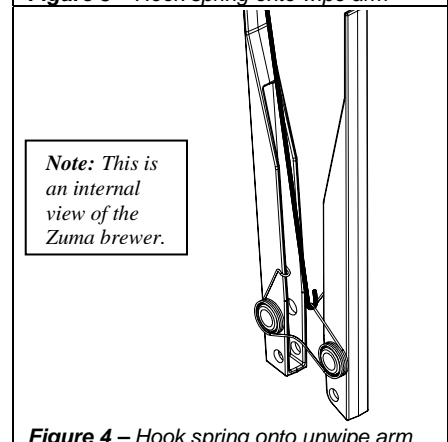


Figure 4 – Hook spring onto unwipe arm