



Installation of Progressive Preinfusion on any S1 Vivaldi – VI, VII, or VII Mini

Updated Nov. 24, 2008 (to fix broken link) <mark>Other Updates highlighted in yellow</mark>



## Instructions to Install Vivaldi Progressive Preinfusion

Tools required: Phillips screwdriver, 5mm hex wrench, small metric open end wrenches, or small adjustable wrench

Time Require: 20 -30 minutes

Skill Level: Low

#### What is Progressive Preinfusion?

Progressive Preinfusion consists of a spring loaded piston inside a cylinder that attaches to a port on the side of the group head. This device is what you received from Chris Coffee and will be installing per the instructions below. When the Single Cup or Double Cup buttons are pressed, the pump first fills the voids about the coffee puck with water. When no airspace remains, the pressure starts to ramp up and the piston starts to compress the spring. As water flows into the cylinder above the piston, this keeps the pressure low for approximately 6 seconds until the spring is fully compressed, then the pressure quickly ramps to its maximum setting. This is the preinfusion stage.

#### **The Installation Process**

Move whatever you need to in order to have complete access to the front, back, and right side of the machine (facing it from the front).

- Unplug the VII.
- Turn off the water to the VII.
- Open the steam valve with the steam arm pointed into a suitable container until the pressure dissipates (unless it is already completely cool).

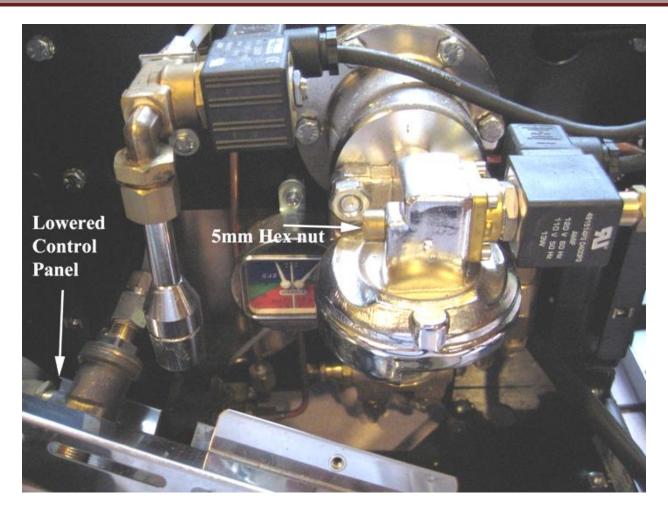
# NOTE: If you've never removed the covers from your VII you should reference the following web page, which has labeled photos showing the locations of the various covers, panels, and screws referenced below:

<u>http://www.s1cafe.com/s1v1/S1Photos.php</u>. Study this web page. It might be good to print it out and have it on hand as you proceed with the following instructions.

- Slide out the drip tray
- Remove the plastic splash panel from the edge of the cup warmer so it doesn't fall and break during the next step. Remove the screw from the front edge of the metal cup warmer. Pull up to remove it.
- Remove the two screws holding on the chrome front panel and remove the panel.
- Remove the top front knurled knob from both the right and left side panels. This allows
  enough give in the upper corner of each panel to perform the next step without
  completely removing either side panel.
- Remove the two screws at the top front that hold on the front control panel.
- Extra step for Mini VII Owners. You must unscrew the handle from the steam lever before performing the following step as shown in the photo below. This is not required if installing the Progressive Preinfusion cylinder on the VII or the VII.



• Gently pull the front panel out from the machine and lower it down so you have access the group. It will look like the photo below:



- Use a 5mm hex key (Allen wrench) to remove the brass plug on the left side of the group head denoted by the arrow in the above photo.
- Save this threaded plug in case you ever need to remove the Progressive Preinfusion device.
- Prepare the Progressive Preinfusion cylinder for installation.



- When received from Chris Coffee the cylinder and the copper tubing with fittings will be separate.
- Screw the tubing onto the cylinder as shown above. This is a compression fitting, no pipe dope or Teflon tape is required. Tighten with a metric or small adjustable wrench.
- Attach the male to male brass adapter to the other end and tighten with a wrench. This is also a compression fitting.
- Gently bend the copper tube with a 90° by hand. (See next photo)
- Wrap the threaded end that screws into the side of the group with Teflon tape.
- Tighten this connection into the hole left by the 5mm drain plug you removed previously. This connection will screw all the way in.
- The resulting installation looks like the photo below.



- Raise the control panel back up to the position where you could insert the screws but do not install the screws at this time.
- Turn the water and power back on. Turn the Vivaldi from Standby to On mode and allow it to warm up.
- Press the Single Cup or Double Cup buttons and verify that none of the connections to the Preinfusion device are leaking. If so, retighten connections until there are no leaks.
- Reinstall all the covers and panels in the reverse order from which they were removed.

Congratulations! Your Vivaldi 1, Vivaldi II, or Vivaldi II Mini now has preinfusion.

## Some Frequently Asked Questions:

#### 1. Can I turn preinfusion on and off on a per shot basis?

No. You always have preinfusion on every shot unless you remove the device and replug the hole.

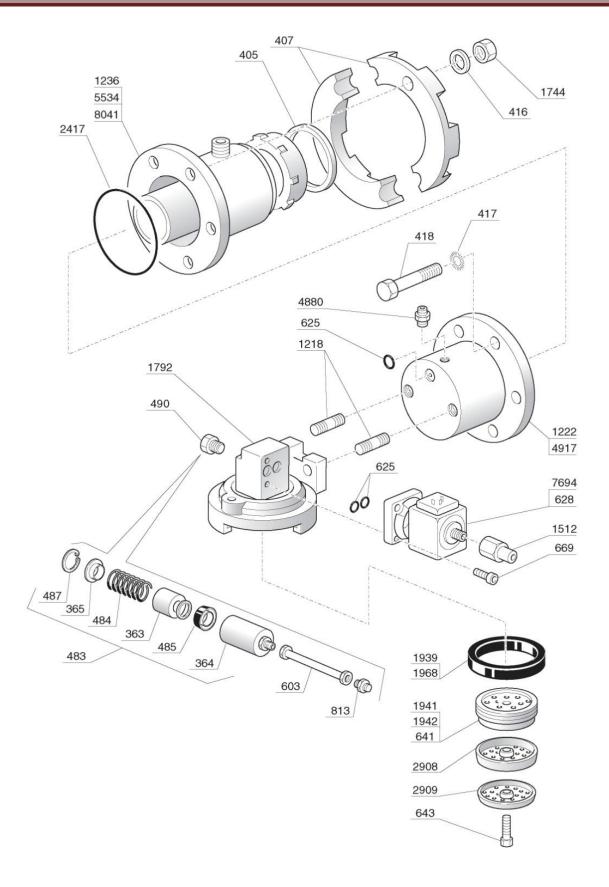
#### 2. Can I use both this device and the new programmable preinfusion on the VII? No. The water pressure during the programmable preinfusion is not strong enough to push back the piston. The piston probably will not move until the pump comes on at the end of the programmed preinfusion time.. This would add another 6 seconds of preinfusion at a higher pressure than the programmable preinfusion. At any rate it would cause a highly variable and unpredictable result.

#### 3. What are the benefits of preinfusion?

Preinfusion makes a shot more forgiving of tamping and packing errors thought it can't overcome gross errors. It also provides more shot to shot consistency and can help bring out subtle flavors that may otherwise be missed.

#### 4. How is the progression preinfusion chamber made?

See the following exploded diagram. This shows how the spring loaded piston is installed in the cylinder. This diagram also shows how the group head and the group boiler are assembled.



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