

Schaerer Coffee Art C

Generic 36mo Preventative Maintenance

Standard Operating Procedures



schaerer
swiss coffee competence

Version RD20210909

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Preventative Maintenance
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1. Contents of Receivables - Service Kits

Service Kit 1		
<i>Part Number</i>	<i>Part Description</i>	<i>Qty.</i>
33.7007.3222	Red Automat UPPER Piston O-ring	1
33.7007.3223	Red Automat LOWER Piston O-ring	1
33.7006.2693	Black Automat O-ring	1
33.7006.3654 or 33.7006.5240	Overpressure Valve 12bar	1

Service Kit 3		
<i>Part Number</i>	<i>Part Description</i>	<i>Qty</i>
33.7006.2431	Grinder Motor	3
33.7006.4039	36V Automat & Bracket	1

Optional Parts		
96.1000.0124	SEB Pro Water Filter Cartridge (Coffee)	1

Important Note:

Please reference any additional memos provided in the PM work order email from the SEB Professional PM team for any further parts and instructions required to complete this preventative maintenance.

Please ensure any open service items previously dispatched by the SEB Professional Dispatch team are covered during this PM and a separate work order is filled out.

2. Required Tools



1. Service Card
2. Gram Scale
3. Clamp Multimeter - for measuring AC Voltage and checking Current
4. Thermometer or Digital Temp Meter - *alternative tool / Clamp Meter w/Temperature Measuring capabilities*
5. Water Hardness Test Strip
6. Food Safe Lubricant (Part Number 33.7006.7339)
7. Basic Hand Tools
 - Short Hex Screwdriver
 - Long Hex Screwdriver
 - Metric Nut Drivers Set 5-13mm
 - Metric 1/4" Socket Set 5-13mm
 - 3/16" Flat Blade Screwdriver
 - 1/4" Flat Blade Screwdriver
 - No. 1 Phillips Screw Driver
 - No. 2 Phillips Screw Driver
 - Combination Wrenches Metric 7mm - 17mm
 - Adjustable Wrench 10"
 - Tape Measure
8. USB Stick with latest software and settings (8 gb or less)
9. Grinder Adjustment Knob
10. Measuring Cups (More than 40oz)
11. Cleaning Supplies
 - Vacuum
 - Automat brush
12. 18V Cordless Screw Gun with P2 Phillips Bit

3. Cleaning Procedure

- 1. Run a cleaning cycle with the cleaning tablet. Follow the instructions on the screen.**
 - Clean the grounds bin, undercounter grounds bin, and surrounding area.
 - Clean the drip grill and drip tray
- 2. Remove the beans out of the hoppers. Remove and clean the empty hoppers with a clean, moist cloth.**



NOTE: It is advised to dispose of the beans (as the calibration REQUIRE fresh beans), but this will be to the discretion of customer.

- 3. Once the cleaning cycle is complete, clean any remaining components. Make sure the bean hoppers are completely dry before re-inserting.**

4. Multi-Point Inspection

1. Perform a water drainage of the boilers

- The machine number can be found on either the back of the machine, on the left side of the automat compartment, and next to the main board behind the left panel.

Performing the water drainage routine

CAUTION: Once the water drainage routine is started the machine will allow hot water to be released from the hot water wand, coffee spout, and steam wand (if applicable).

Please exercise caution when activating the routine to prevent injury.

Perform a water drainage using the water drainage function in the programming menus:

1. Insert Service Card and type your pin (1000)
2. Tap System—Test/Calibration—Water drainage
3. Confirm that you would like to perform the water drainage.

A timer will appear on the screen and start counting down once the automat moves into brewing position. Once this timer is below 2:00 minutes turn off the water supply and allow the system to depressurize. Remove power from the machine once there is no water flowing from the hot water wand (and steam wand if applicable).

2. Once the water drainage is complete, turn off water supply and power off the machine to begin checking the coffee boiler for calcium.

- Remove the coffee boiler inlet and clean any calcium with wire brushes.

Checking for calcium

CAUTION: Please be aware that the boiler and its components may still be hot.

Please exercise caution when handling any of these components.

4. Multi-Point Inspection (cntd)

3. Remove all panels for the machine. Check for any leaks or broken parts and briefly clean up any dirty areas.

- If additional issues or maintenance / repairs are needed, please contact Tech Support and ensure a separate work order is created outside of this service.

Once power has been removed, proceed with disconnecting the center boiler nut as shown in the illustration on the right.

Once the boiler nut is disconnected, you will have the ability to insert your long Schaerer screwdriver until it touches the metal at the bottom of the boiler.

Coffee Boiler



- If you feel any crunching or debris inside which impedes the movement of the screwdriver to the bottom of the boiler then you have calcium present.
- If you can insert the screwdriver and feel the metal at the bottom of the boiler then your check inside the boiler is complete.

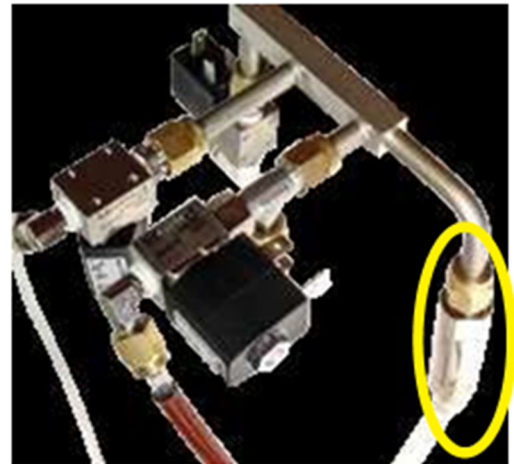
PLEASE note: If you can insert the screwdriver to the bottom of the boiler and don't feel any calcium, this is not a guarantee that there is no calcium present.

4. Multi-Point Inspection (cntd)

Next, using a 14mm and 17mm open ended wrench, remove the overpressure valve from the boiler outlet manifold and replace with the new overpressure valve. Please see the illustration to the right for the location of the coffee boiler overpressure valve.

Replace the overpressure valve - part number 3370063654 or 3370065240

Coffee Art C



What to do if calcium is present (next steps)

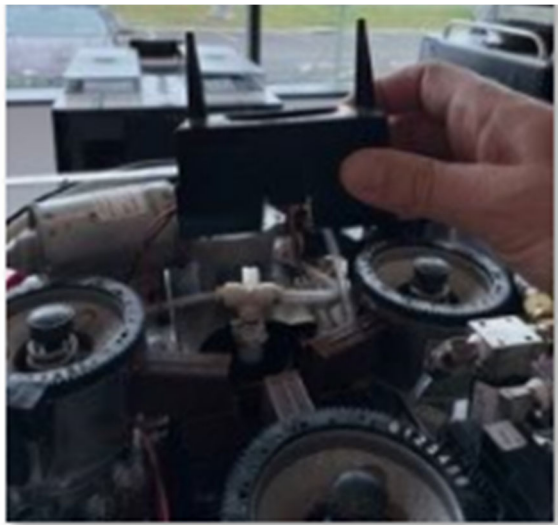
If you find calcium inside the boiler, notify our Technical Support team and request next steps.

- 4. Check the drain pipe and water supply pipe pathing and ensure nothing is being interfered with.**

5. Automat Motor and Grinder Motor Replacements

NOTE: Machine must be unplugged and the beans are vacuumed out of the grinders.

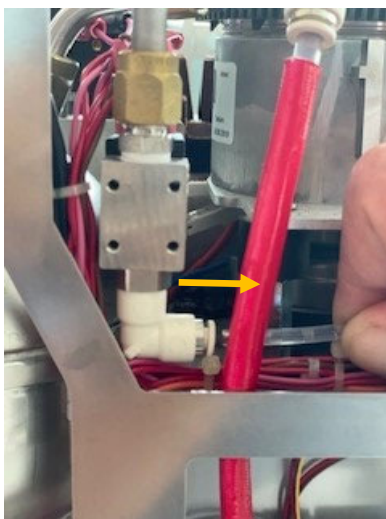
1. Remove the android and grinder seals and set aside.



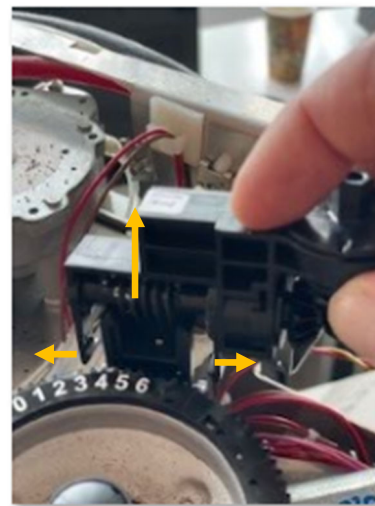
2. On each grinder, make a mark on the top burr approximately where the adjustment gear arrow is pointing.



3. Disconnect the hot water bypass delivery tube from the valve.



4. Remove each grinder's adjustment gear by spreading the security tabs outward and lifting upwards on the gear.

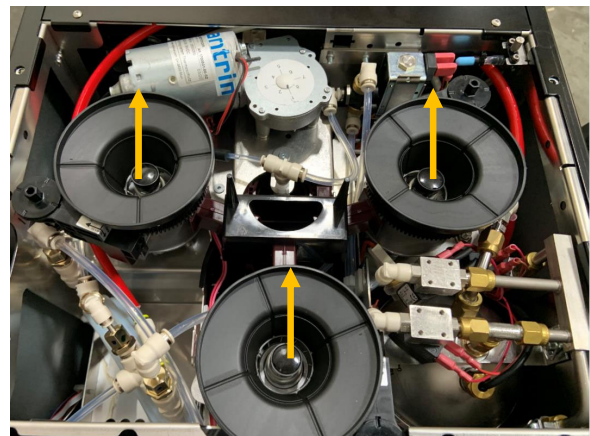


5. Automat Motor and Grinder Motor Replacements (cntd)

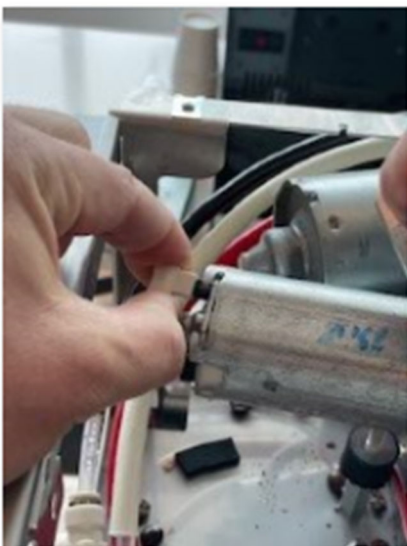
5. Remove the (2) 10 mm hex nuts from each grinder using a socket wrench, 3" extension, and 10 mm socket.



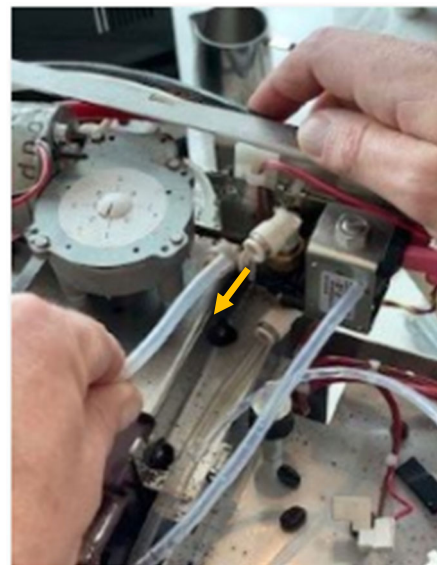
6. Remove each grinder by lifting them off their supports, but do not lose the lock washers (x2 per grinder).



7. As each grinder is removed, disconnect the electrical supply wires.

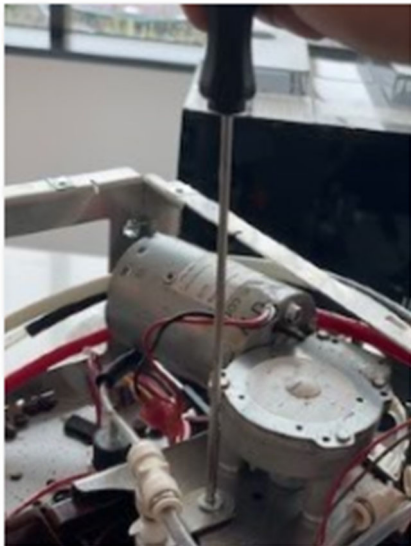


8. Disconnect the top tube from the 3-way diverter valve.



5. Automat Motor and Grinder Motor Replacements (cntd)

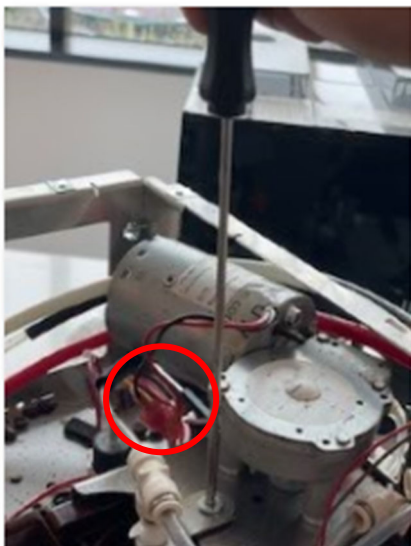
9. Remove the screw holding the retaining tab + outlet adaptor onto the automat motor bracket.



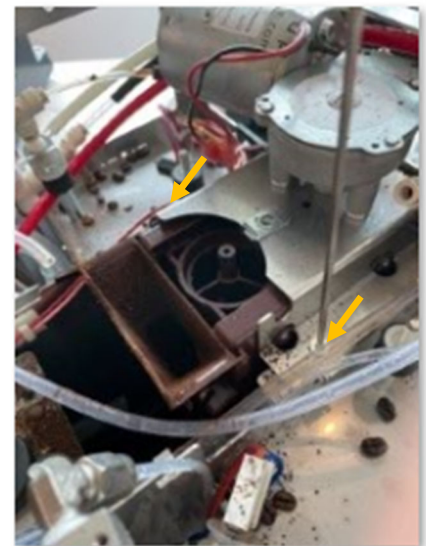
10. Lift the outlet adaptor off the upper piston outlet nozzle and swing to the left.



11. Disconnect the electrical supply wires from the motor.



12. Remove the two side screws from the automat motor bracket.

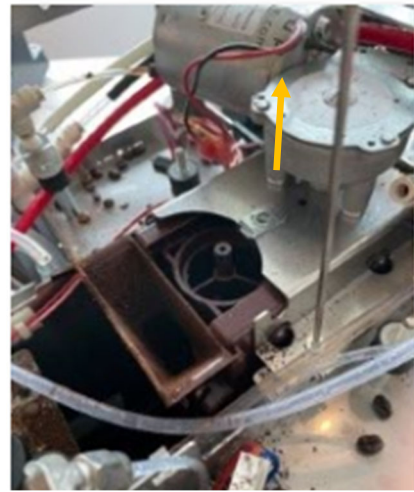


5. Automat Motor and Grinder Motor Replacements (cntd)

13. Remove the rear bracket screw.



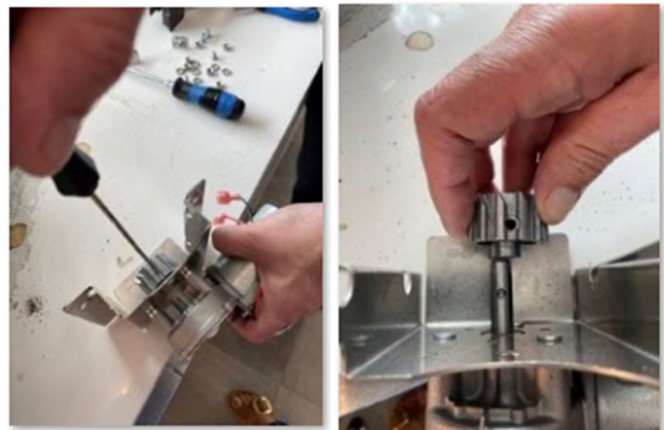
14. Lift the motor out of the machine.



15. Rotate the gear so the set screws are facing forward.

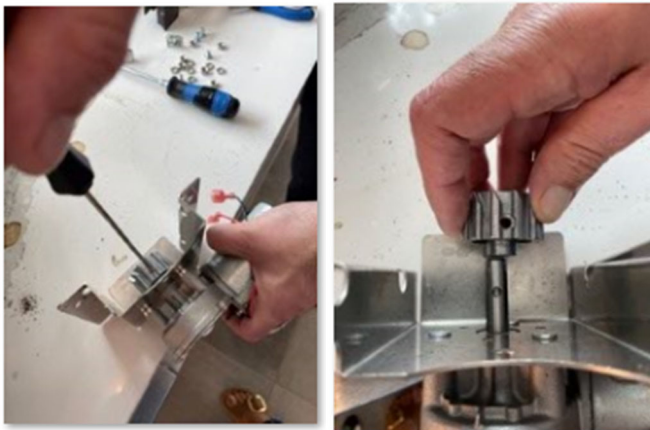


16. Using the long Schaerer screwdriver, remove the gear set screws and slide the gear off of the shaft.

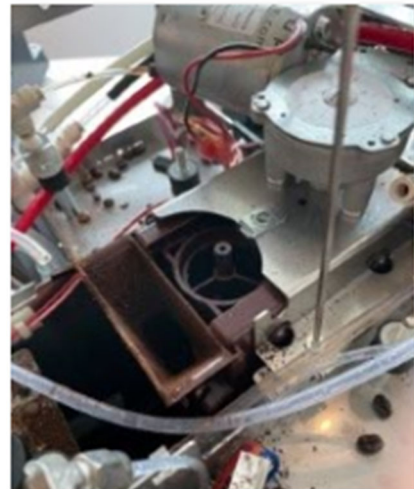


5. Automat Motor and Grinder Motor Replacements (cntd)

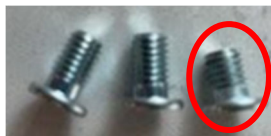
17. Install the gear onto the new automat motor + bracket. The longer set screw goes in first, the shorter holds the longer screw in.



18. Install the new motor into the machine and reconnect the wires. The wires are keyed and cannot be connected wrong.



19. When installing the screws, ensure the shorter of the 3 screws is installed on the back.



20. Transfer the retaining tab screw clip to the new bracket.



5. Automat Motor and Grinder Motor Replacements (cntd)

21. Reinstall the upper piston outlet nozzle and put the screw in.



22. Make a mark on the grinder motor brackets to assist with motor mounting directionality.



23. Remove the two screws holding the bracket to the grinder casing and separate the grinder casing from the bracket, do not lose the serrated washers.

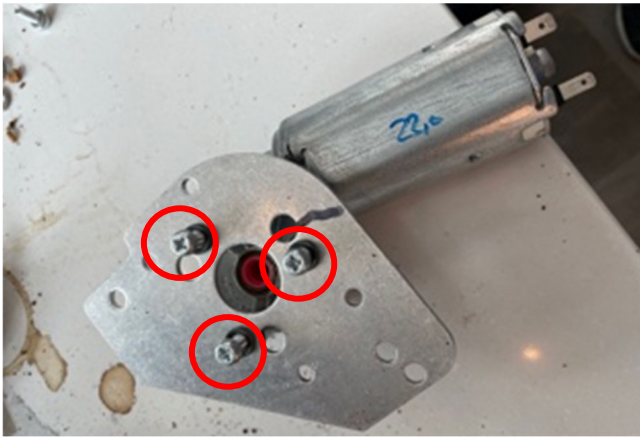


24. Make another mark on the top-side of the bracket to assist with motor directionality.



5. Automat Motor and Grinder Motor Replacements (cntd)

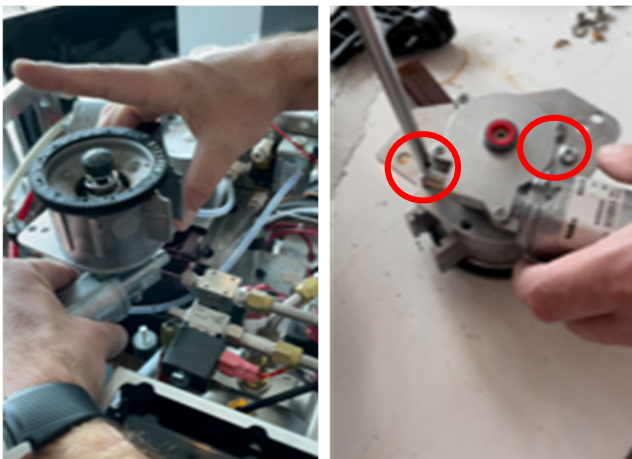
25. Using the screw gun with extension and P2 phillips bit, unscrew the (3) mounting screws, but leave them in their holes.



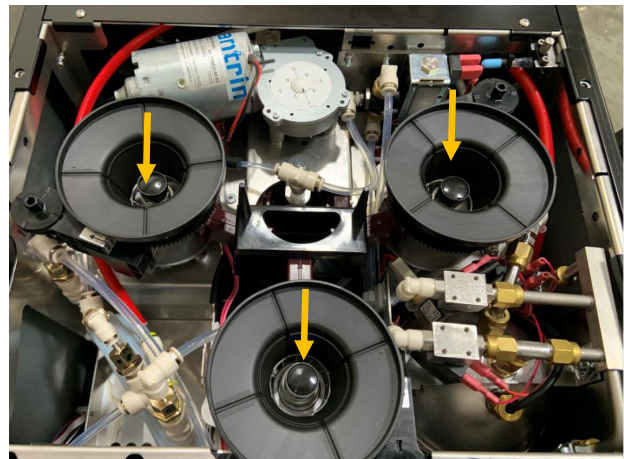
26. Using the directionality lines, install the new motor using the screw gun. **Make sure the torque setting is no higher than 12 and the screws are fully seated.**



27. Set the grinder casing onto the motor + bracket and line up the outlet using the machine as a guide. Secure the grinder casing onto the bracket with the (2) screws with serrated washers.

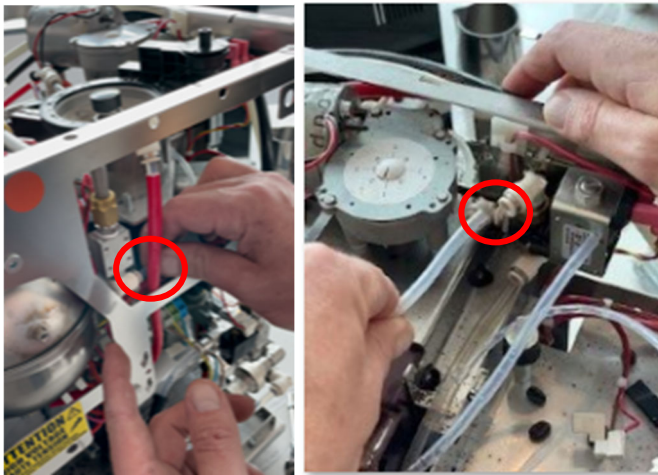


28. Reinstall the grinders into the machine, reconnect the power wires, and secure with (2) hex nuts and (2) lock washers each. The electrical connections are keyed and cannot be swapped.



5. Automat Motor and Grinder Motor Replacements (cntd)

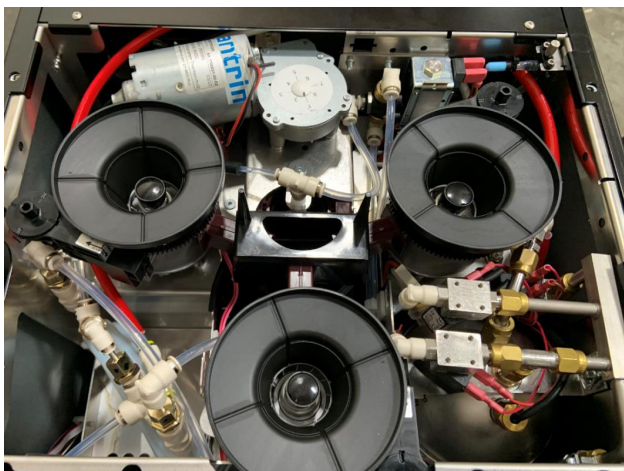
29. Reconnect the hot water bypass and diverter valve tubes.



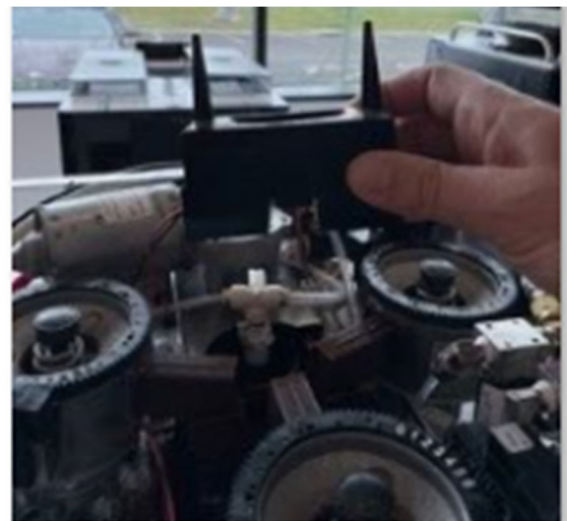
30. Reinstall the adjustment gear while lining up the arrow on the gear with the mark previously made as a calibration bookmark.



28. Reinstall the hopper seals.



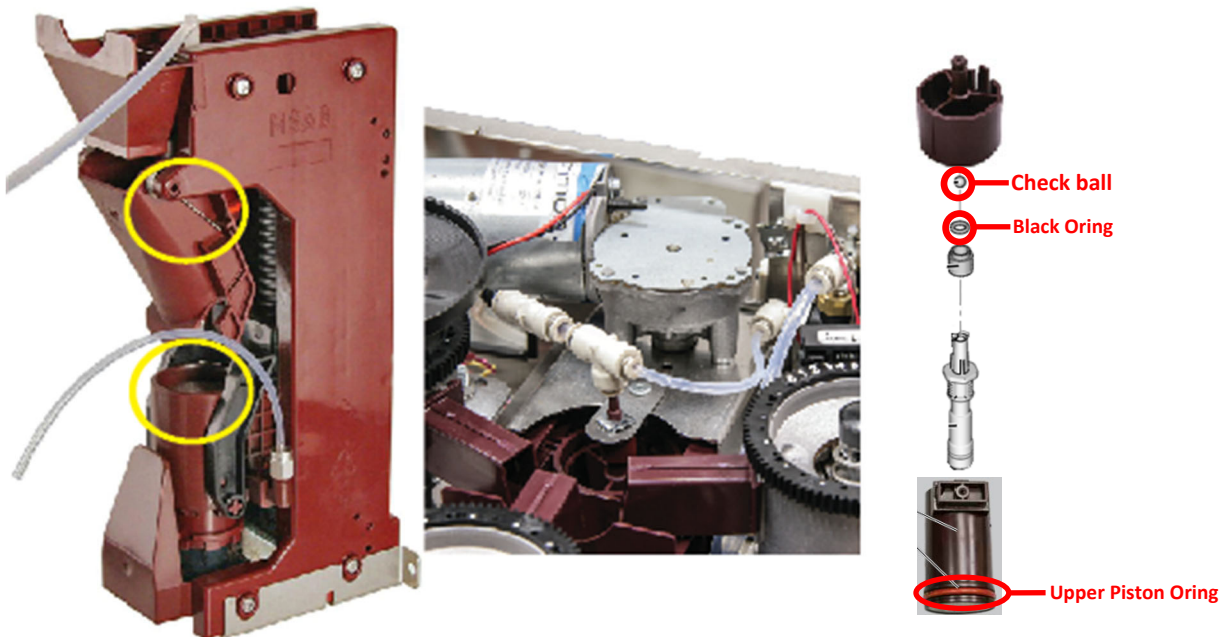
29. Reinstall the android.



6. Red (Upper and Lower Pistons) O-Rings and Black O-Ring Replacements

Remove the automat and clean thoroughly in the sink. Be sure to verify the presence of the check ball throughout this process.

- Remove the lower piston from the brew chamber
- Remove black o-ring above the automat (outlined in the diagram below)
- Remove the red o-rings from both the upper and lower piston and clean the area thoroughly
- Lubricate new red upper and lower piston o-rings and black automat o-ring and insert them
- Clean the automat compartment and reinstall the automat



7. Additional Adjustments & Filter Replacement

1. Insert Service card (PIN 1000), press “System” tab, then press “System Parameters.” Verify that the “(0) Machine Number” matches the machine number on the physical machine.

- The machine number can be found on either the back of the machine, on the left side of the automat compartment, and next to the main board behind the left panel.

2. Record the machine’s total “Amount of cleanings” onto the checklist (this MUST be done for each machine).

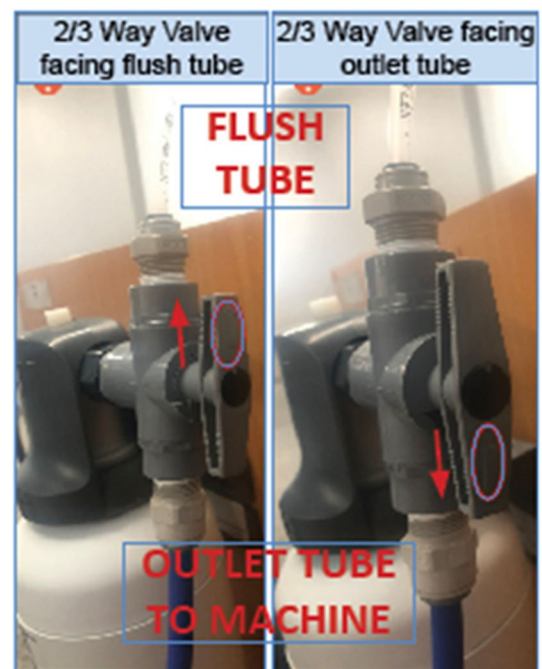
There are two ways of accessing this information:

- Insert the Service Card (PIN 1000), press “Information” then “Counters and Statistics.” Select “Machine counters” then scroll down until “Amount of cleanings”. Record the TOTAL amount from the rightmost box.
- Put the machine on standby mode and press the menu icon in the bottom left corner. Press “Quick Menu” then press “Counters and Statistics.” Select “Machine counters” then scroll down until “Amount of cleanings”. Record the TOTAL amount from the rightmost box.

3. Replace the water filter cartridge.

Optional: Discuss the replacement of the water filter cartridge with the customer as they will be responsible for the cost of the filter.

- Direct the flush tube towards a drain or sink, then adjust the 2/3 valve so that water will flow through the flush tube.
- Turn on the water supply and flush 2 gallons of water (approximately 2 min). During this time, check for and fix any leaks.
- Once flushed, turn the 2/3 way valve back towards the outlet tube / machine water supply tube. Check for leaks.
- Date the filter with installation date and a replace by date 1 year from installation. (eg. Installed 09/01/2021, replace by 09/01/2022)



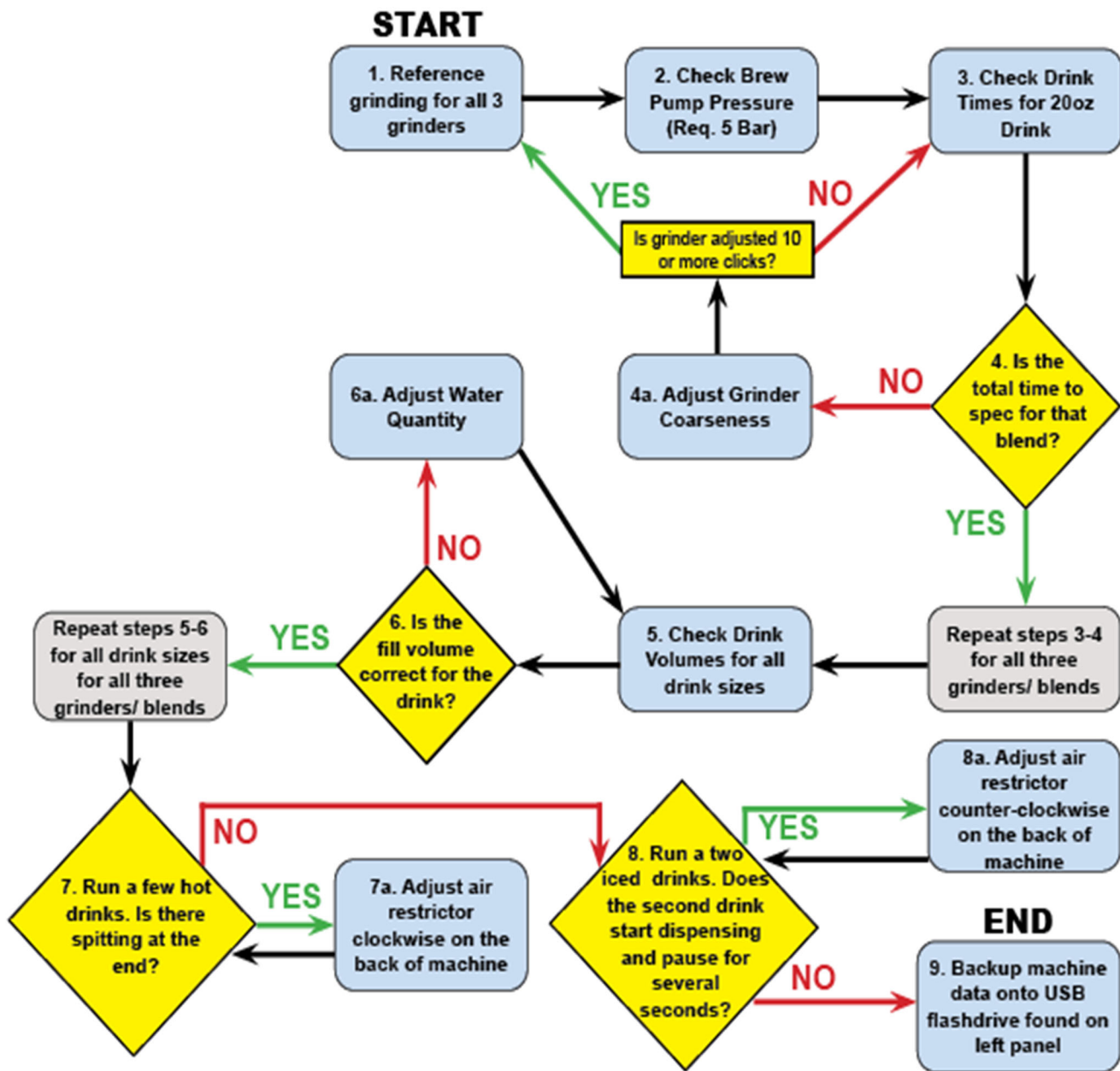
8. Calibration

8A. Calibration Overview (PM)

Ensure bean hoppers are completely dry, then fill hoppers with fresh beans.

Machine is now ready for calibration, please refer to checklist and fill it out.

Throughout the entire calibration process, please refer to customer recipe specifications and planogram layouts to avoid confusion.



If you have any technical questions or need assistance, please call our Technical Support Team @ 888.989.3004 - Select option 1, option 2, then option 2

8B. Recipe Settings

Use appropriate planogram for customer and equipment layout.

8C. Touch Screen Calibration



Items Needed:

1. Service Card



- Insert "SERVICE" card into card reader and enter "PIN CODE" to enter "Programming Menu".



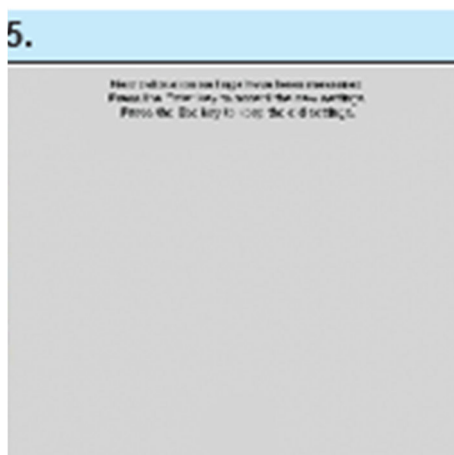
- After entering programming menu, Press "Setup Touch It", to advance to next screen.



- Press "Calibrate Touch Screen" and wait for the white screen to appear as shown in step 4.



- After entering the White Screen, follow instructions on screen.



- After completing step 4, another white screen will appear.
- Simply touch the screen to complete the process.
- **NOTE:** Previous versions of Touch It Software will not display the second screen and will automatically reboot after completing step 4.



- After completing step 5, the machine will reboot. Remove Service Card at this time.
- After machine has completed the reboot process, test touch display function and repeat process if necessary.

8D. Grinder Calibration



Items Needed:

1. Service Card
2. Digital Gram Scale
3. Disposable Cup



- Insert "SERVICE" card into card reader and enter "PIN CODE" to enter "Programming Menu".



- After entering programming menu, Press "Test/Calibration" button to enter "Test/Calibration" screen.



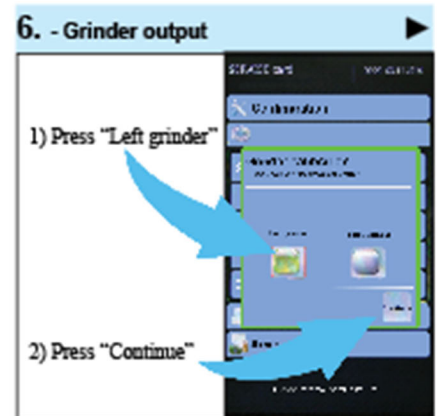
- After entering "Test/Calibration" screen, press "Calibrate grinders" button.
- When "Calibrate grinders" button is pressed, brew chamber will raise.



- Turn on scale and set to measure grams.
- Place 12oz disposable cup on scale and press "TARE".

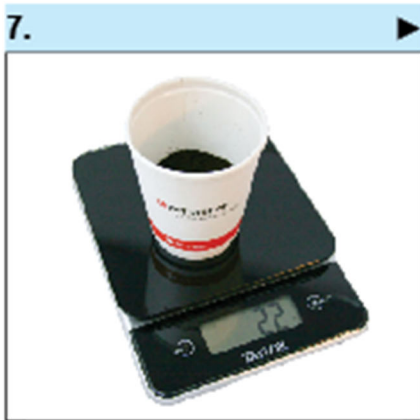


- Remove grounds bin tray and metal shield.
- Place cup on "Automat" as shown, to capture grinder output for measuring.



- 1) Press "Left grinder" button
- 2) Press "Continue" button

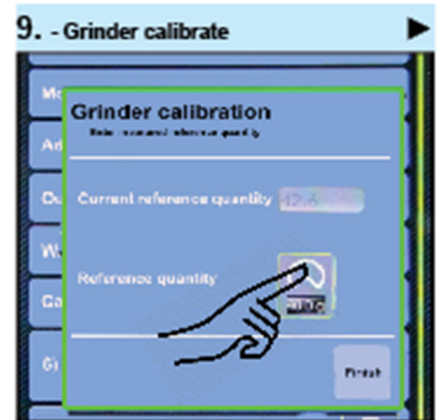
8D. Grinder Calibration (cntd)



- After reference grinding has completed, remove 12oz cup from Automat and weigh.
- Press "Continue" button on screen.
- **NOTE: Do NOT press "Repeat", otherwise the grinder calibration process must be restarted!**



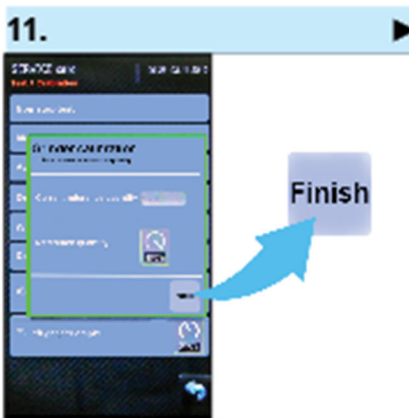
- Compare weight of actual grounds captured from Automat and "Current reference quantity" displayed on screen.



- If adjustment is required, press "Reference quantity" button to display graphical thumb wheel.



- Adjust reference quantity.
- Press "Green Check" icon.



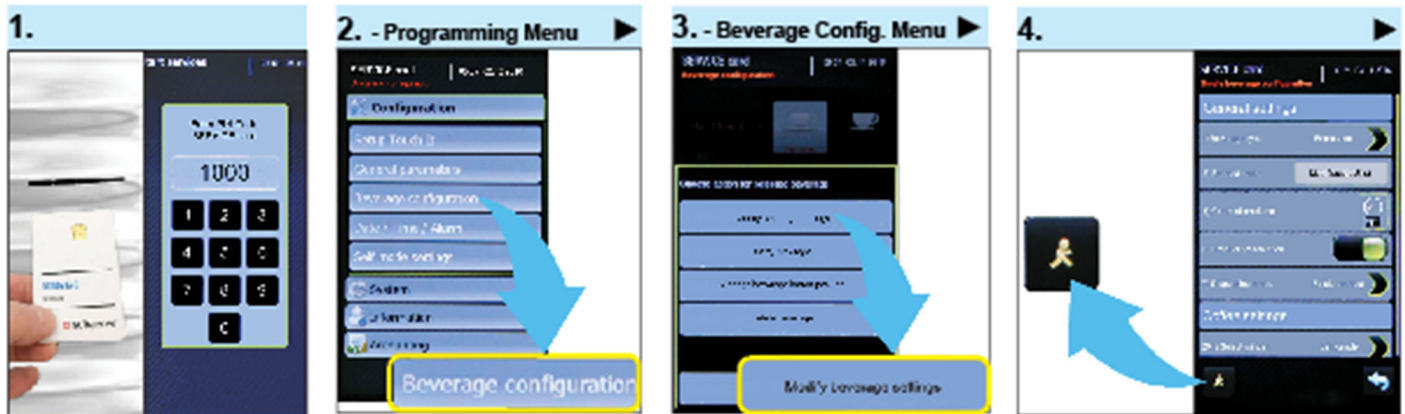
- Press "Finish Button" to complete.
- **Repeat all steps in this section for the Right grinder and Front grinder.**

8E. Drink Weight Calibration

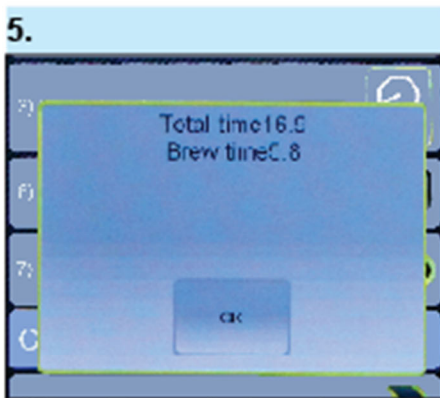
Items Needed:



1. Service Card
2. Digital Gram Scale
3. Grinder adjustment knob



- Insert "SERVICE" card into card reader and enter "PIN CODE" to enter "Programming Menu".
- After entering programming menu, Press "Beverage configuration" button on screen to enter Beverage configuration screen.
- Select MEDIUM 20oz drink in single cycle to
- From "Beverage configuration" screen, press "Modify beverage settings" button. Refer to the recipe settings on the following page for customer specifications.
- Place Measuring Cup under dispensing spout.
- From "Single Beverage Configuration" screen, press "Walking Man" icon in lower left to dispense drink.
- Check drink volume and brew time. Dispensing time will be displayed as shown in step 5.



- After entering programming menu, Press "Beverage configuration" button on screen to enter Beverage configuration screen.
- Select MEDIUM 20oz drink in single cycle to test



- If needed, directly adjust the grinder coarse/finer. Remove the black plug on the side you are adjusting.
- Turn the grinder knob clockwise to adjust FINER, and counter-clockwise to adjust COARSER. R-check brew times after adjustments.
- **NOTE: Listen for the clicks. If you adjust 10 or more clicks in a single direction (total), please repeat the calibration process for the grinder you are calibrating starting from step 2 of flow chart (see section 5a)**

Schaerer Coffee Art Generic 36mo Preventative Maintenance SOP

8F. Pump Pressure and Drink Volume Check



Items Needed:

1. Service Card
2. Digital Gram Scale
3. Measuring Cup



- Insert "SERVICE" card into card reader and enter "PIN CODE" to enter "Programming Menu".



- After entering programming menu, Press "Beverage configuration" button to continue.



- After pressing "Beverage configuration" button, select Medium sized drink in single mode in a single cycle for calibration.



- After selecting drink button, press "Modify beverage settings" button to enter the "Single beverage configuration" screen.



- Press the "Walking Man" button and note pressure gauge.
- **NOTE: The Save icon may appear instead, press it and continue.**
- Pressure should read 4.75—5.25 BAR while drink is dispensing.
- Press OK when shot is complete.

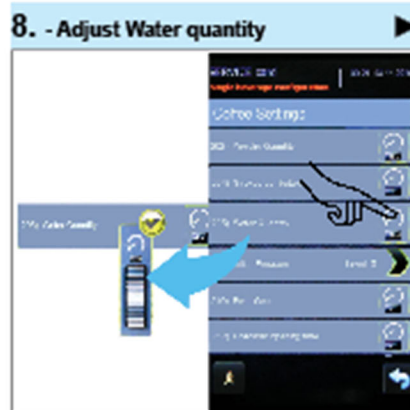


- **NOTE: Removal of right side cover is required if adjustments are necessary.**
- Repeat step 5 and adjust water pump pressure as necessary.

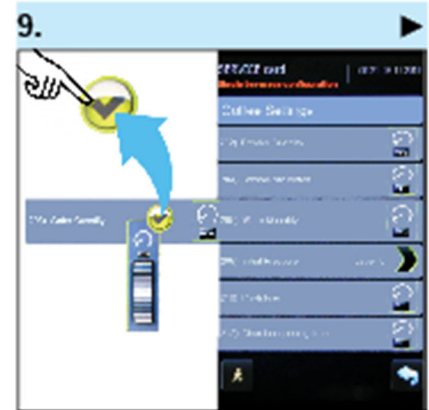
8F. Pump Pressure and Drink Volume Check (cntd)



- From "Single beverage configuration" screen, find "Water quantity".
- **NOTE: See customer recipes for water quantity specifications.**



- If adjustment is required, press "Water quantity" button to display graphical thumb wheel and adjust accordingly.



- Adjust "Water quantity".
- Press "Green Check" button to verify change.
-  will appear at bottom of display.
- Press to save menu changes.



- Place empty Measuring Cup under dispensing spout.
- While still in "Single beverage configuration" screen, press Walking Man button on screen.



- Empty Measuring Cup and repeat 2 more times.
- Note quantity on measuring cup
- **Make sure the volume falls within customer specifications!**



- Adjust if the volume or weight does not match the customer specifications.
- Re-Check volume after each adjustment by pressing "Walking Man" button in lower left side of display to dispense drink.

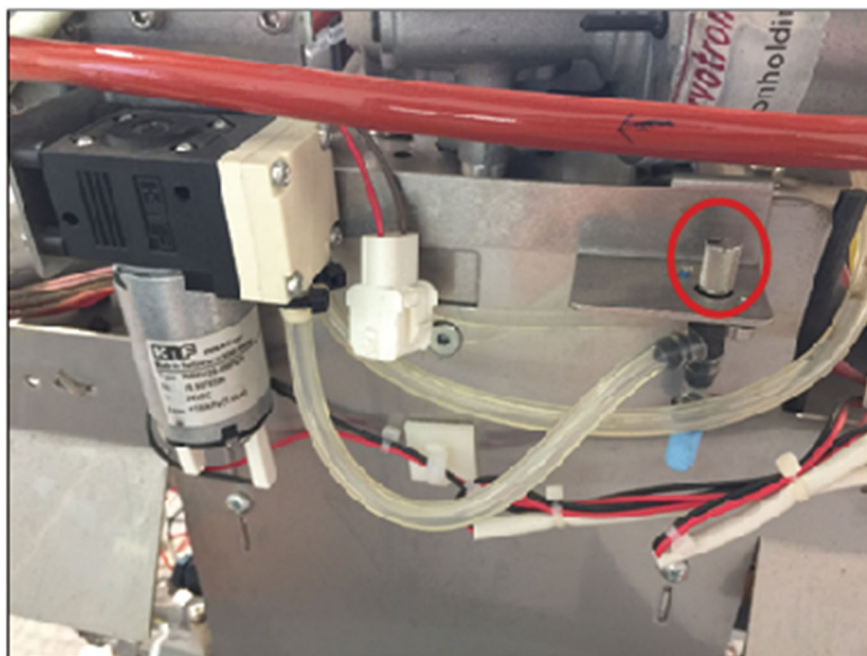
8G. Air Valve Adjustment

Locating the Air Valve:

Using the short Schaerer tool:

- Unscrew the four screws on the top panel. Remove the top panel.
- Unscrew the two screws on the back panel. Remove the black panel.

Locate the air valve as circled in red in the image below:



Adjusting the Air Valve:

Using a flat head tool:

- Tighten / close the valve by turning screw clockwise from top until stop
NOTE: Don't tighten it too hard to avoid damaging the parts
- Loosen / open by 1 turn (360 degrees) by turning counter-clockwise from top

Once the air valve is adjusted, dispense two of a hot drinks and iced drinks and observe any spitting from the spout in the beginning and end of dispensing.

NOTE: If spitting is still observed, slightly close the screw (turning clockwise) until there is no spitting and re-run drinks. If there is residual coffee remaining in the brewing lines, slightly open the screw until dispensing runs smoothly.

Once complete, use the short Schaerer tool to screw the panels back on.

9. Concluding Actions

- 1. Make sure store has necessary cleaning supplies.**
- 2. Clean up the machine and re-fill the hoppers with (advise customer if any of the hoppers are near empty). Empty and clean the grounds bin area and undercounter grounds compartment (if applicable).**
- 3. Record any additional parts that were identified areplaced throughout the maintenance.**

If additional issues or maintenance/ repairs are needed, please contact Tech Support and ensure a separate work order is created outside of this service.

- 4. Ensure the checklist is complete, then fill out the closing information (sign, date, time, etc.). Provide the store with a copy of the completed checklist as well. Please email a copy of the completed checklist to:**

PMaintenance-US@seb-professional.com

- 5. Make sure the machine is in normal operating condition before you leave the site. Preventative maintenance is now complete.**