



How To: Replace Paddle Wheel

Encore, Virtuoso, Preciso, Maestro, Maestro Plus

Time: 15-30 min

Difficulty: Medium

Tools/Supplies: Part 1: Plate Vise Grips, Paperclip

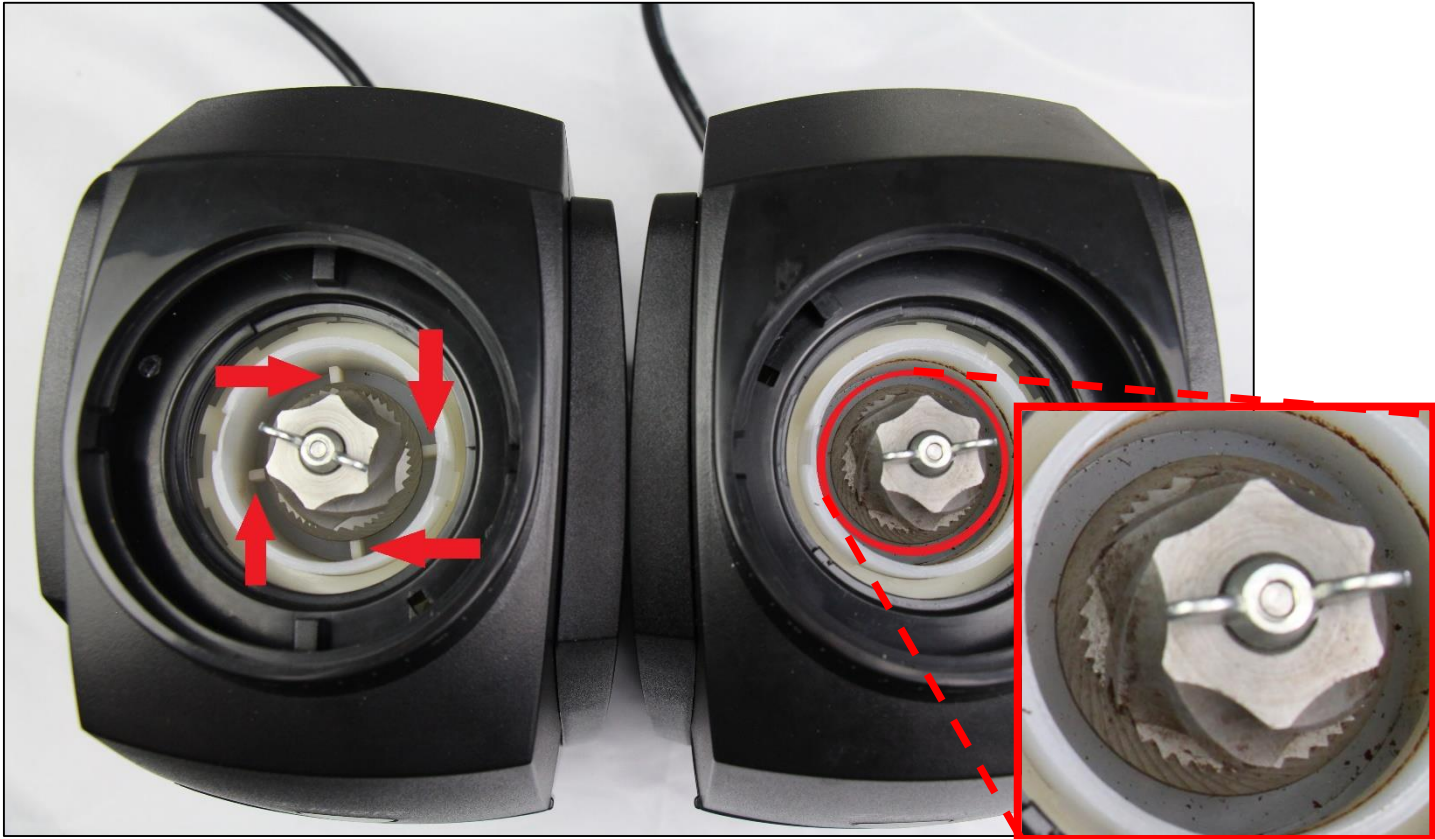
Part 2: Flat head screwdriver, Cloth, Philips screwdriver and/or T 10 Hex

Parts: Paddle wheel (6380 – Paddle wheel & felt)

Additional Resources: Case Removal Guide (visit www.baratza.com/troubleshooting for guides)

***** Unplug the grinder from power supply *****

Below is an Encore. This guide will work for all Conical grinders. **Yours may not have a wingnut.**



Example of a good paddle wheel

Example of a bad paddle wheel

*Note that there are no paddles



Technique 1 (faster but more difficult)

There are two methods to change the paddle wheel. The first method is jolt-loosening the cone burr which relies on tact and tools but also heavily involves luck. If you are lucky and jolt-loosening works, it is a quick and easy repair. If jolt-loosening isn't working after several tries, use the second method instead which walks through a nuts-and-bolts disassembly.

1. Rotate the wingnut off the grinder (Encore Wingnut). The wingnut is reverse threaded so spin it clockwise to loosen it.

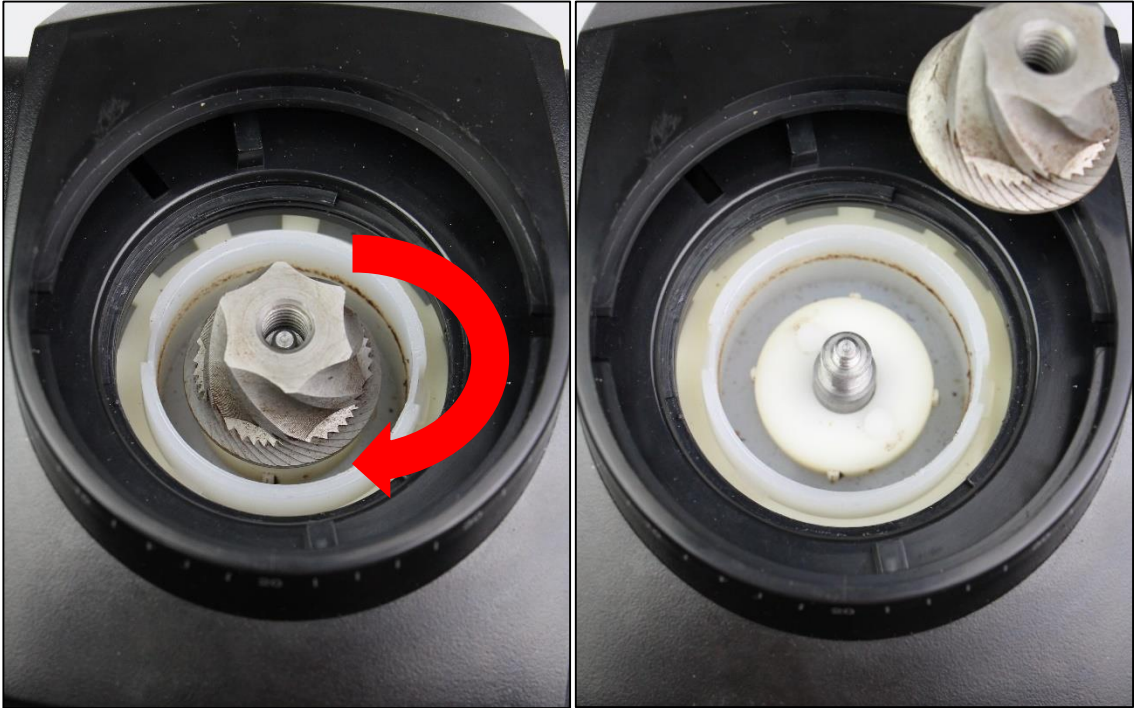


2. Clamp the cone burr with the Plate Vise grips, then use your hand, a mallet or a hammer to hit the Vise Grips horizontally along the X axis so that the cone burr is rotating **CLOCKWISE**. The cone burr can turn either direction and so the impact of your hammer hitting the vise grips should provide adequate torque to break the burr free from the shaft so it can be unscrewed by hand **CLOCKWISE** until it removes.

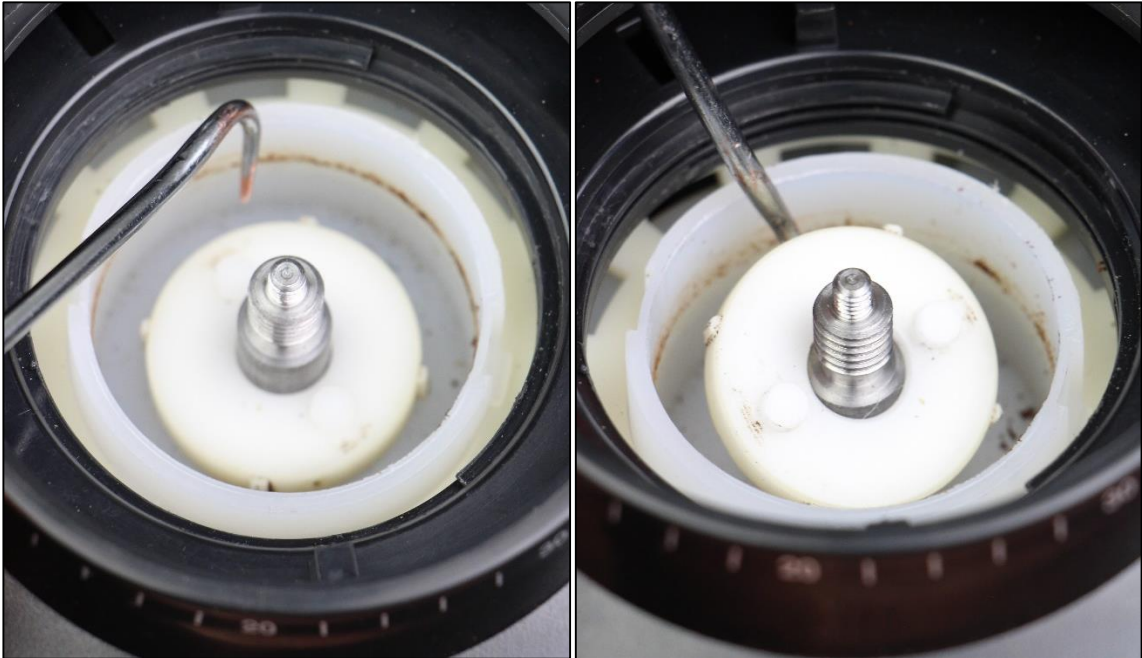




3. Continue to spin the burr clockwise until the cone burr fully releases from the drive shaft



4. Use something pointed (paperclip or screwdriver) to lift the old paddle wheel up and out of the grinder. **Do not turn the grinder upside down.**





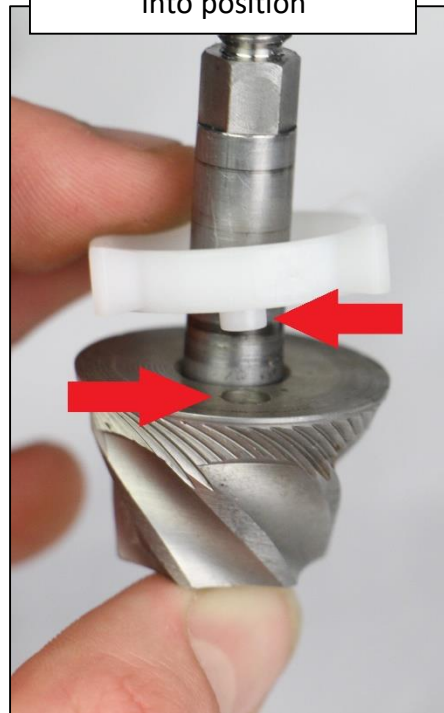
5. There will be a felt and shims left behind on the drive shaft. Do not remove. Simply place the new paddle wheel and felt into the grinder



6. You can place the cone burr back into the grinder and rotate it all the way counter clockwise so that the burr is flush with the drive shaft.

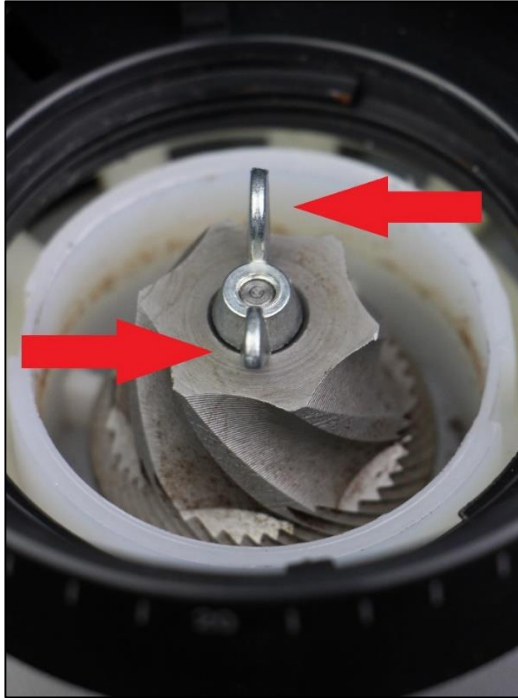


If it is not flush, that means the male and female posts do not line up. Use a pick to rotate into position





7. Place the wingnut back onto the grinder. In order to tighten it, turn it counterclockwise. Tighten it until it stops, you do not need to tighten any further. It will self-tighten as coffee passes through.

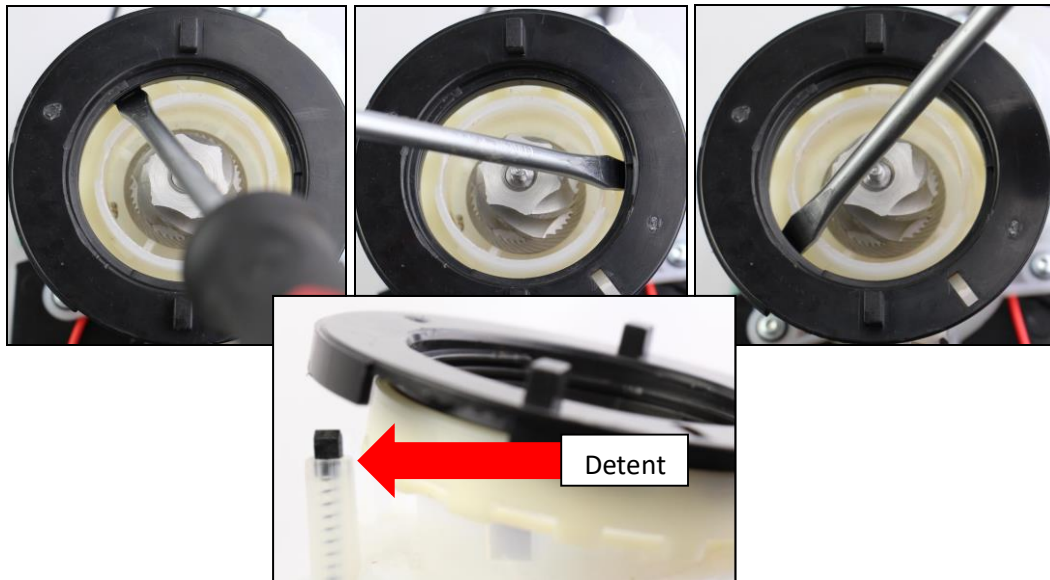




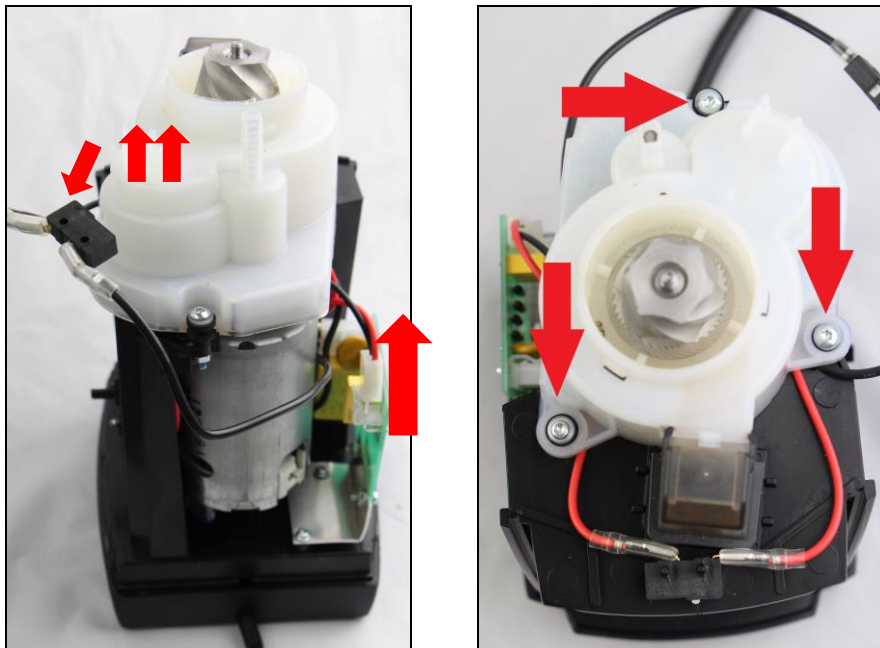
Technique 2 (longer but easier)

The second option is going through the grinder's gearbox in order to change the paddle wheel

- 1) Unplug the grinder and remove the case
- 2) Take the wing nut off *Encore only* (Part 1, Step 1). Remove the adjustment ring by placing the screw driver under the adjustment ring at 3, 7, and 11 o'clock and prying up. Keep close eye on the detent. It is spring loaded and may shoot out of the holder.

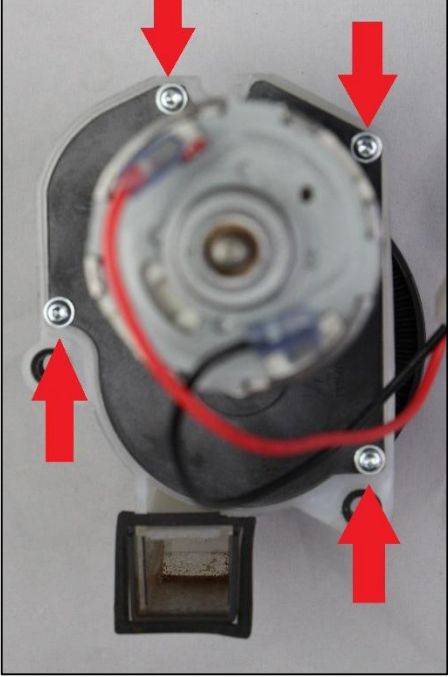
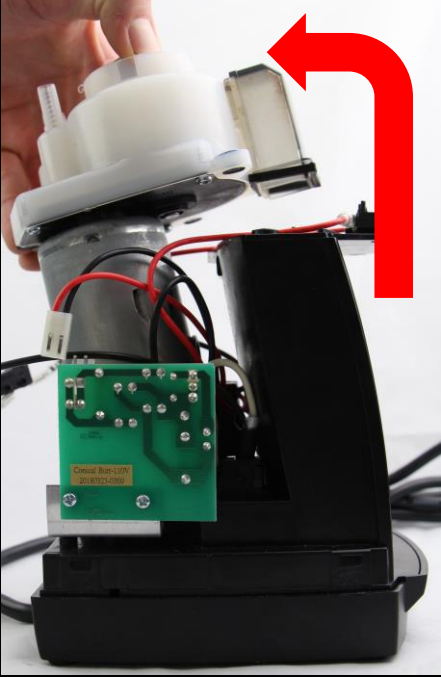


- 3) Remove the micro switch by lifting it off the two posts on the housing. Unhook the motor. Then remove the three screws holding the gearbox to the housing assembly





4) Flip the housing upside down and remove the four screws holding the motor to the housing

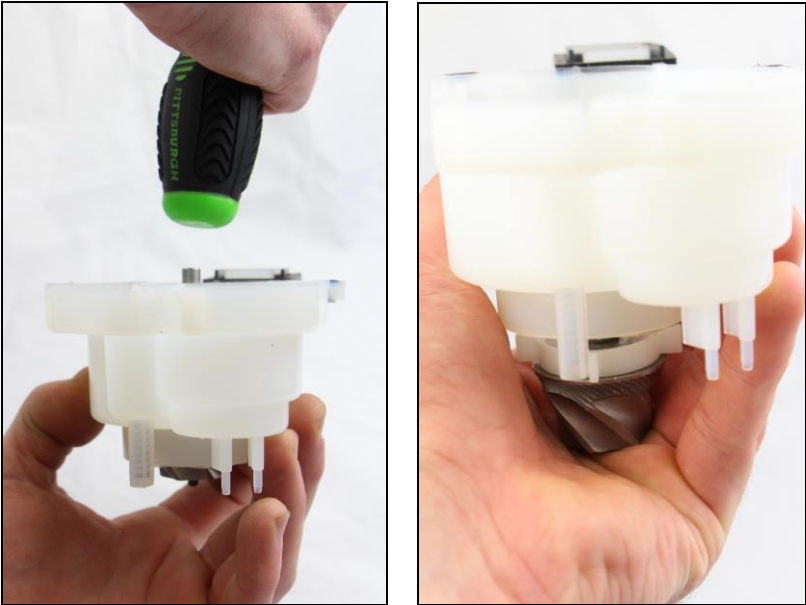


5) We are going to remove the nut and bolt from the drive shaft. The drive shaft and gear will want to rotate, so wedging a cloth in the gearbox can give you the resistance you need to release the nut

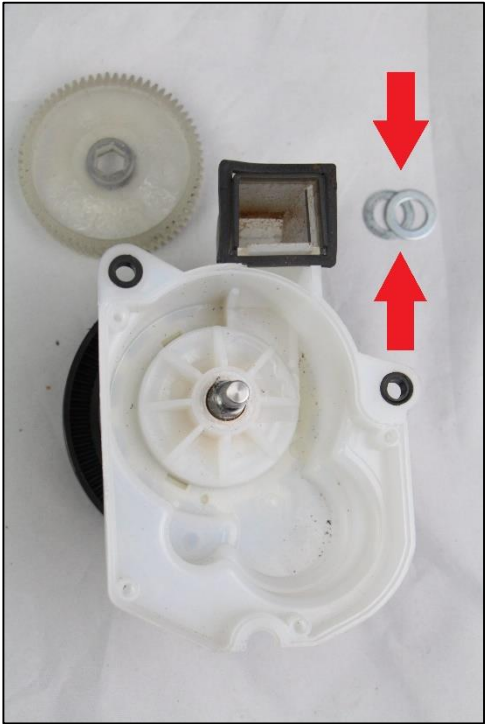




6) Use something that is soft (rubber mallet, end of the screwdriver) and hammer the main drive gear out of the gearbox. DO NOT use a metal hammer. This can damage the top of the drive shaft. Place a hand under to prevent losing/ damaging parts.



7) Remove the main drive gear. Make sure to keep track of each washer and where it is located within the grinder. Each washer may be a different thickness, and it is important to **return each washer to its original location during reassembly**. Each grinder may have different shims. In this example, there are two under the main drive gear and four under the paddle wheel/ felt.

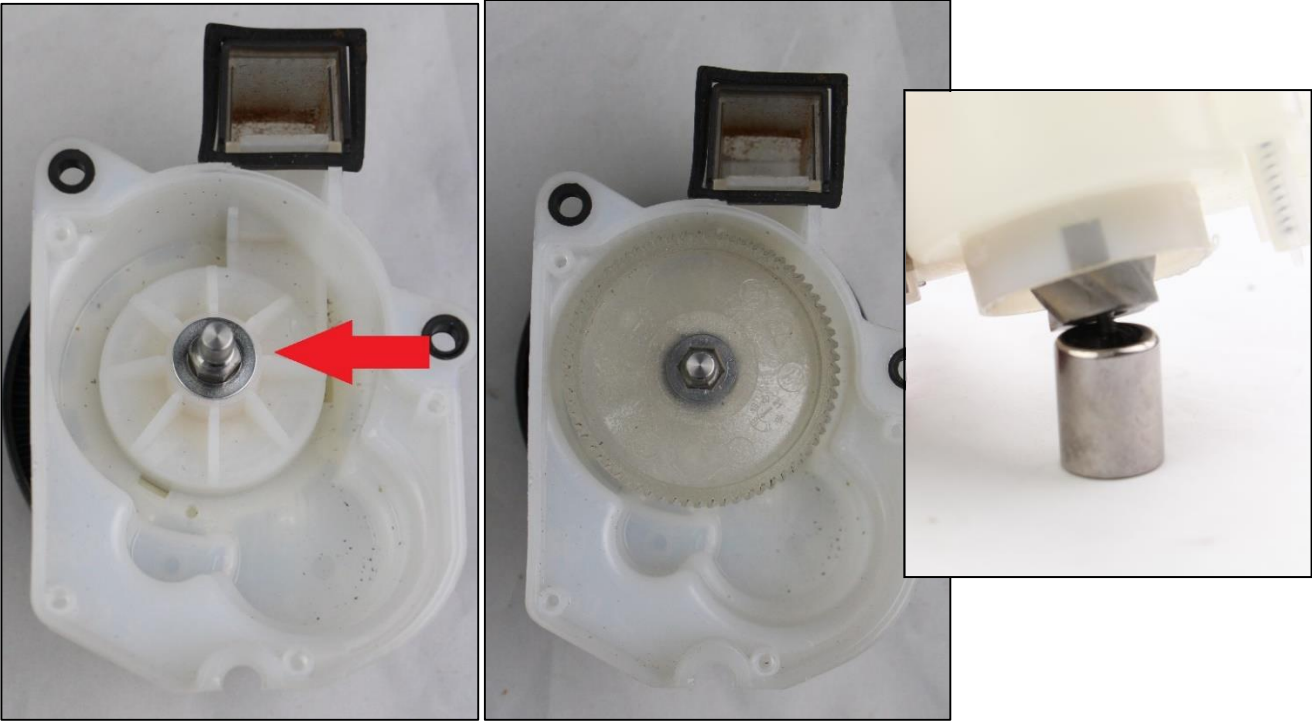




8) remove the old paddle wheel and replace it with one with four flanges on it. At this point we are going place the washers and felt back into the paddle wheel and onto the drive shaft. Make sure that the female and male parts on the paddle wheel and cone burr align.

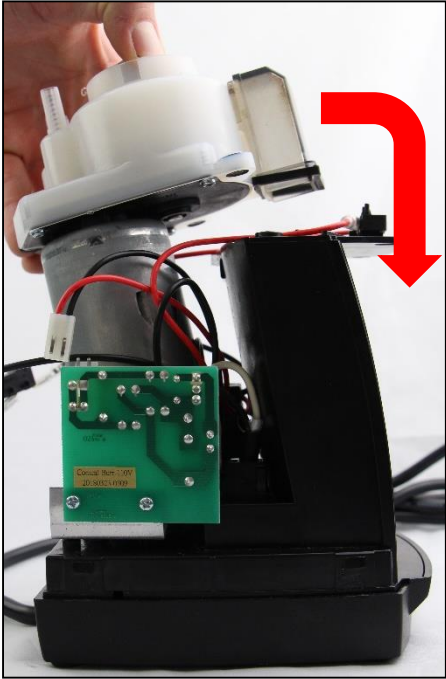
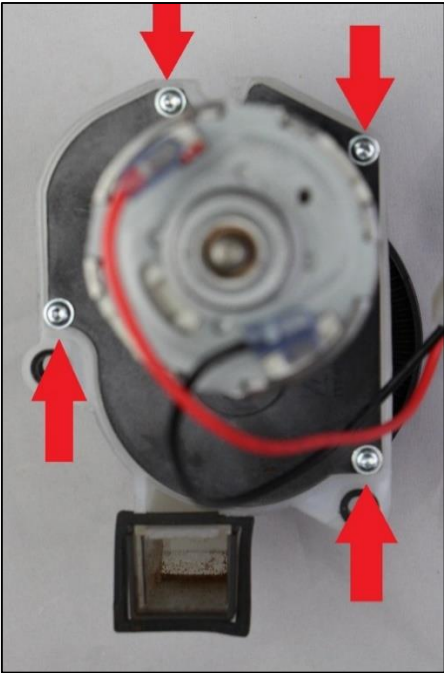


9) Place the washers that we previously removed from the main drive gear and place them back onto the drive shaft. Then place the main drive gear back onto the shaft. Make sure that the hexagonal piece on the drive shaft slides back into the gear. Having something underneath (a weight/socket) greatly helps pushing it into place and reduces stress on the chassis.

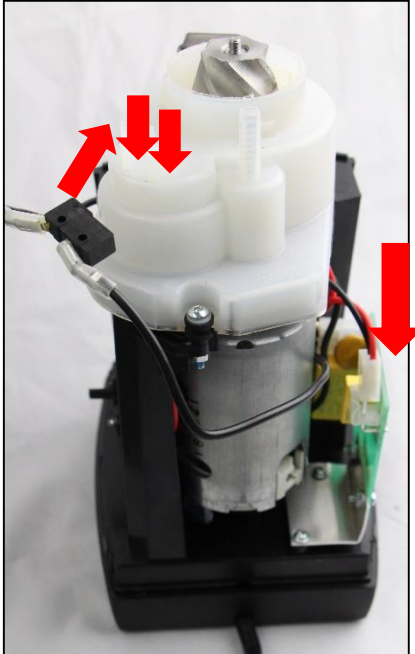
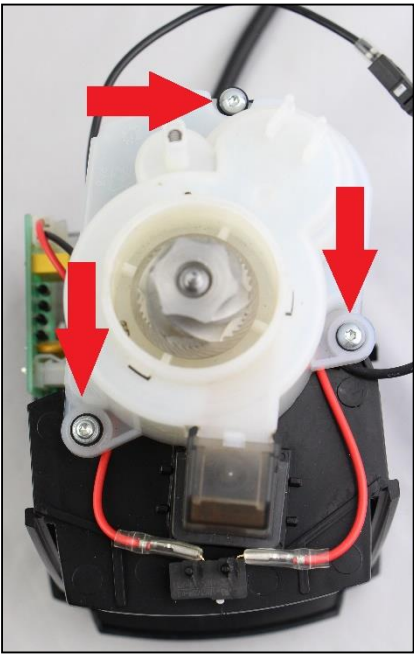




10) Place the motor/ plate back on the house and screw all four screws back into place

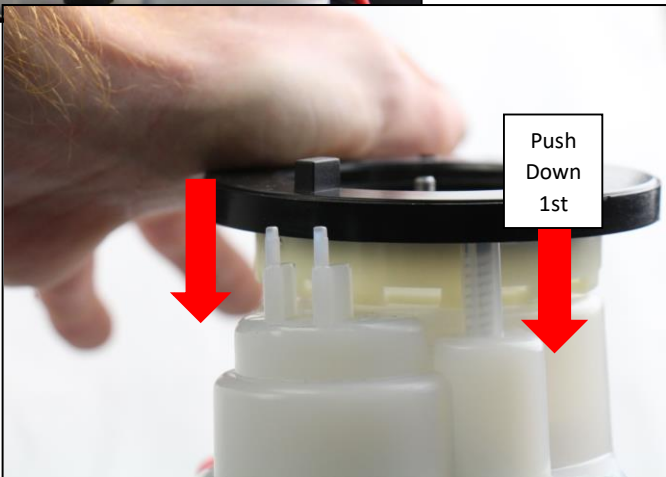
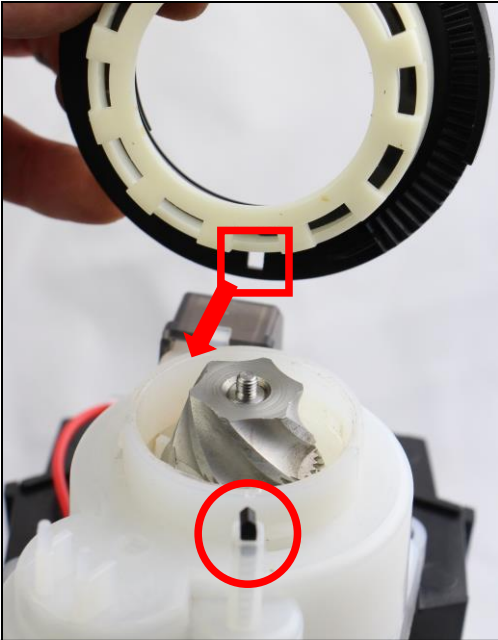


11) Turn the grinder back around and place it back on the chassis. Then screw the three screws back into place. Also make sure to place the micro switch back onto its posts.





12) Replace the adjustment ring by placing pressure on the adjustment ring starting at 11 then 3, and 7 o'clock. Keep close eye on the detent. It is spring loaded and may shoot out of the holder. Placing the cutout in the adjustment ring over the discharge chute helps the detent align with the adjustment threads. Palming the adjustment ring to apply pressure works as well. Place the wing nut back on (Part 1, Step 7).



13) Place the case back onto the grinder.