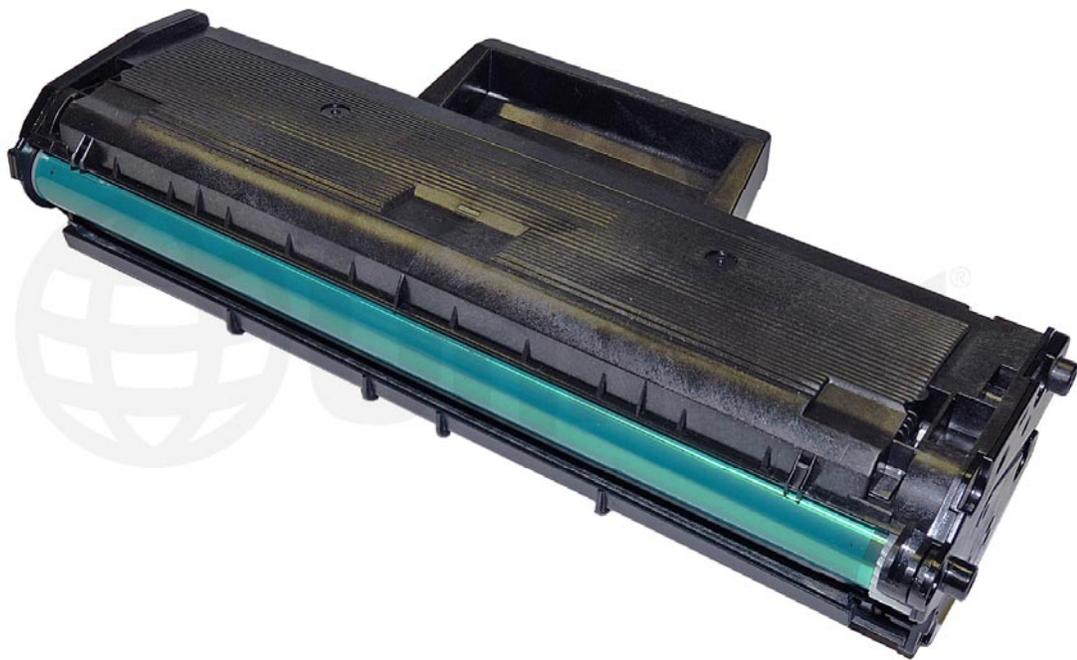


# SAMSUNG® XPRESS M2020 MLT-D111S TONER CARTRIDGE REMANUFACTURING INSTRUCTIONS



SAMSUNG MLT-D111S TONER CARTRIDGE

# REMANUFACTURING THE SAMSUNG XPRESS M2020 MLT-D111S TONER CARTRIDGE

By Mike Josiah and the Technical Staff at UniNet



First released in May 2014, the Samsung Xpress M2020 series of printers are based on a 21ppm, 1200 DPI engine. The first page out is stated to be under 8.5 seconds, and all “W” models so far come with Wi-Fi, Samsung Mobile Print, Google Cloud Print, AirPrint, and NFC features built in.

The M2020 comes with 64MB memory and the M2070 comes with 128MB memory installed (fixed amounts). Both have a duty cycle of 10,000 pages per month.

These cartridges do not have a built in drum cover, but do come new with an orange plastic cover.

The replacement cartridge itself is rated for 1,000 pages at 5% coverage (ISO 19752). The starter cartridge is rated for 500 pages.

## **PRINTERS BASED ON THIS ENGINE\***

**Samsung Xpress M2020W**

**Samsung Xpress M2021W**

**Samsung Xpress M2022**

**Samsung Xpress M2022W**

**Samsung Xpress M2070F**

**Samsung Xpress M2070FW**

**Samsung Xpress M2070W**

**Samsung Xpress M2071FH**

**Samsung Xpress M2071W**

**Samsung Xpress M2070FW**

\*As of April 1, 2015

**REQUIRED TOOLS**

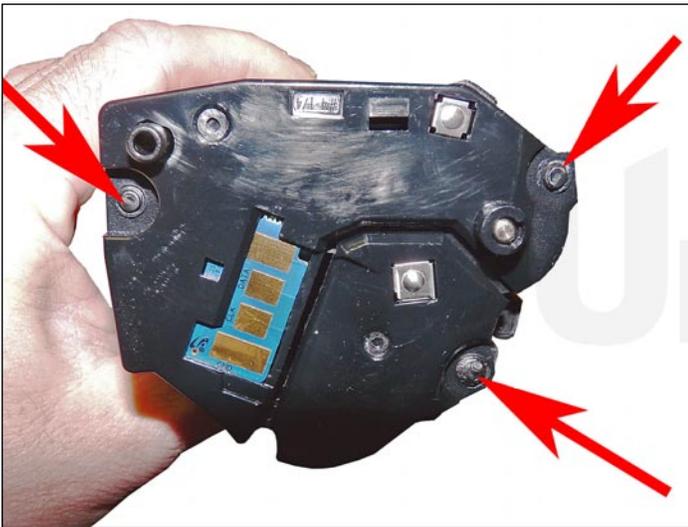
1. Toner approved vacuum
2. A small common screwdriver
3. A Phillips head screwdriver
4. Needle nose pliers
5. Chisel blade knife
6. Electric drill
7. #29 drill bit (see supplies needed below)\*

**REQUIRED SUPPLIES**

1. Replacement toner for use in the Samsung M2020
2. Dedicated wiper blade
3. Replacement chip
4. Conductive grease
5. Drum lubricating powder

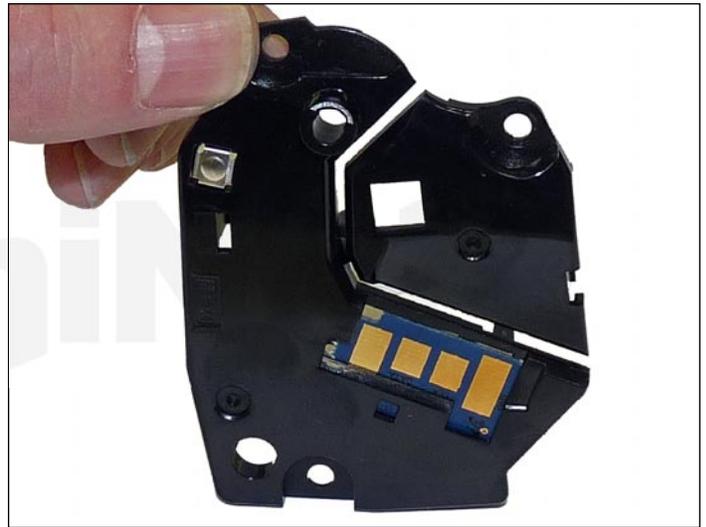
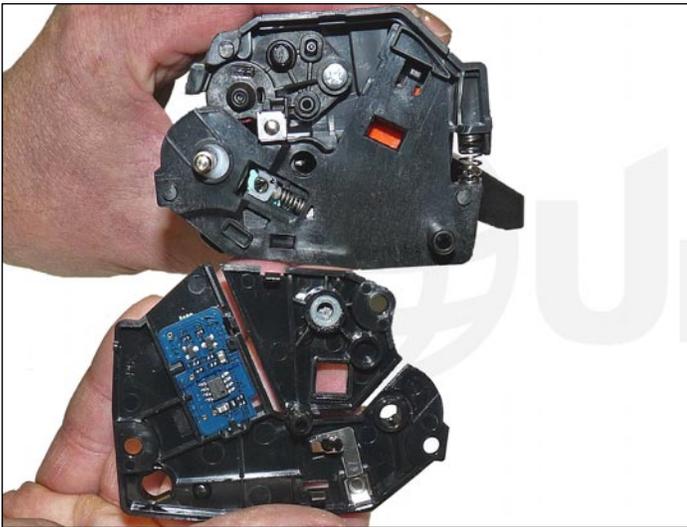
\*If using the #29 drill bit, we recommend #8 x 1/4" self-tapping screws.

If not, make sure you match the drill size to your screws and the screws cannot be longer than 1/4" (6.35mm).



1. Place the cartridge with the handle facing away from you.

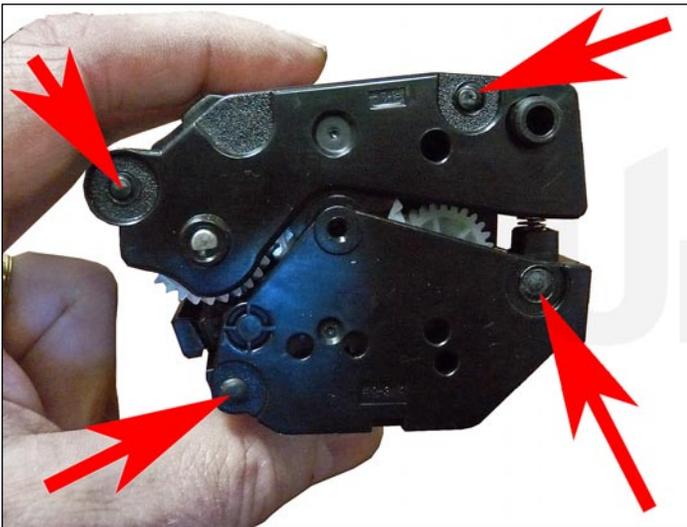
Slice off the three plastic rivets with a square Xacto type blade on the contact (chip side) end cap.



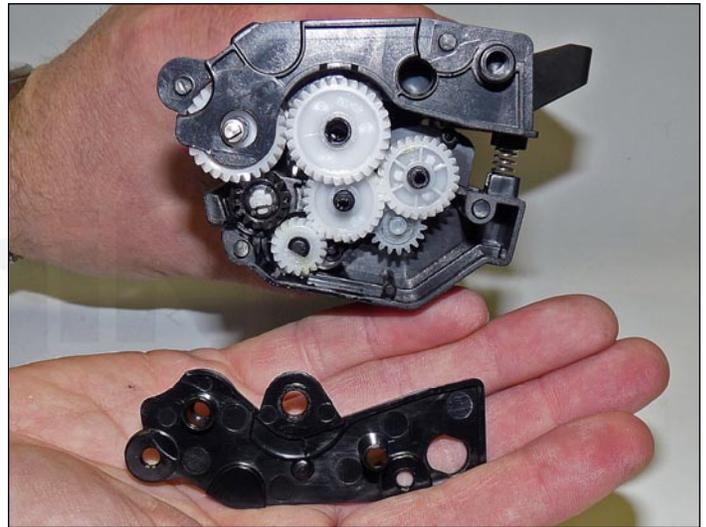
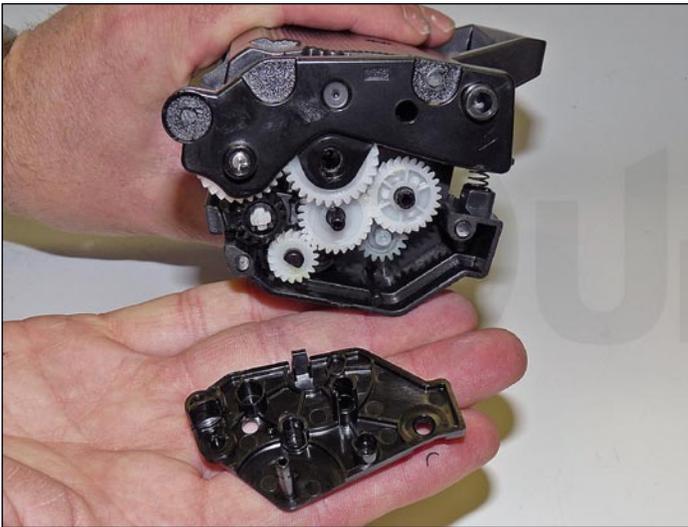
2. Gently pry off the end cap.

The end cap looks like it is in two pieces, but is not.

Be careful not to break it when removing!



3. On the opposite side of the cartridge slice off the four plastic rivets with a square Xacto type blade.



4. Gently pry off the end cap.

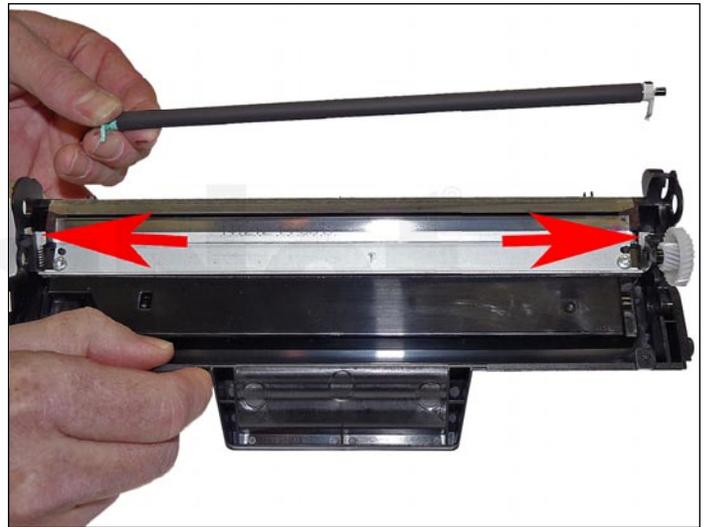
This one is actually in two pieces.



5. Lift off the waste chamber.



6. Slide the drum axle out from the hub side and remove the drum.



7. Remove the PCR.

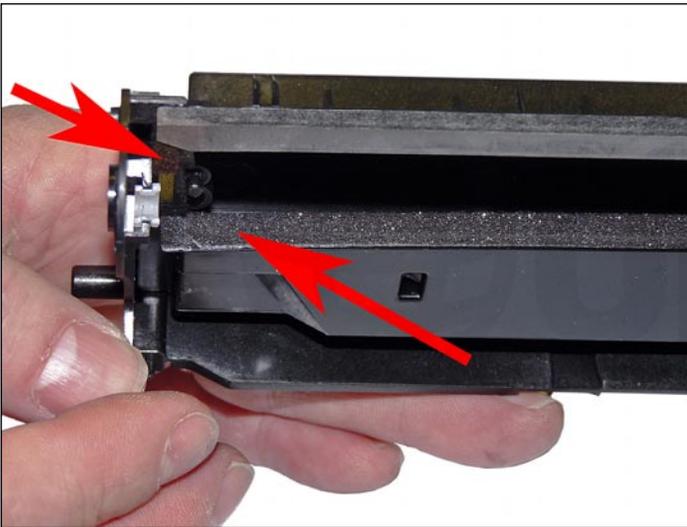
Make sure the holders stay in place!



8. Remove the two screws and wiper blade from the waste chamber.

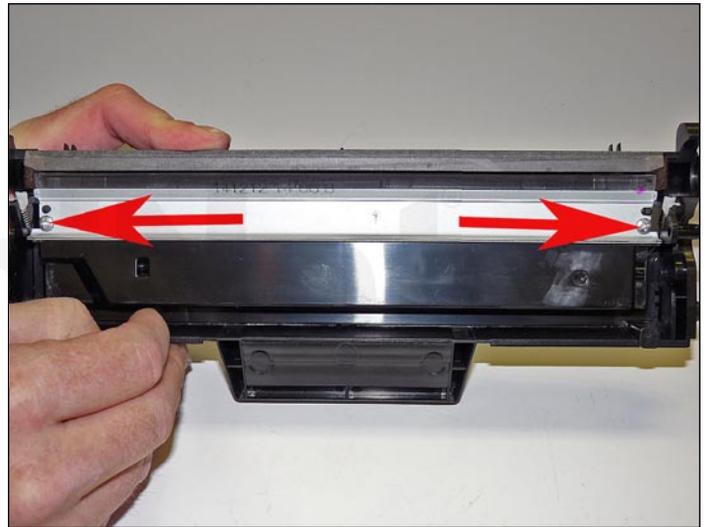


9. Remove the large drive gear.

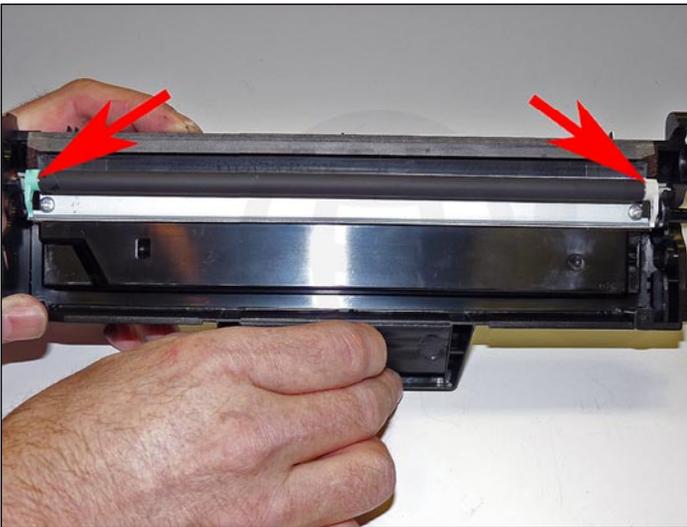


10. Clean out any remaining toner from the waste chamber.

Be careful to keep the wiper blade seal clean.



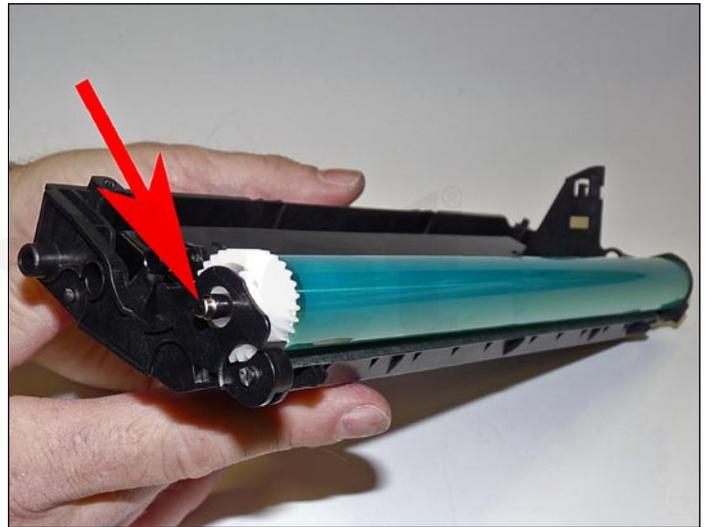
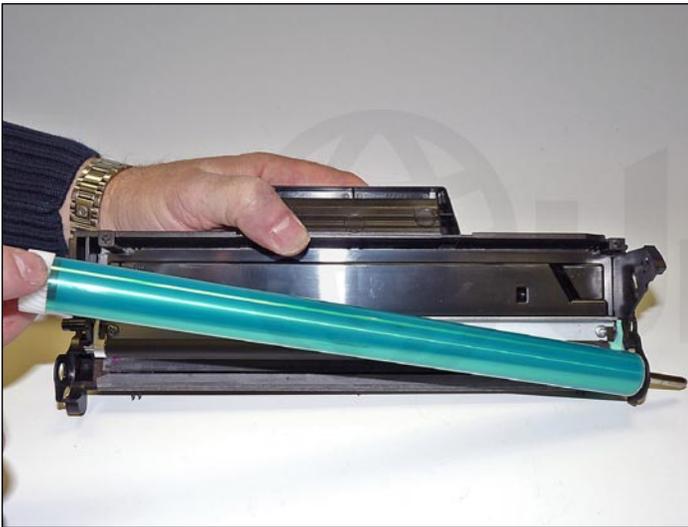
11. Reinstall the wiper blade and two screws.



12. Clean the PCR with your normal PCR cleaner and install in the cartridge. Make sure the guides fit in place and the rollers fit into the holders properly.

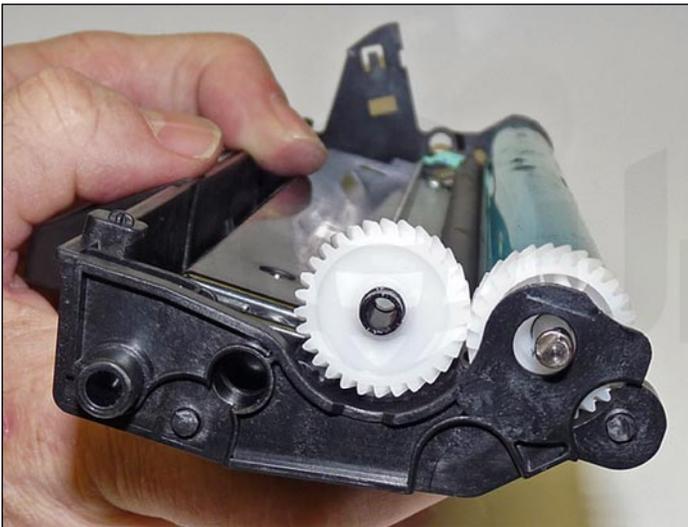
**WARNING:** Do not clean the OEM PCR with alcohol, as this will remove the conductive coating from the roller. If the PCR is an aftermarket, follow the cleaning methods recommended by the manufacturer. If the PCR is an OEM, we recommend it be cleaned with your standard PCR cleaner.

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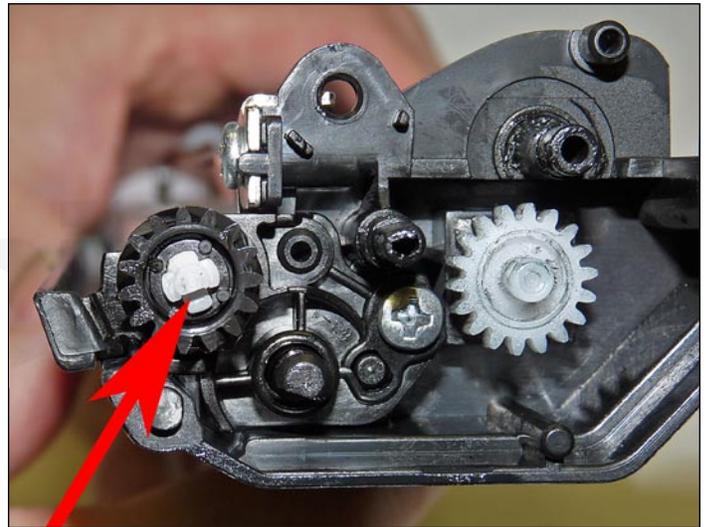
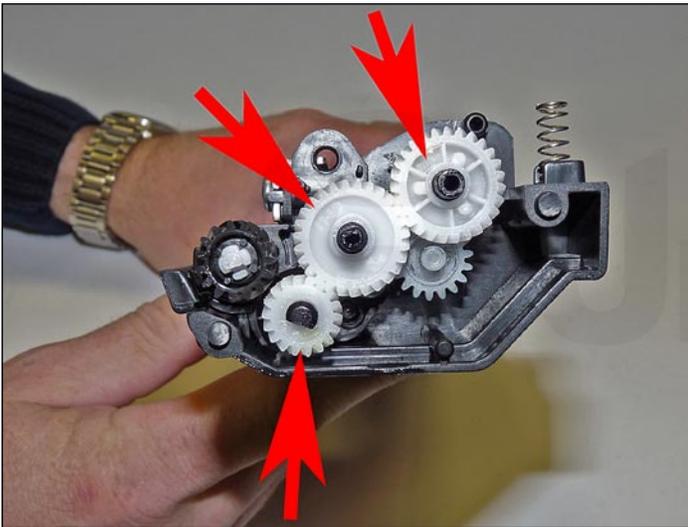


13. Install the hub gear side first.

Slide the axle through the gear and cartridge wall.

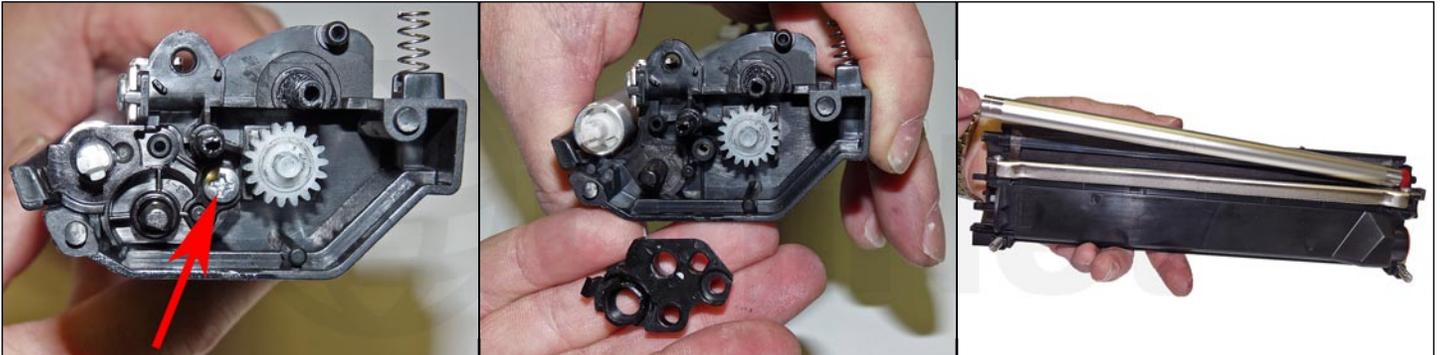


14. Install the large drive gear.



15. Remove the three gears as shown and place aside.

Remove the developer roller gear by squeezing the tab on the shaft.

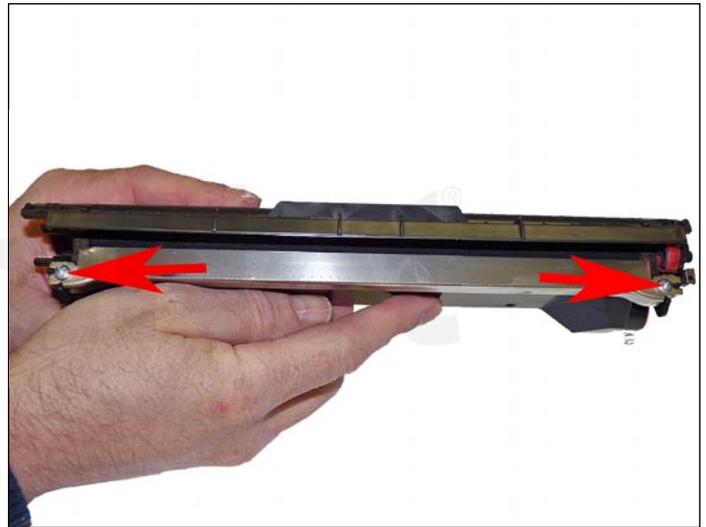


16. Remove the developer roller's inner plate and screw, on the gear side of the cartridge.

Remove the developer roller sleeve.



17. Until new replacement fill plugs are available, leave the plug in place. The OEM plugs are very brittle and break easily.



18. Remove the two screws on the doctor blade and remove the blade.



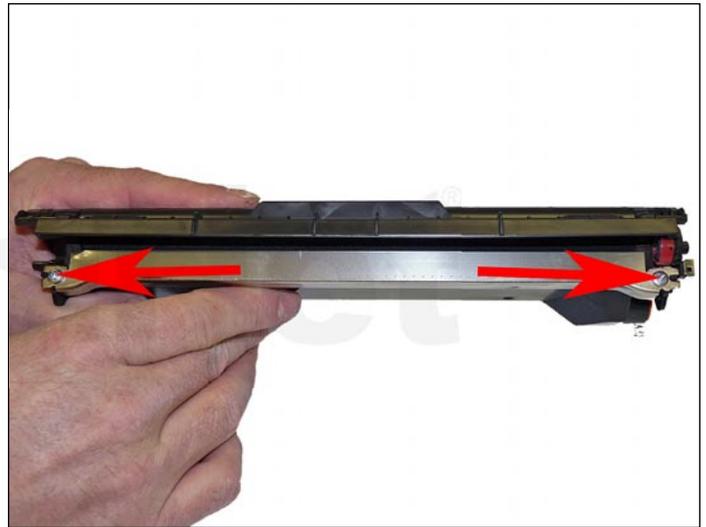
19. Clean out any remaining toner from the hopper through the developer roller/doctor blade hole.



20. Clean the feed roller and any remaining toner from the hopper seals.



21. Fill the hopper with toner for use in the M2020 cartridge.

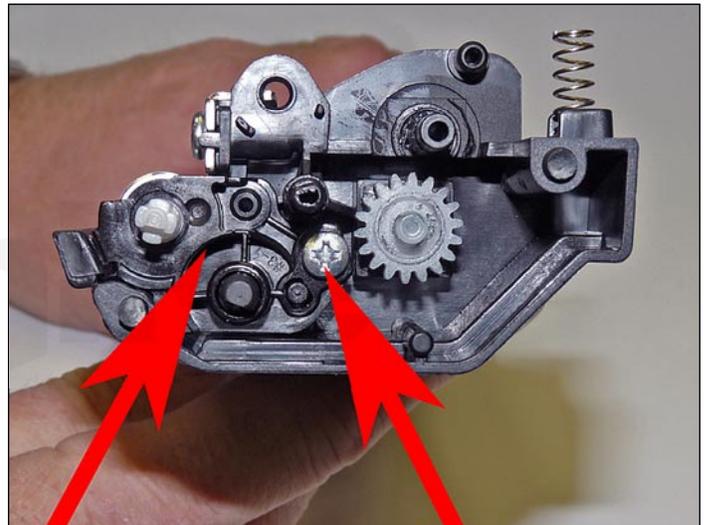


22. Clean and reinstall the doctor blade and two screws.

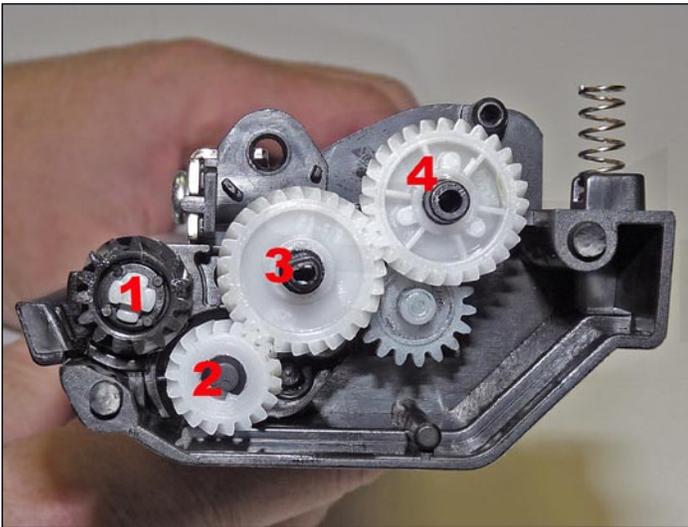
It is highly recommended that the doctor blade be cleaned. Failure to do so will cause streaking. Dampen a cotton swab with alcohol, and clean the blade. Be careful not to press too hard and damage the blade. If the blade has a heavy buildup of toner on it, clean it with acetone, and then alcohol.



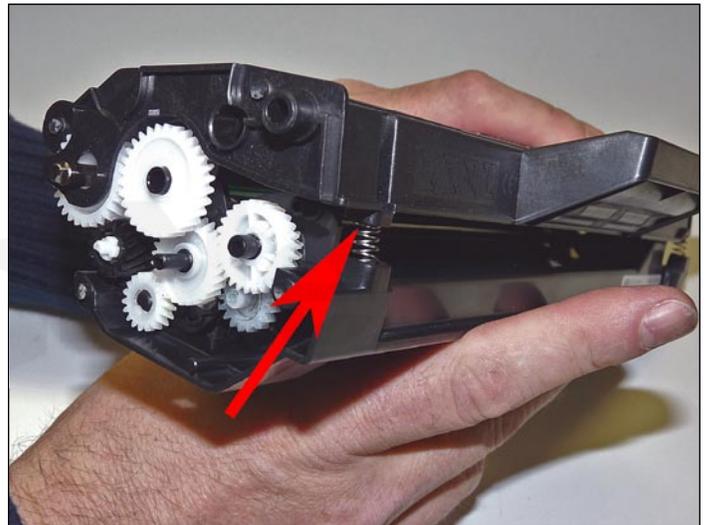
23. Install the developer roller.



24. Install the inner plate and screw.

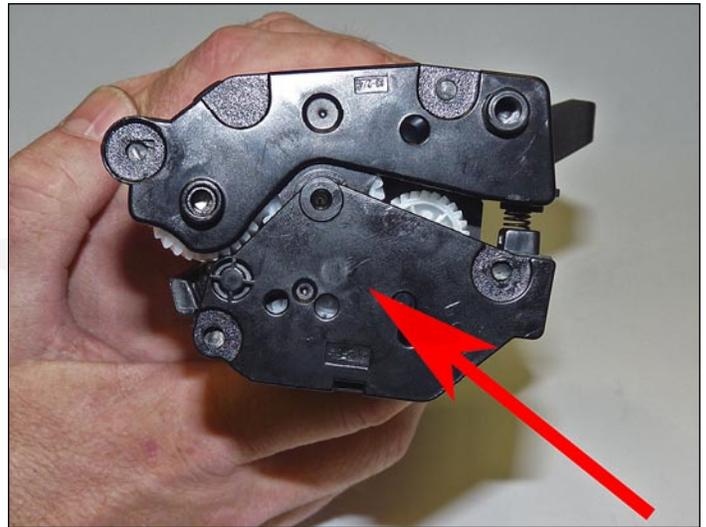
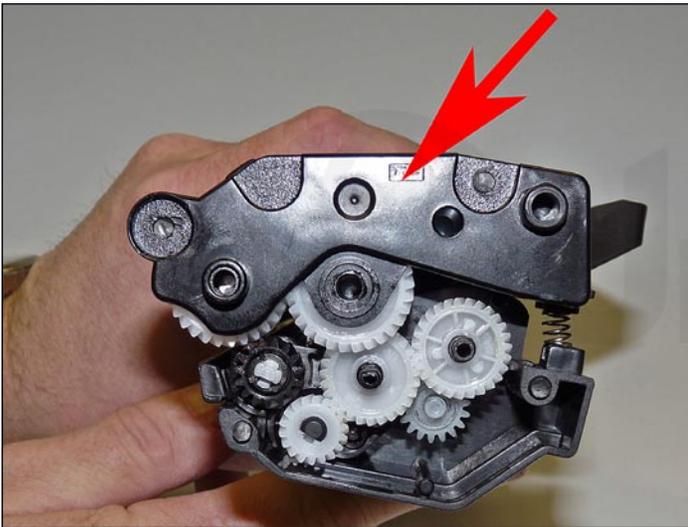


25. Install the four gears as shown in the order indicated. You may need to press on the auger gear to seat gear #4 properly.



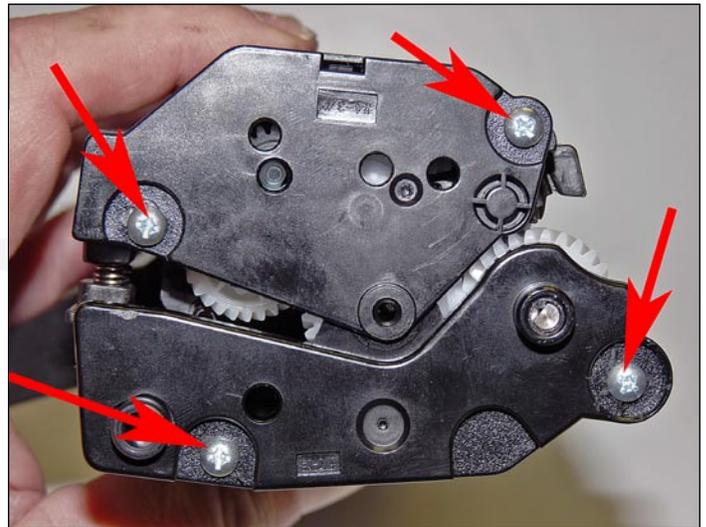
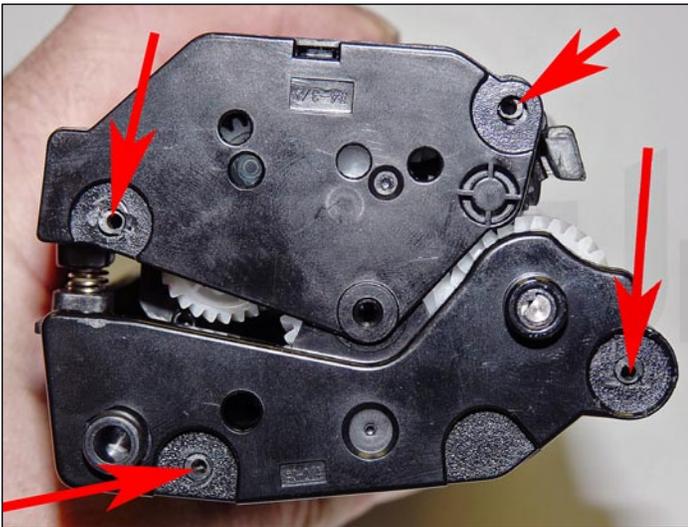
26. Place the two halves together.

Make sure the two springs fit in their respective points.

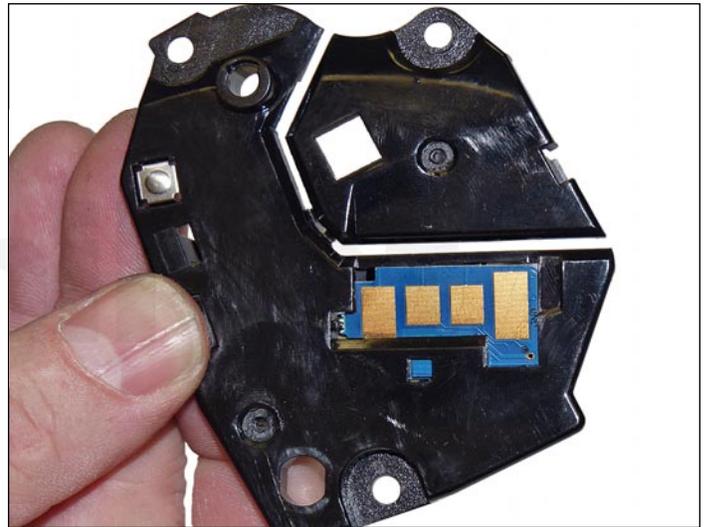
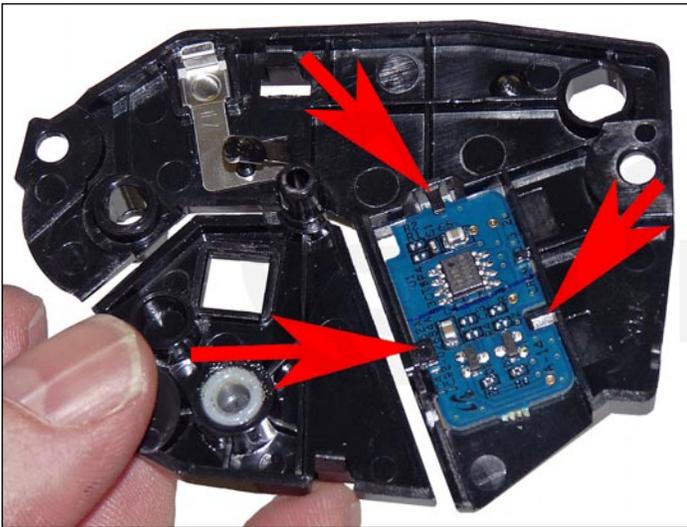


27. Install the gear side end caps (two pieces).

Install the top piece first.

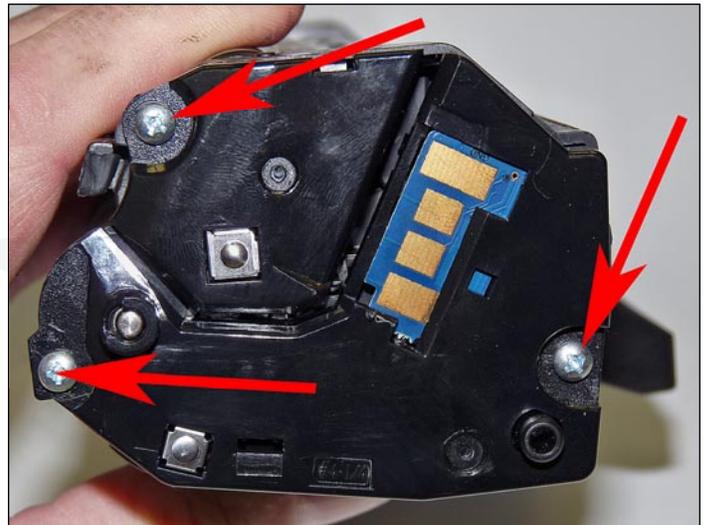
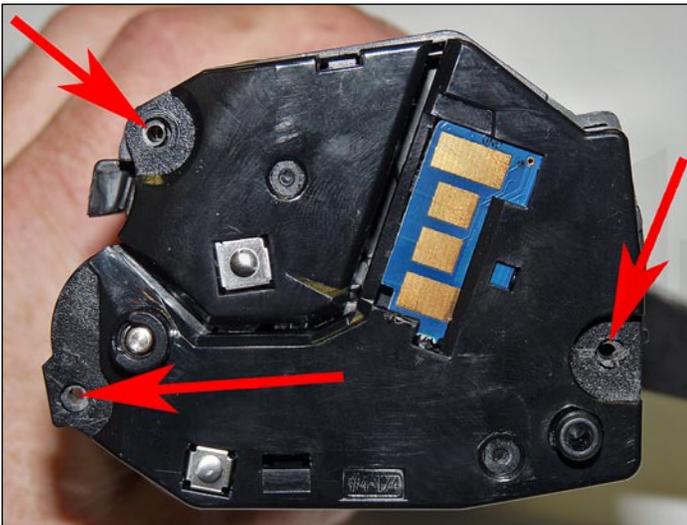


28. Drill holes where the four rivets were and install the screws.



29. Install the replacement chip on the contact end cap by sliding it out from the inside of the end cap.

Replace the chip making sure it's seated properly.



30. Install the end cap, drill the three holes, and install the screws.



31. Install the drum cover on the cartridge.