CANON® IMAGECLASS D1120 • TYPE 120
TONER CARTRIDGE REMANUFACTURING INSTRUCTIONS

CANON IMAGECLASS D1120 • TYPE 120 TONER CARTRIDGE

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REMANUFACTURING THE CANON IMAGECLASS D1120/TYPE 120 TONER CARTRIDGE

By Mike Josiah and the Technical Staff at UniNet

First introduced in February 2010, the D1120 series of laser printers is based on 30ppm, 1200dpi Canon engine that has a first page out in less than 8 seconds. There is just a single cartridge version for these machines, rated for 5,000 pages.

The cartridges are similar in design to the HP P2035 cartridges, but are not interchangeable. They also use the new drum drive gear system. The actual drive gear is a floating type that uses a ball and socket configuration (see above photo). There are no screws used at all to hold the cartridge together. All the end caps and bushings are held in place by plastic welds. This sounds worse than it is though it's actually not that bad to do.

The pin system holding the two halves of the cartridge together is similar to many HP machines. You will need to cut two small holes cut in the top to get access to the pins. The pin-access hole location on these cartridges is almost identical, and the same methods you use for the P2035 should work here.

PRINTERS RELEASED IN THIS SERIES SO FAR

imageCLASS D1120
imageCLASS D1150
imageCLASS D1170
imageCLASS D1180

Cartridge troubleshooting as well as running test pages, cleaning pages and some simple printer troubleshooting will be covered at the end of this article.

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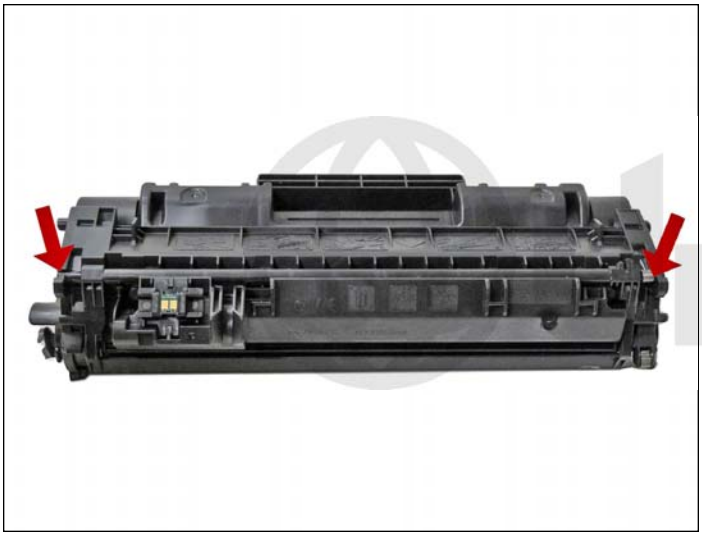
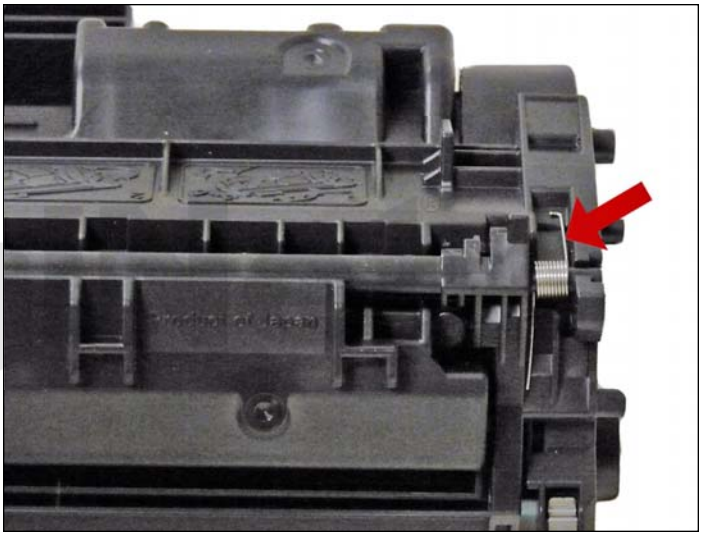
SUPPLIES REQUIRED

1. New toner for use in the Canon imageCLASS D1120 type 120 cartridge (5000 pages)
2. Replacement chip
3. New drum (optional)
4. Wiper blade (optional)
5. Doctor blade (optional)
6. Magnetic roller (optional)
7. Sealing strip (optional)
8. Cotton swabs
9. Isopropyl alcohol
10. Drum padding powder

TOOLS REQUIRED

1. Jeweler's screwdriver
2. Phillips head screwdriver
3. Small common screwdriver
4. X-Acto knife with square chisel type blade (see image in step 12)
5. Flush cutting wire cutters
6. Dremel type tool with side grinding bit
7. A 3/32 drill bit
8. Small (#4) 1/4" long self-tapping screws
9. Hot glue gun





1. Remove the drum cover by prying up on each end.

Note the spring position so that it can be replaced later.

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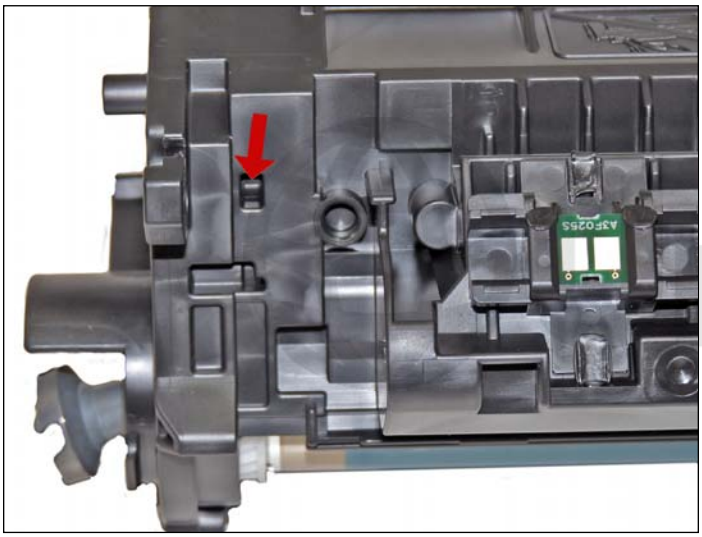
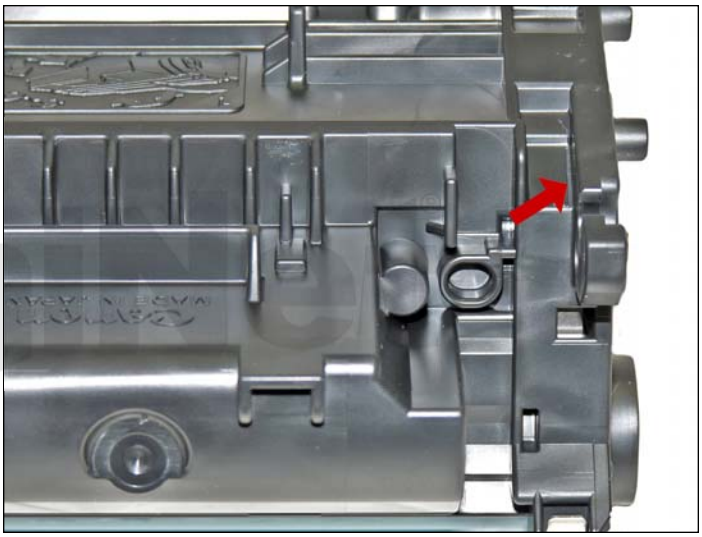
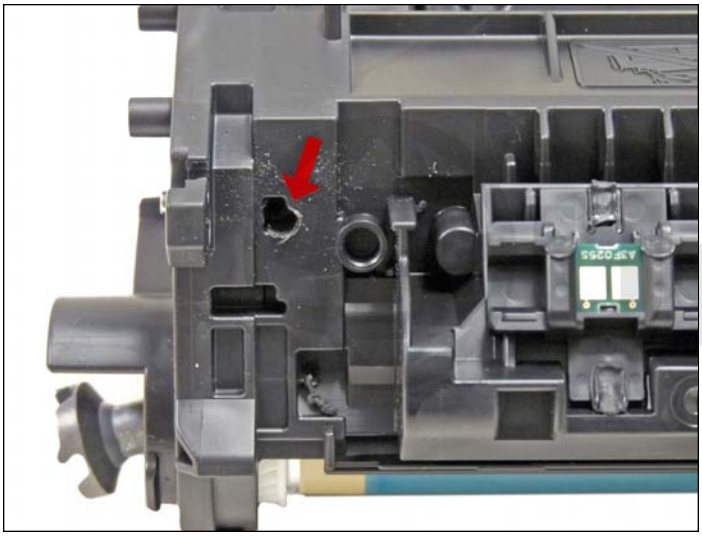
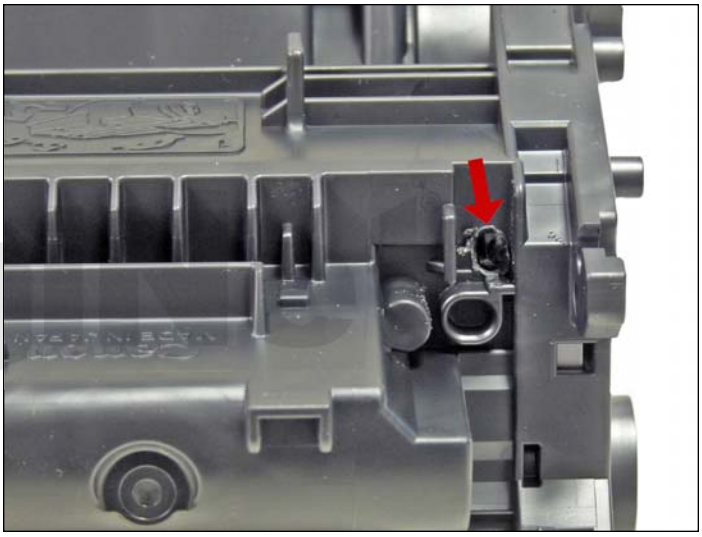




2. Drill a shallow hole on each side of the cartridge as indicated:

Un-cut.





Cut.

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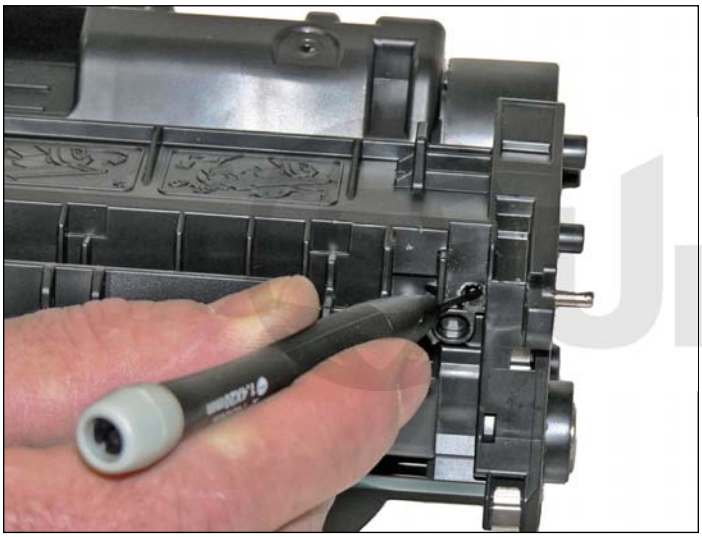
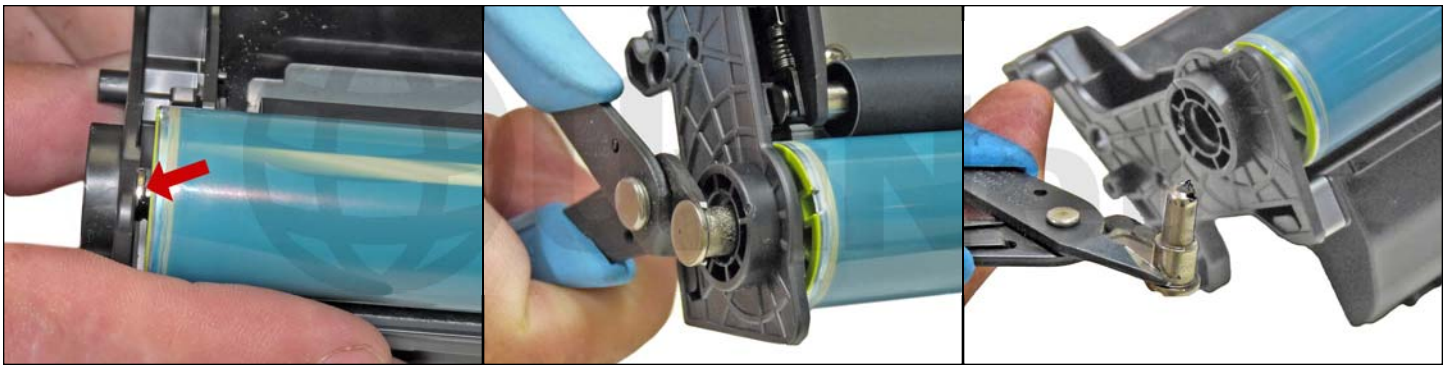


3. Push the pins out with a jeweler's screwdriver. With the hole in this location, by just pushing the screwdriver in, the pins will be pushed out. Remove the pins.

4. Separate the two halves.



5. With a flat head screwdriver, press the drum axle pin out from the inside of the cartridge wall as shown. There is a small shoulder visible that the screwdriver should be pressed against. Make sure not to bend or damage the plastic wall and the plastic is thin and easily damaged. Remove the axle pin from the outside with flush cutting wire cutters.

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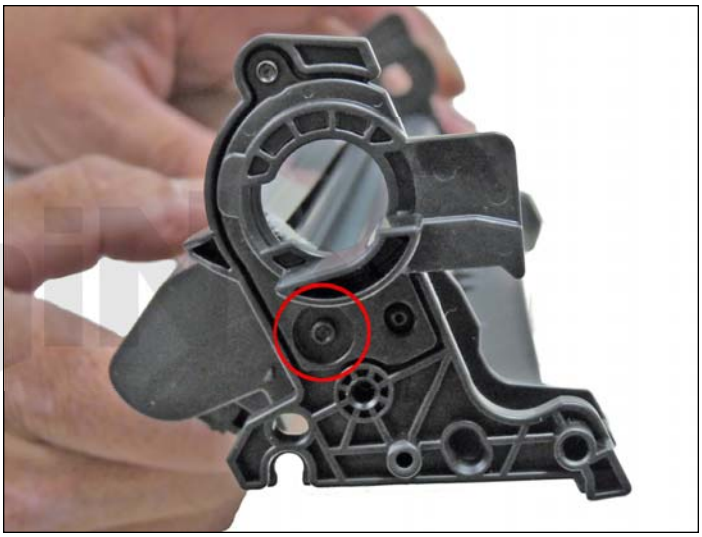
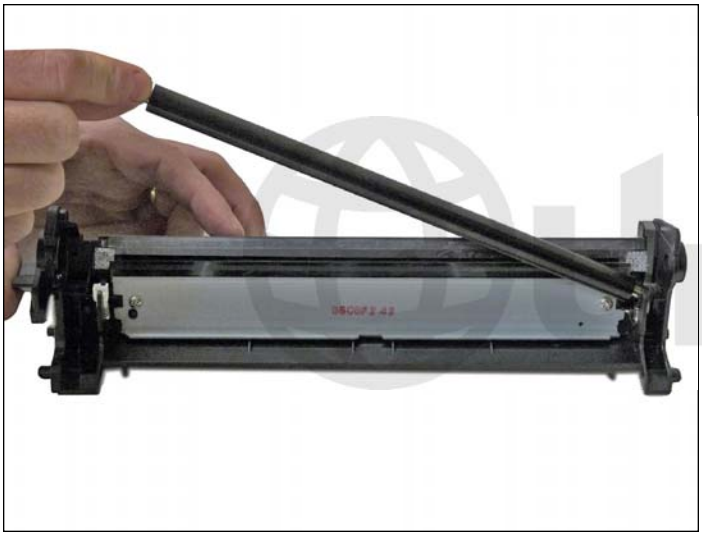
6. Remove the drum.



This is a good time to look at the new drive gear(s). This is a completely new system. New drums and gears are being developed. The drum hub on the opposite side is welded. The weld can be broken or drilled out, but there is a good chance that the hub will either warp if pried off, or will be hard to align if drilled out.



7. Remove the PCR and clean with your standard PCR cleaner.

8. Remove the two screws and the wiper blade.

Clean out the waste toner.

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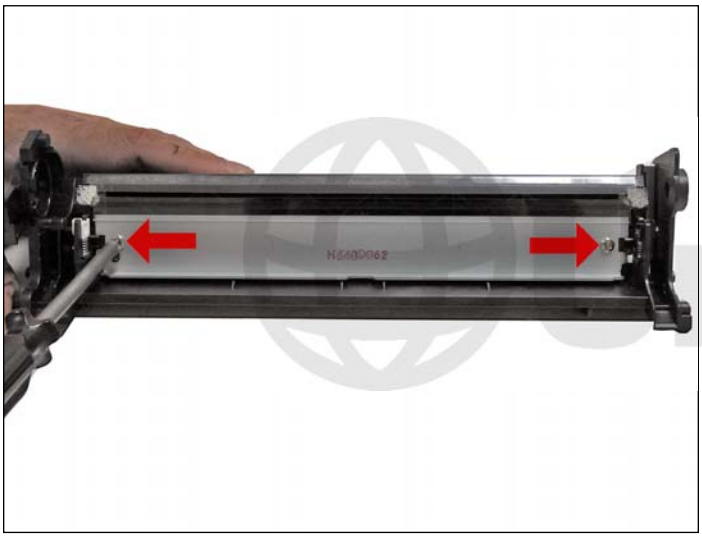
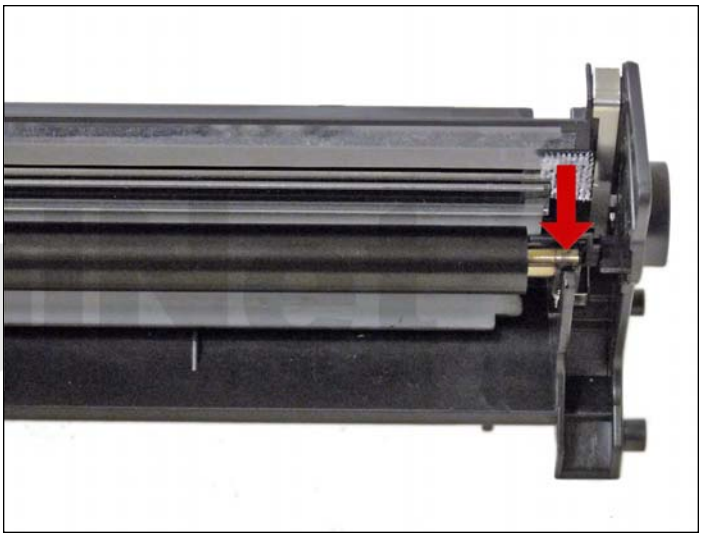
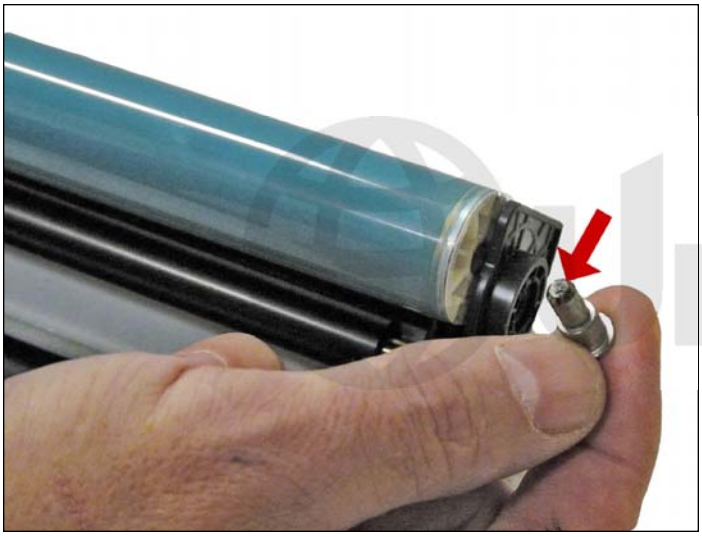


9. Coat the wiper blade with your preferred lubricant.

Install the blade and two screws.



10. Re-install the cleaned PCR. Note that a new OEM PCR has a small amount of conductive grease on the black (contact) side.



11. Re-Install the OPC drum and metal axle pin.

The metal axle pin should have a small amount of conductive grease on the tip.

Remove the old grease and replace before inserting the pin. Make sure the axle pin is fully inserted.

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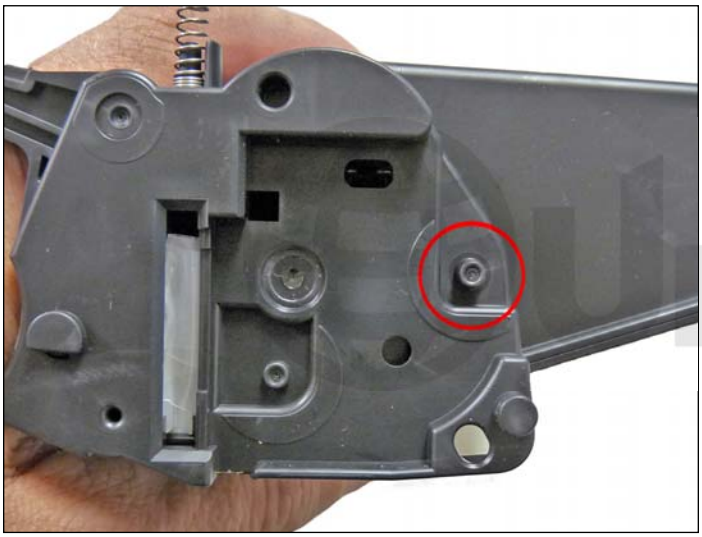
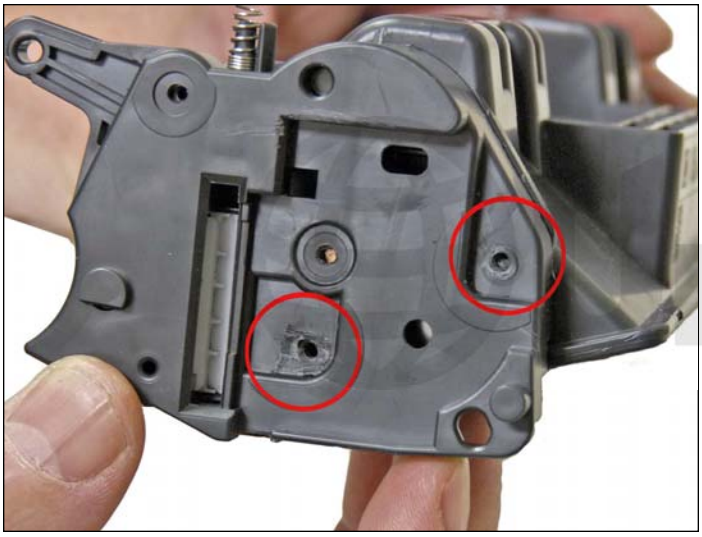


12. Slice the two tabs off each location as shown on the left (seal) end cap. Use a square blade X-Acto knife to slice off the tabs. NOTE: Both the end caps are plastic welded in place. The only way to open them up is to cut the welds and carefully drill them out. We have found the left (non-gear) side is the best side to do this on.



13. Using the 3/32" drill bit, drill out each of the two welds. Be careful to keep the drill straight as you drill in. Use a slow speed and only drill in no more than 1/4".

14. With a flat head screwdriver, work the edge of the blade around the edge of the end cap and gently pry up the end cap. You will hear the remaining parts of the welds break free. The top weld will also break off now. Take your time with this.

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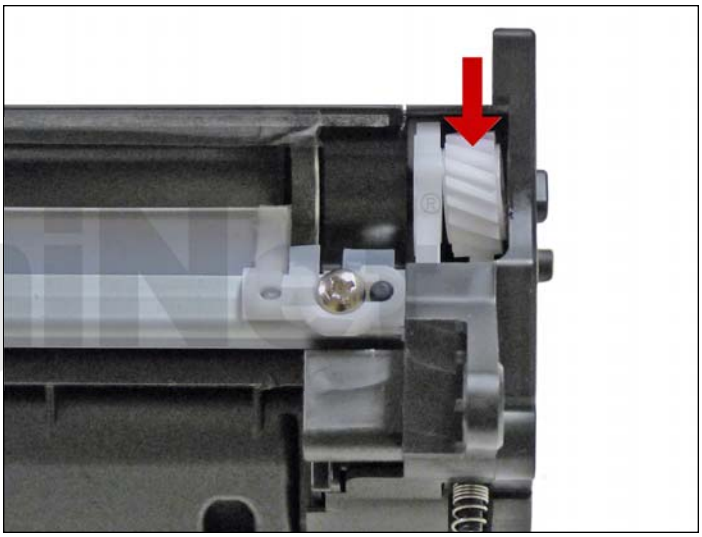
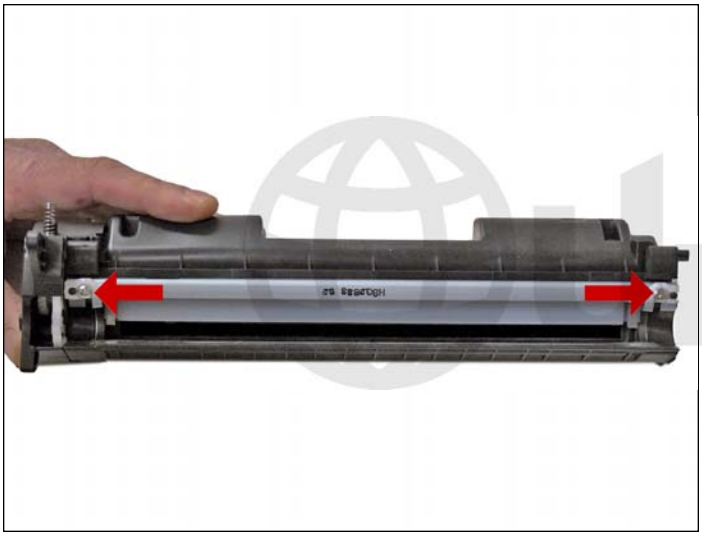
15. Remove the magnetic roller assembly.

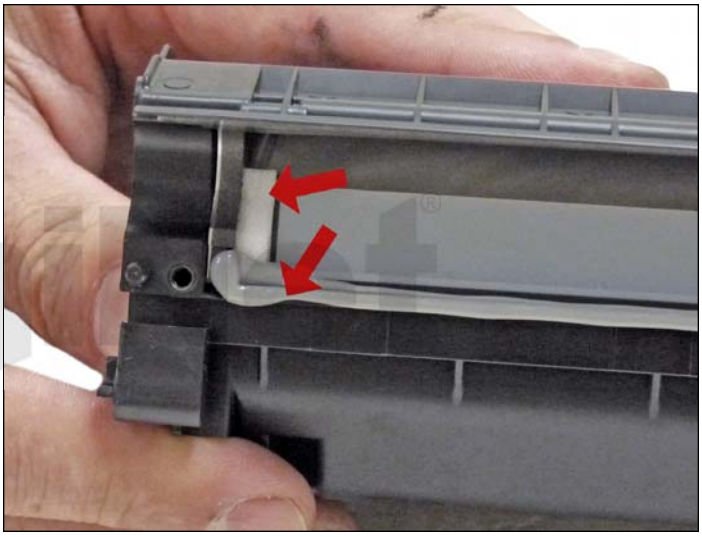


16. Remove the magnetic roller drive gear.

The end cap will keep the bushing in place.



17. Remove the doctor blade and two screws.



18. Clean out any remaining toner from the hopper. Note the doctor blade seal. It is a sticky substance that can be clean with alcohol if toner gets on it.

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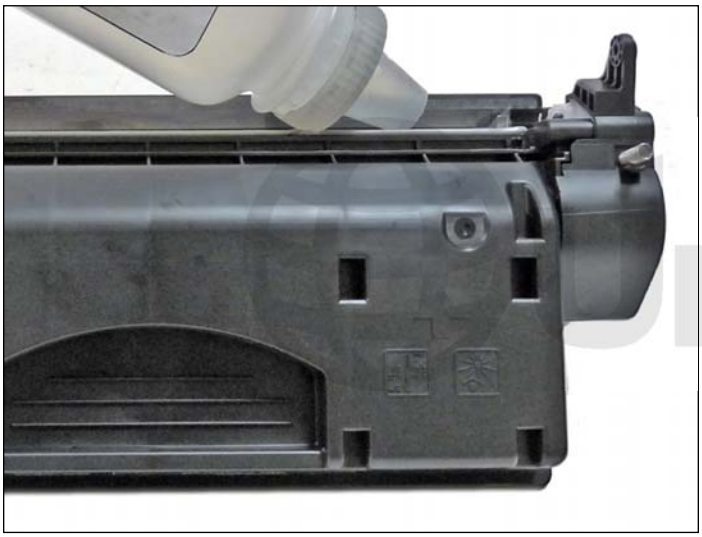

19. If you're not going to use a seal, fill through the magnetic roller opening with new toner for use in Canon imageCLASS D1120. There is no fill plug in these cartridges.

20. If you are going to seal the cartridge, there is a white plastic shelf that needs to be removed. The shelf is held on with double sided tape. It can be gently pried off with a small screwdriver.

21. Install the seal onto the cleaned rails. Make sure the seal tab is set over the non-gear side of the cartridge.

Remove the white toner port seal and insert the seal tab is through the port opening.

Install the white port seal on top of the seal.

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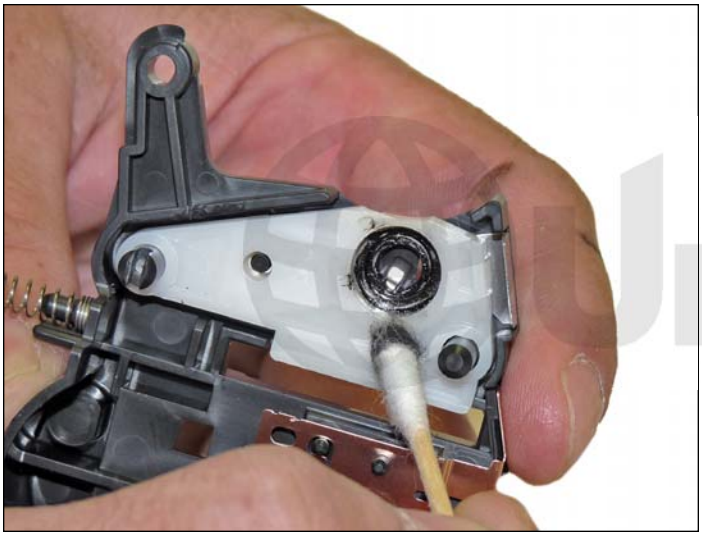
22. Re-install the white plastic shelf. If the adhesive is not working, replace it with a good double sided tape. This shelf helps with the flow of toner in the hopper.

23. Re-install the doctor blade and two screws.



24. Clean the old grease off the contact plate, and replace with new conductive grease.

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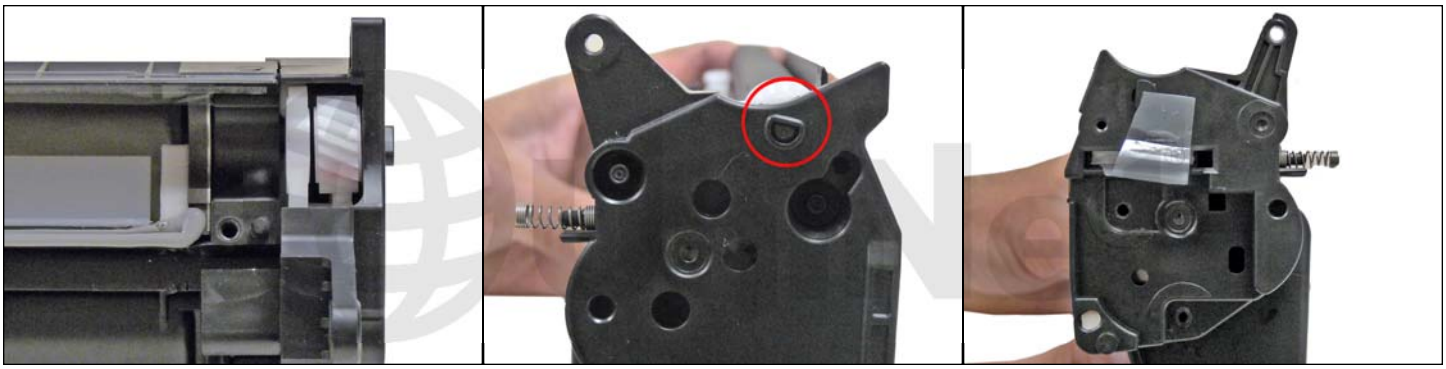
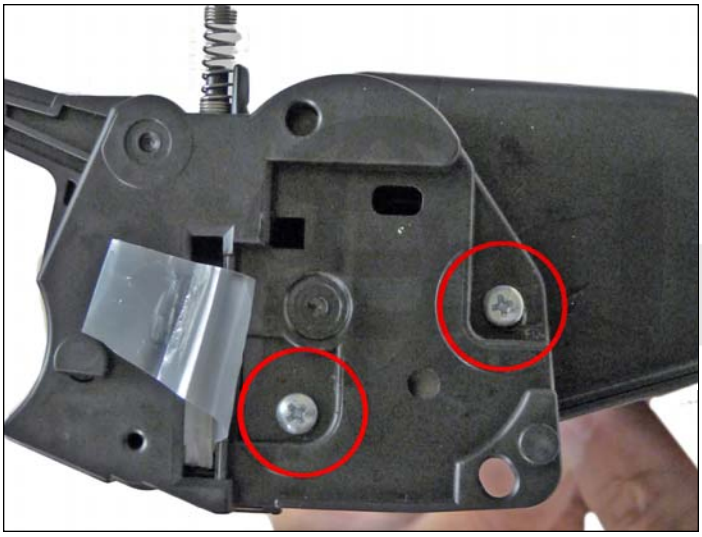


25. Re-assemble the toner hopper section. Place the magnetic roller drive gear in place and install the magnetic roller assembly. Turn the roller until the keyed end fits into the drive gear properly. Install the end cap and align the keyed magnet into the keyed slot on the gear side first. This will help in aligning the opposite end cap.



26. Install two small screws into the holes previously drilled out. In our tests, the two screws will hold the end cap on with no problems.

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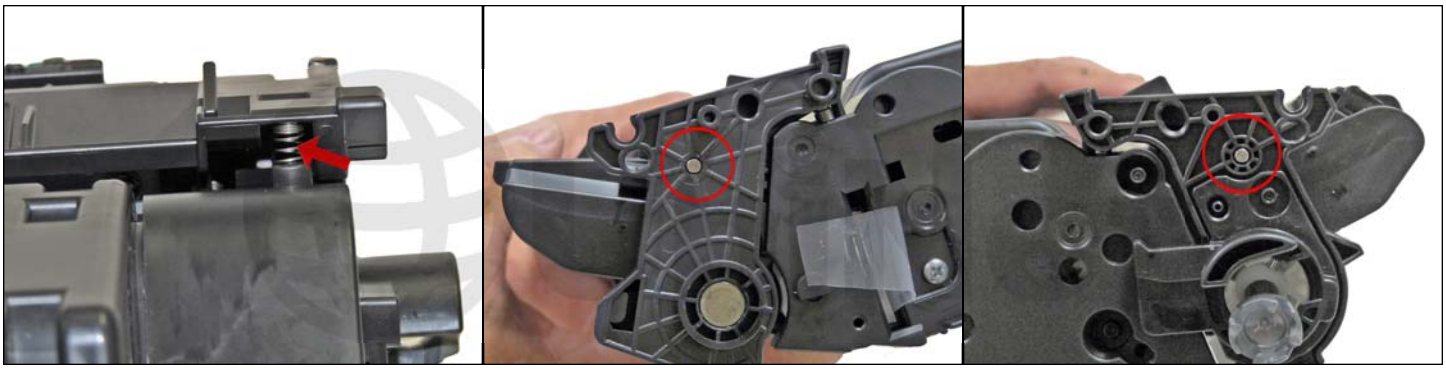
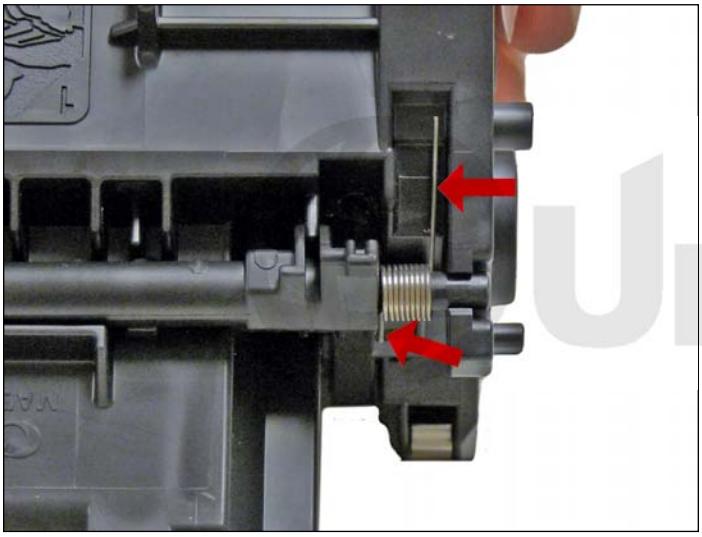
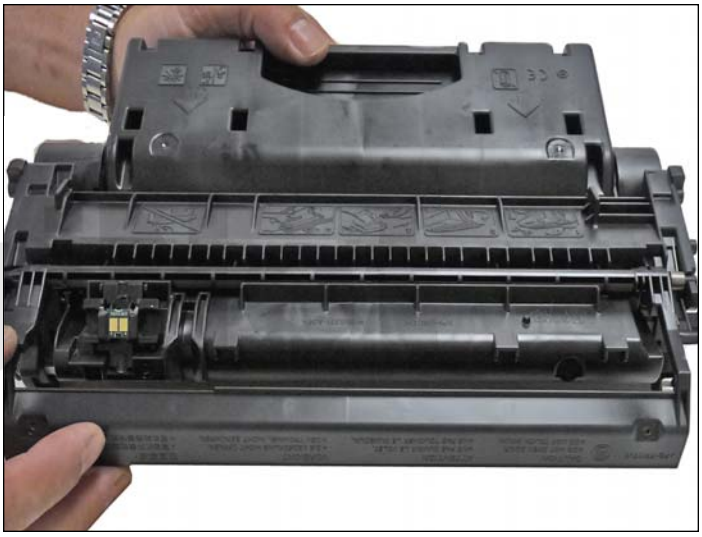


27. Place the two halves together, make sure that the two springs are aligned, and insert the two pins.

Make sure that the pins are slightly pushed in so that they do not interfere with installing the cartridge in the printer.





28. Install the drum cover.

Make sure the spring is situated correctly.

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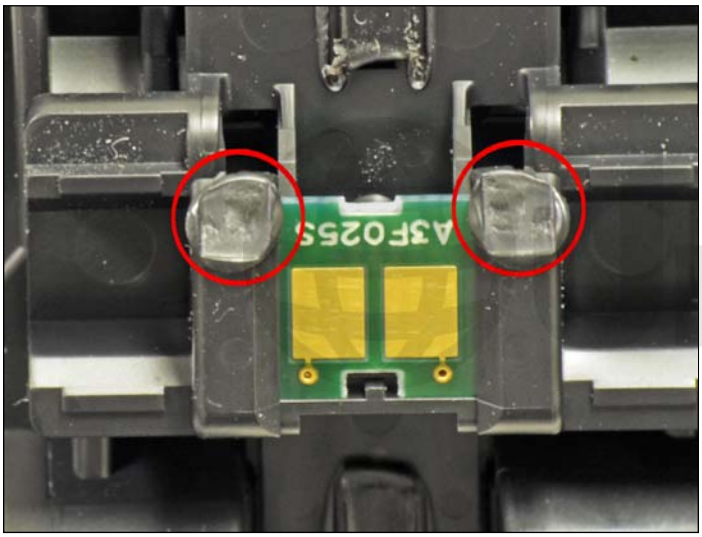

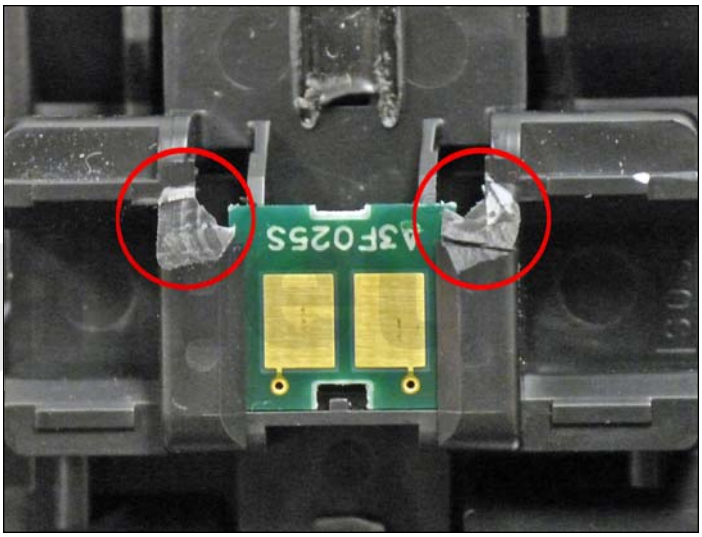

29. To replace the chip, cut the top melted plastics off the chip rails to remove the chip.

Install the new chip. If the chip is loose, place a small dab of glue from a hot glue gun onto each corner.

TROUBLESHOOTING/REPETITIVE DEFECT CHART

OPC drum:	**75 mm**
Lower fuser roller:	**63 mm**
Upper fuser film:	**57 mm**
Registration roller:	**43 mm**
Magnetic roller:	**42 mm**
Transfer roller:	**39 mm**
PCR:	**38 mm**

RUNNING TEST PAGES

These machines are all MFP's and it is best just to make a copy of a suitable test page.

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