

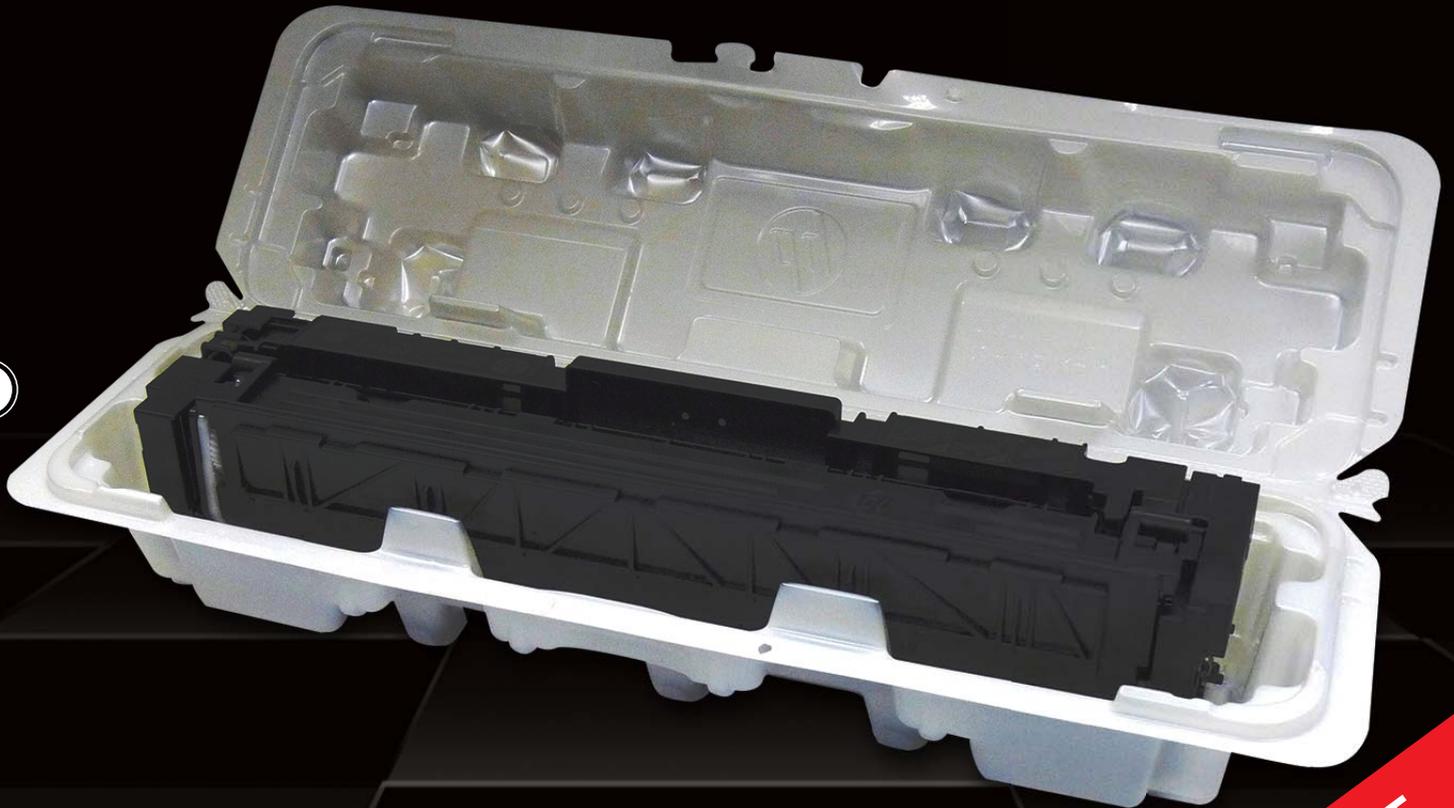
Tech Zone



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REMANUFACTURING THE HP LASERJET PRO M454 W202X 414A SERIES BLACK AND COLOR TONER CARTRIDGE



RT's Cartridge Library

SUPPLEMENT



Mike Josiah

Remanufacturing the HP LaserJet Pro M454 W202X, 414A series Black and Color Toner cartridges

First released in June 2019 the M454 series of color laser printers are based on a 28ppm black & color, 600 Dpi engine.

The first page out is stated at under 11.1 seconds. Standard installed memory for the M254 series is 512MB.

New cartridges do not come with a drum cover. They use a plastic box insert to protect the cartridge. It's a good idea to have your customers save these inserts. See Figure 1 The starter cartridges that ship with the printer are rated for 12000 pages CMYK.

The end caps are plastic welded, and the DB has a left hand threaded screw, but once past the welds are not that difficult to do.

The printers currently* based on the M254 engine are the:

LaserJet Pro M453dn	LaserJet Pro M454dw	LaserJet Pro MFP 479fdw
LaserJet Pro M454dn	LaserJet Pro MFP 479fdw	LaserJet Pro MFP 479fdn

The cartridges used in these machines are:

HP 414A	W2020A Black	2,400 pages	\$84.99 List*
HP 414A	W2021A Cyan	2,100 pages	\$109.99 List*
HP 414A	W2022A Yellow	2,100 pages	\$109.99 List*
HP 414A	W2023A Magenta	2,100 pages	\$109.99 List*
HP 414A	W2020X Black	7,500 pages	\$171.99 List*
HP 414A	W2021X Cyan	6,000 pages	\$234.99 List*
HP 414A	W2022X Yellow	6,000 pages	\$234.99 List*
HP 414A	W2023x Magenta	6,000 pages	\$234.99 List*

* Pricing and printer list current as of November 2019.

Required Tools

- Toner approved vacuum.
- A small screw driver (Common Style)
- A Phillips head screwdriver
- Needle Nose Pliers
- Flat blade (Common) screwdriver
- Square edge razor blade

Required Supplies

- Color toner for use in the HP M454 series cartridges.
- New replacement chip
- New Long Life Drum
- New Wiper Blade
- New Developer Roller (Optional)
- New PCR [Optional]
- New Doctor Blade [Optional]
- Good quality double sided tape 1/8" wide. (3M brand preferred)
- Lint free Cloths
- Conductive grease



1 With the HP top label facing you, remove the spring from the left side of the cartridge.



2 On the same side, using a flat blade screwdriver, pry out the top of the end cap until you feel the weld give way.



3 Slide the screwdriver inside the end cap to the place indicated and gently pry again until the end cap comes free.



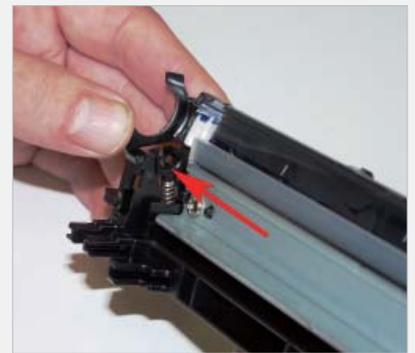
4 Remove the end cap.



step > **5** Remove the drum from the cartridge. Doing this now will make separating the two halves easier.



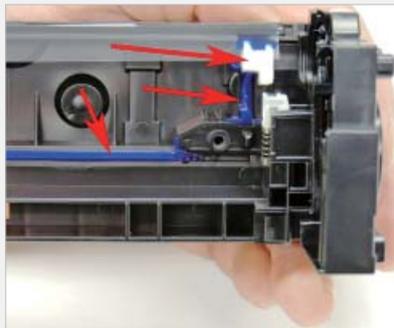
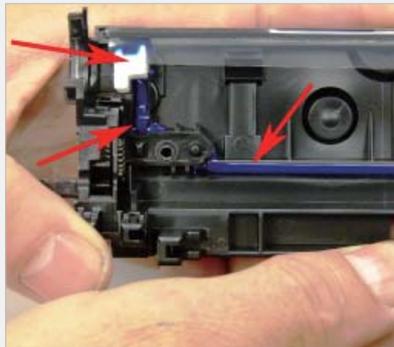
step > **8** Remove the two wiper blade screws and the wiper blade.



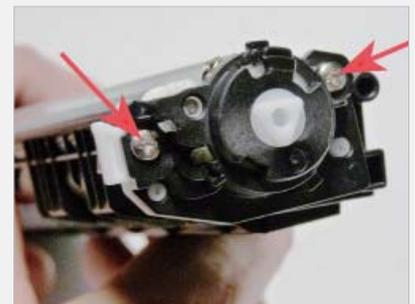
step > **11** Install the cleaned PCR. Make sure to place a small amount of conductive grease on the black PCR holder.



step > **6** Start to separate the two halves. You will see a small black plastic tab on the drum gear Assembly that blocks you from removing the waste chamber. Press down opposite the tab while pulling the end cap out to separate the two halves.



step > **9** Clean out all the waste toner from the chamber. Make sure all the wiper blade seals are clean. Clean the blue seals with a foam swab and 99% Isopropyl alcohol if necessary.



step > **7** Remove the PCR. Clean with your preferred PCR cleaner and place aside in a clean area.



step > **10** Coat the new wiper blade with your preferred lubricant and install. Install the two screws.

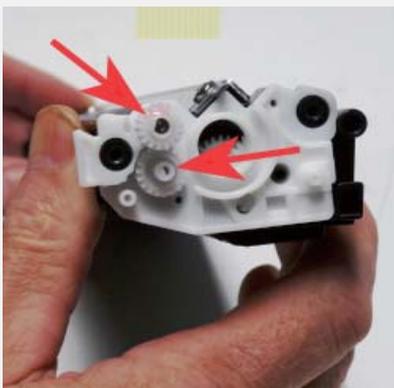
LOOKING FOR STEP-BY-STEP GUIDES FOR CARTRIDGES?



Mike Josiah's popular toner cartridge procedures are available in hardcopy format in some regions, and online to all regions as a library of cartridge models—sponsored by UniNet Imaging: www.uninetimaging.com



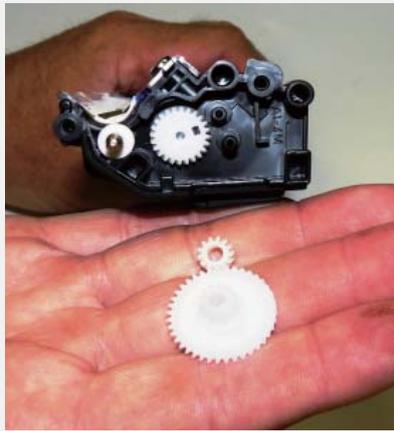
step > **12** On the Supply chamber, remove the two screws from the gear side end cap. Remove the end cap. Be careful of the drum drive gear and bushing. They can come loose.



step > **13** Remove the two gears.



step > **14** Pry off the white inner end cap.



step > **15** Remove the large and small gears as shown.



step > **16** Slide the developer roller over and remove. Be careful not to lose the 2 round bushings or alignment tab.



step > **17** There are two screws holding the doctor blade in place. The left screw is a normal thread screw, the right side uses a left hand thread screw. Be careful not to mix them up. Remove the DB.



step > **18** Vacuum out the remaining toner from the hopper from the slot next to the feed roller. Remove the old seal if present.

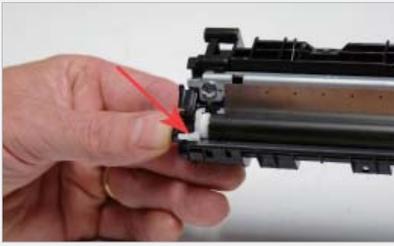


step > **19** At this point you can fill the hopper with toner for use in the HP M254 series of printers.

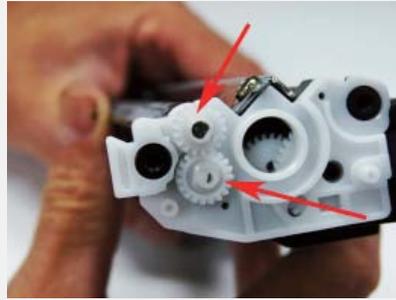


step > **20** Clean the doctor blade seals. Install the doctor blade and two screws. Remember the right side uses the left hand threaded screw! Make sure you have an even gap across the DB edge. They is not an alignment pin for the blade.

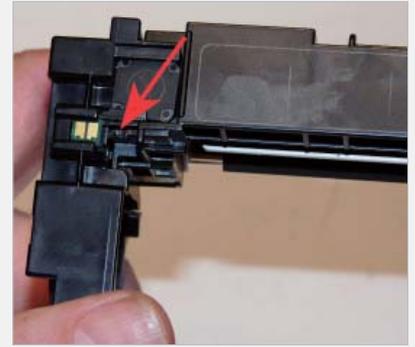




step > **21** Install the developer roller. Make sure both ends have the bushings in place and the left side also has the tab bushing long side up.



step > **24** Install the two gears on the feed and developer roller shafts.



step > **27** On the waste chamber, cut the chip holder with a flat blade in the two places indicated. Remove and replace the chip. Hold the new chip in place with a drop of hot glue or silicon adhesive. Make sure you don't get any on the contacts!



step > **22** Install the small and large gears as shown.



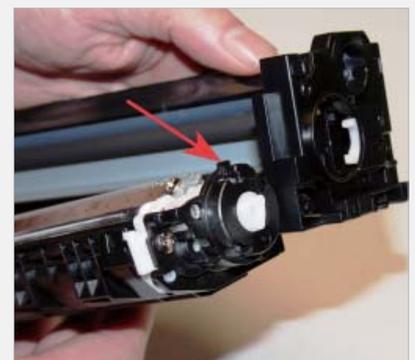
step > **25** Install the drum drive gear and bushing.



step > **22** Install the small and large gears as shown.



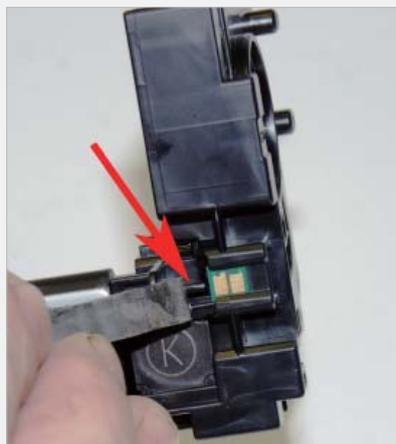
step > **26** Install the end cap and two screws.



step > **28** Place the two halves together. Lift up on the black tab while pulling the end cap out to align them properly.



step > **23** Press the inner end cap in place.



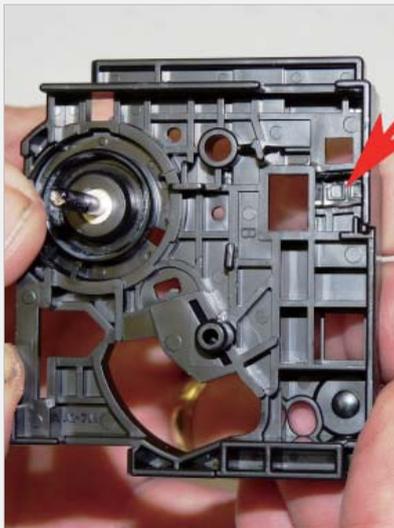
step > **28** Place the two halves together. Lift up on the black tab while pulling the end cap out to align them properly.



29 Coat the drum with your preferred lubricant and install the drum in the waste hopper.



31 Install the spring.



30 Place a small piece of a good double-sided tape on the inside of the end cap. Clean and replace the conductive grease on the drum axle and install the end cap.

For Image troubleshooting the chart below should help identify a potential issue. Measure the distance between defects and refer to the chart.

Repetitive Defect Chart:

Cartridge Station Pitch	67.0mm
ITB	66.7mm
OPC Drum	63.0mm
Fuser Pressure Roller	56.5mm
Fuser Sleeve	56.5mm
Transfer Rollers	51.5mm
Registration Roller	44.0mm
Primary Charge Roller	23.6mm
Developer Roller Sleeve	22.6mm
Output Kicker Rollers	11.0mm



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