

# THE RECYCLER

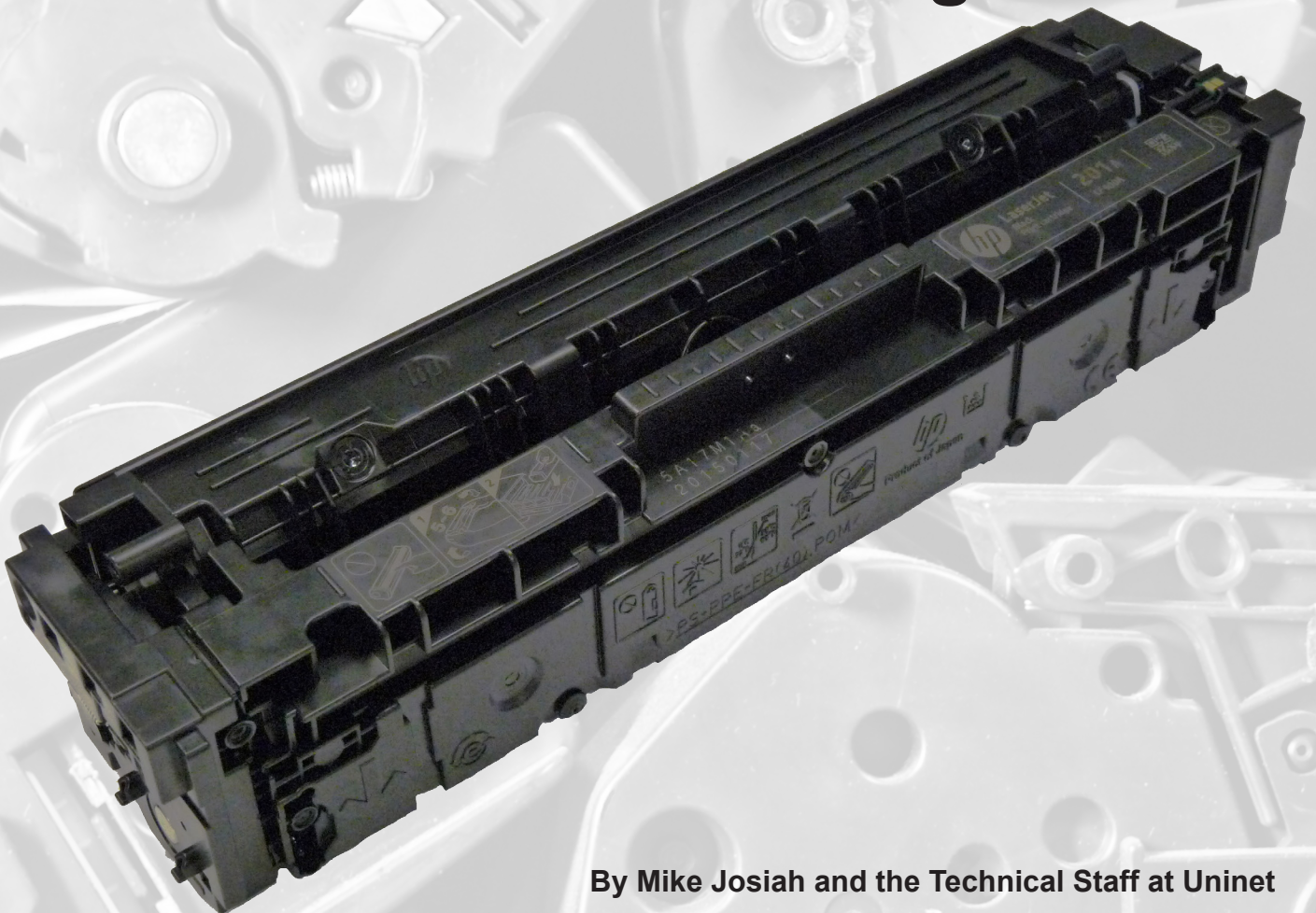
Trade magazine for the toner and inkjet remanufacturing industry ~ making waste work

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MAGAZINE



# Technical Guide

## Remanufacturing the HP LaserJet Pro M252 and MFP 277 (CF400A/X-201A/X series) black and colour toner cartridges



By Mike Josiah and the Technical Staff at Uninet

# Remanufacturing the HP LaserJet Pro M252 and MFP 277 (CF400A/X-201A/X series) black and colour toner cartridges

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First released in July 2015, the Pro M252/277 series of colour laser printers are based on a 19ppm black and colour, 600dpi engine (3,600dpi with RET). The M252 cartridges use a new type of toner that HP calls "ColorSphere 3" and a new type of chip HP calls "JetIntelligence". Per the HP datasheet, the toner gives a higher yield when compared to the HP 131A, and the new chip technology provides anti-fraud technology.

The first page out is stated at under 11.5 seconds. Standard installed memory for the M252n is 128MB, while the M252dw and the M277dw both come standard with 256MB. New cartridges do not come with a drum cover. They use a new type of box insert to protect the cartridge. It's a good idea to have your customers save these inserts (see Figure 1).

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



Figure 1

## The cartridges used in these machines are (HP 201A/X series):

CF400A (Black)	1,500 pages	\$66.99 (€ 58.75) List*
CF401A (Cyan)	1,400 pages	\$78.99 (€69.28) List*
CF402A (Magenta)	1,400 pages	\$78.99 (€69.28) List*
CF403A (Yellow)	1,400 pages	\$78.99 (€69.28) List*

CF400X (Black HY)	2,800 pages	\$89.99 (€78.93) List *
CF401X (Cyan HY)	2,300 pages	\$99.99 (€87.70) List *
CF402X (Magenta HY)	2,300 pages	\$99.99 (€87.70) List *
CF403X (Yellow HY)	2,300 pages	\$99.99 (€87.70) List *

\* Pricing current as of September 2015. With the new machines shipping with 1,500 page black but 700 page colour starter cartridges, there is sure to be a fast growing demand for remanufactured cartridges!

## The printers currently based on the M252 engine are the:

HP LaserJet Pro M252n

HP LaserJet Pro M252dw

HP LaserJet Pro MFP M277dw

### REQUIRED TOOLS

- Toner-approved vacuum
- A small common screw driver
- A Phillips head screwdriver
- Needle nose pliers
- Flat blade screw driver

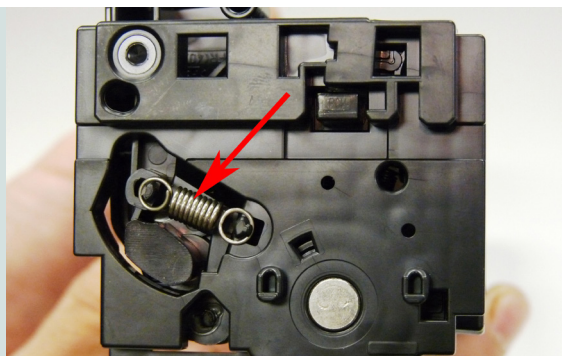
### REQUIRED SUPPLIES

- Colour toner for use in the HP M252/277 series cartridges (check for standard or high-yield)
- New replacement chip (check standard or high-yield)
- New long-life drum
- New wiper blade
- New PCR [optional]
- New doctor blade [optional]
- Good quality double-sided tape 1/8" wide (3M brand preferred)
- Lint-free cloths
- Conductive grease



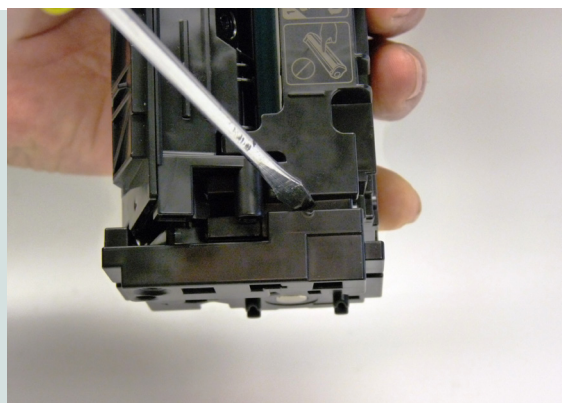
## STEP ONE

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



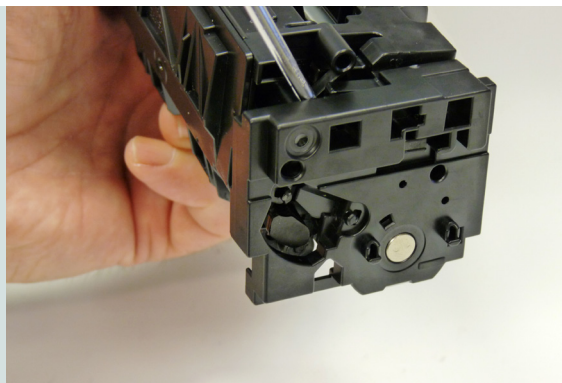
## STEP TWO

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



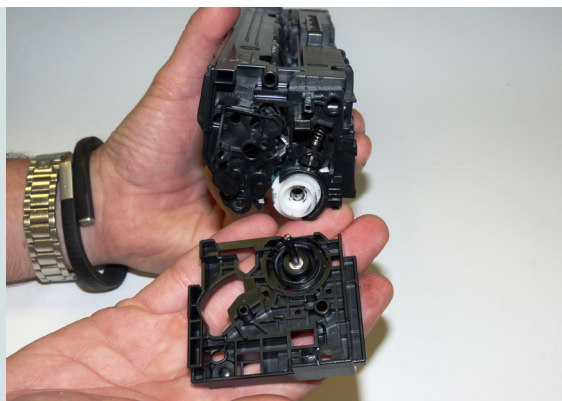
## STEP THREE

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



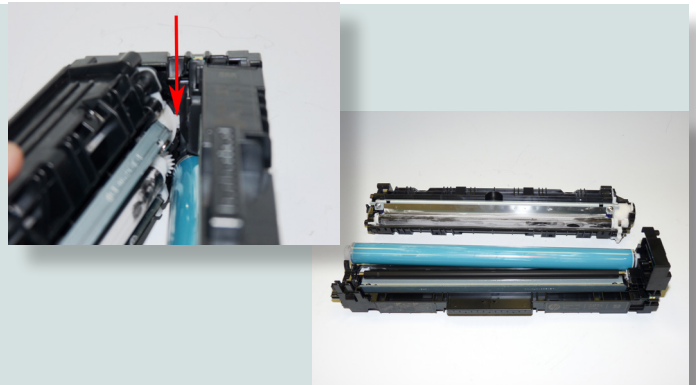
## STEP FOUR

Remove the end cap.



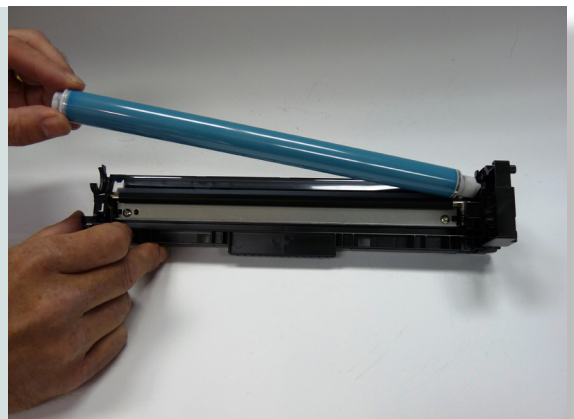
## STEP FIVE

Start to separate the two halves. You will see a small white plastic tab on the drum gear assembly that blocks you from removing the waste chamber. Lift up on that tab while pulling the end cap out to separate the two halves.



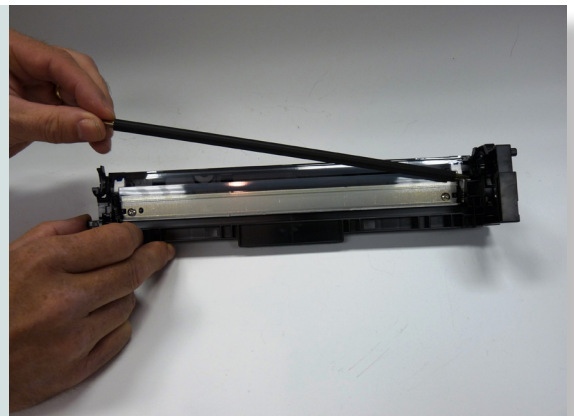
## STEP SIX

Remove the drum from the waste chamber.



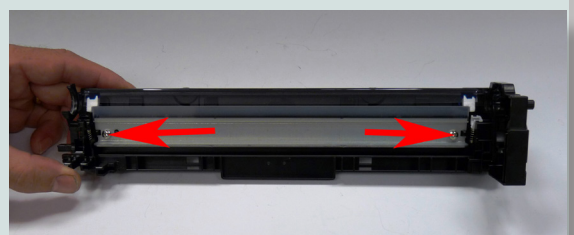
## STEP SEVEN

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



## STEP EIGHT

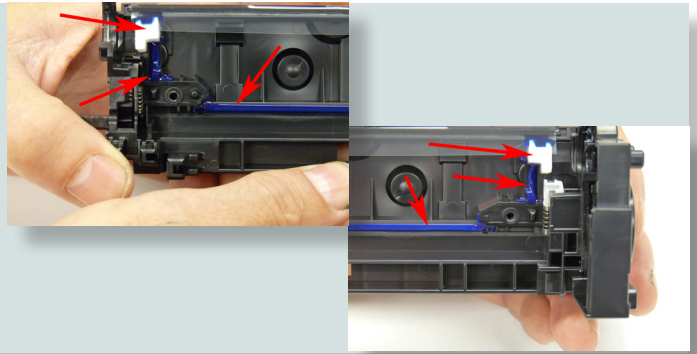
Remove the two wiper blade screws and the wiper blade.





## STEP NINE

Clean out all the waste toner from the chamber. Make sure all the wiper blade seals are clean.



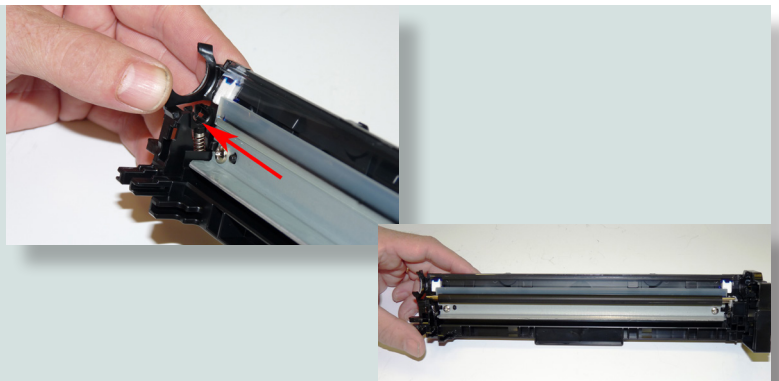
## STEP TEN

Coat the new wiper blade with your preferred lubricant and install. Install the two screws.



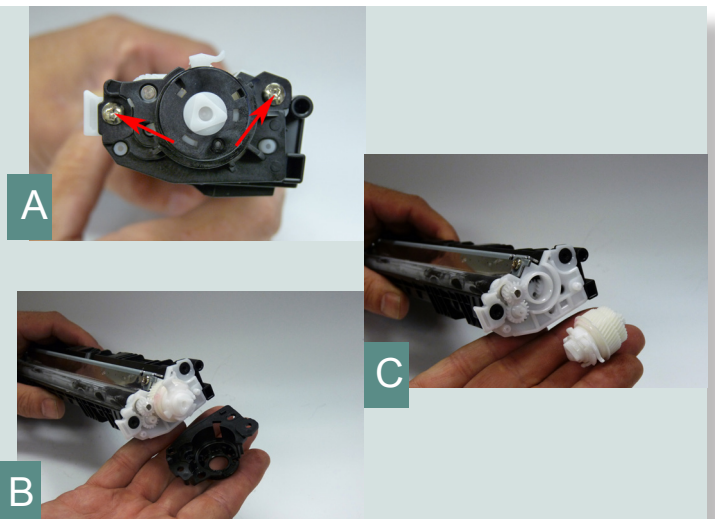
## STEP ELEVEN

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



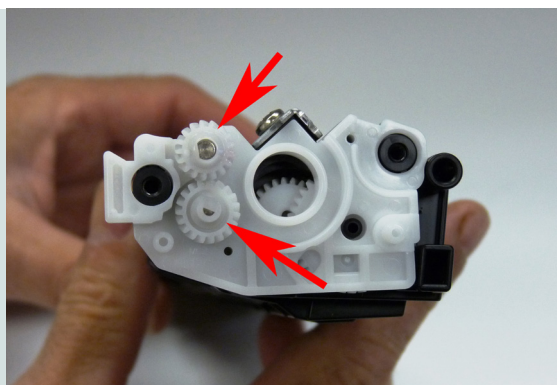
## STEP TWELVE

On the supply chamber, remove the two screws from the gear side end cap. Remove the end cap. Be careful of the spring loaded drum drive gear, it will come loose (see Figures A, B and C).



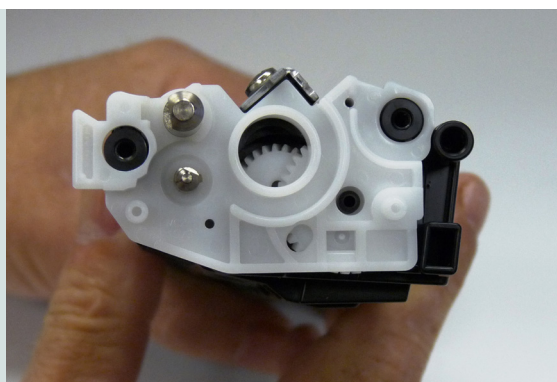
## STEP THIRTEEN

Remove the two gears.



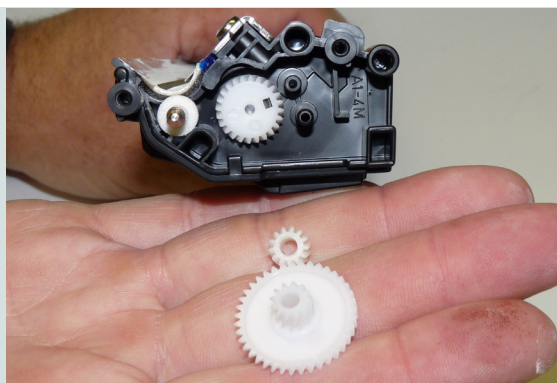
## STEP FOURTEEN

Pry off the white inner end cap.



## STEP FIFTEEN

Remove the large and small gears as shown.



## STEP SIXTEEN

Slide the developer roller over and remove. Be careful not to lose the two round bushings or alignment tab (see Figures A and B).



A



B

## STEP SEVENTEEN

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.



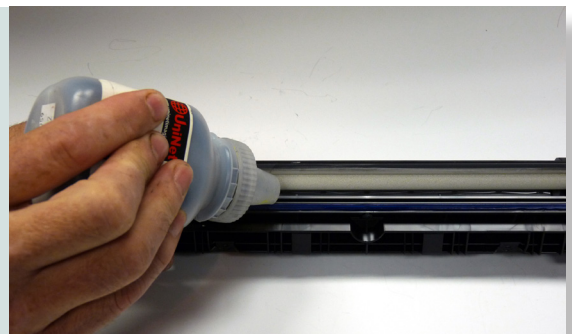
## STEP EIGHTEEN

Vacuum out the remaining toner from the hopper from the slot next to the feed roller.



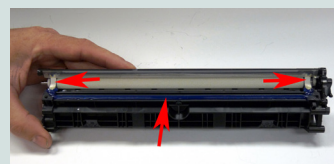
## STEP NINETEEN

At this point while tight, you can fill the hopper with toner for use in the HP M252 series of printers.



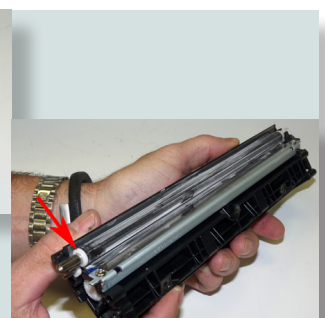
## STEP TWENTY

Clean the doctor blade foam seals. Install the doctor blade and two screws. Remember the right side uses the left hand threaded screw.



## STEP TWENTY-ONE

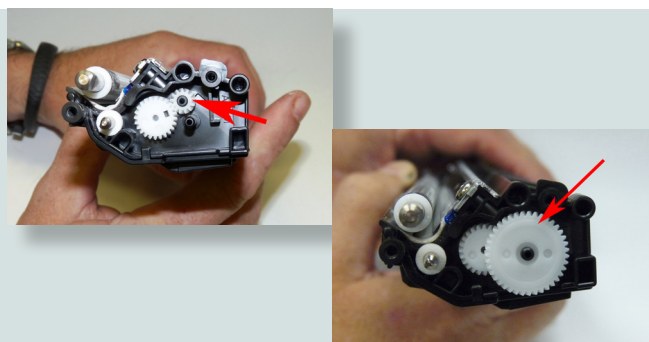
Install the developer roller. Make sure both ends have the bushings in place and the left side also has the tab bushing long side up.





## STEP TWENTY-TWO

Install the small and large gears as shown.



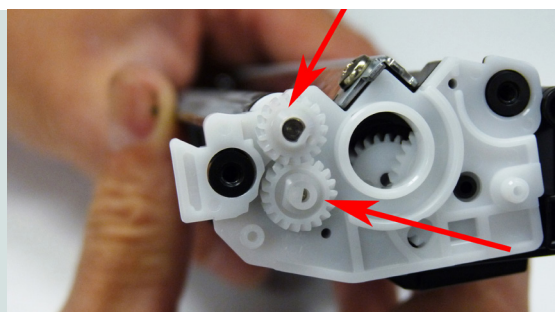
## STEP TWENTY-THREE

Press the inner end cap in place.



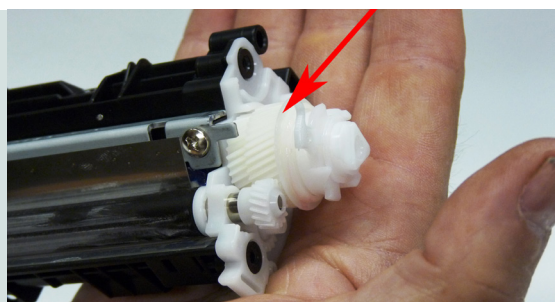
## STEP TWENTY-FOUR

Install the two gears on the feed and developer roller shafts.



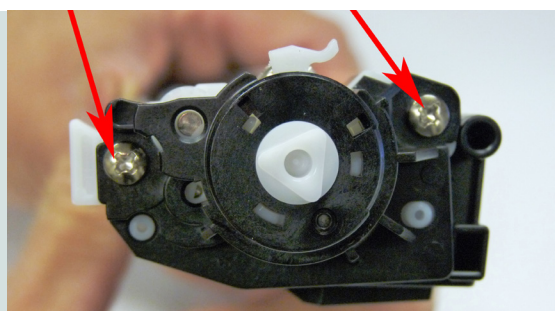
## STEP TWENTY-FIVE

Install the drum drive gear.



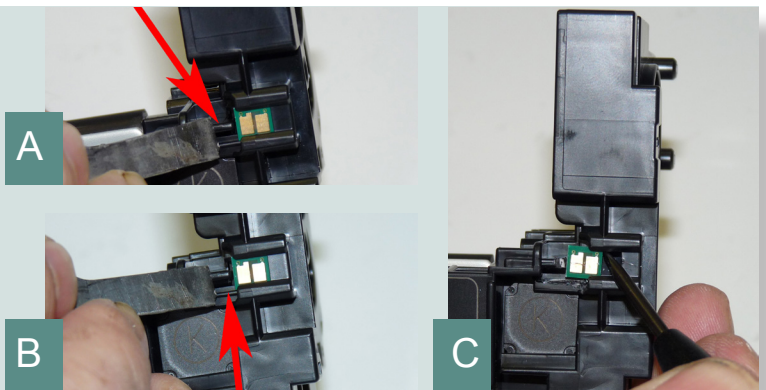
## STEP TWENTY-SIX

Install the end cap and two screws.



## STEP TWENTY-SEVEN

Cut the chip holder with a flat blade in the two places indicated. Remove and replace the chip.



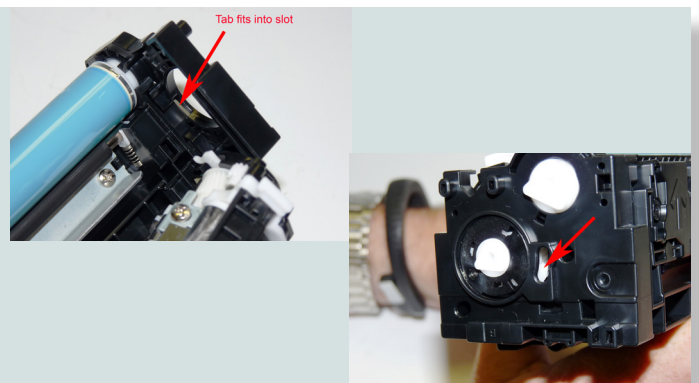
## STEP TWENTY-EIGHT

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



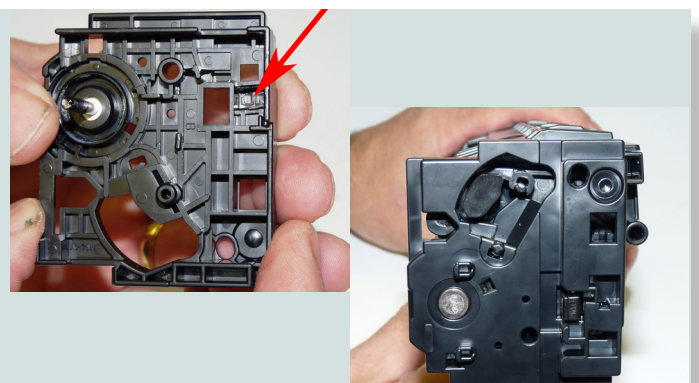
## STEP TWENTY-NINE

Place the two halves together. Lift up on the small white drum gear tab while pulling the end cap out to align them properly.



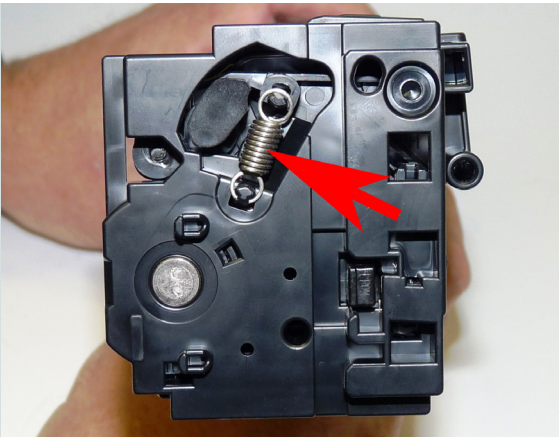
## STEP THIRTY

Place a small piece of a good double-sided tape on the inside of the end cap. Install the end cap.



STEP THIRTY-ONE

Install the spring.



TAKING TEST PRINTS

Supplies status page

- 1. Press OK to open the menus
- 2. Scroll until "REPORTS" appears on the display
- 3. Press OK
- 4. Scroll until "Print Supplies Status Page" appears on the display
- 5. Press OK

REPETITIVE DEFECT CHART

Cartridge station pitch	67mm
ITB	66.7mm
OPC drum	63mm
Fuser pressure roller	56.5mm
Fuser sleeve	56.5mm
Transfer rollers	51.5mm
Registration roller	44mm
Primary charge roller	23.6mm
Developer roller sleeve	22.6mm
Output kicker rollers	11mm

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