

INNOVATIVE IDEAS. DEPENDABLE SOLUTIONS. TOTAL RELIABILITY.



THE CANON 105 TONER CARTRIDGE



DOC# 0380

By Mike Josiah and the technical staff at Summit Technologies
– a Division of Uninet Imaging.



Remanufacturing the Canon 105 Toner Cartridge



The Canon 105 Toner Cartridge

First released in September 2006, the Canon imageClass MF7200 series of printers are based on a 1200dpi, 20ppm Canon engine. As with most Canon cartridges they do NOT use a chip. The 105 cartridge is unique in its design, as of June 2007, there is not a comparable HP cartridge. Testing is ongoing to determine what parts are needed/available to remanufacture them. The cartridge for the MF 7200 series is the 105 (0265B001AA) and is rated for 10,000 pages. Figure A shows a potential location for a chip and possibly a different plastic configuration for other manufacturers. However no chips are used on the 105 version and we have not seen any other manufactures use this cartridge yet. Figure B shows that cartridge as removed from the box. Note the many shipping lock and tape seals. This cartridge even comes with a bag of desiccant attached!

Canon imageClass MF7200 series of printers are a true multi function machine in that they are a duplex copier, laser printer, color network scanner, super g3 fax, and are network capable. These machines also print on up to 11" x 17" paper, have a touch screen interface, come standard with 256Mb of memory, have a 50 sheet ADF, and have a first page out at less than 7.9 seconds.

This cartridge has a list price of \$388.00 but so far has a street price of about \$205.00. (Pricing as of June 2007).

So far the only machine based on the MF7200 engine is the:
imageClass MF-7280

Printing test pages, cartridge troubleshooting as well as some simple machine troubleshooting is covered at the end of the article.

The theory for these cartridges is the same as most of the other HP/Canon monochrome cartridges so we will not go into it here.

Required Tools

- Toner approved vacuum.
- A small Common screwdriver
- A Phillips head screwdriver
- Needle nose pliers
- Flush cutting Wire Cutters

Required Supplies

- Toner 525g MF7200 type (Preliminary weight)
- New OPC Drum (Under Investigation)
- New Wiper Blade (Under Investigation)
- New PCR [Optional] (Under Investigation)
- New mag. Roller [Optional] (Under Investigation)
- New Dr. Blade [Optional] (Under Investigation)
- 99% Isopropyl Alcohol
- Magnetic Roller Cleaner
- Drum Lubricant
- Conductive Grease
- White Lithium grease

1) Note on each end of the cartridge there are small silver pins. To separate the two halves these pins must be removed. There is no need to cut through the top of the cartridges to remove the pins. With a Dremmel tool or wire cutters, cut away the plastic from around the pins and remove the pins. See **Figures 1 & 2**



Figure 1

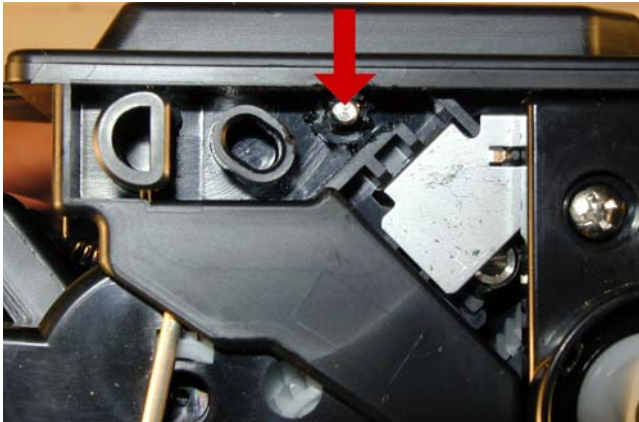


Figure 2

2) Separate the two halves See **Figure 3**



Figure 3

3) On the large gear side, remove the drum alignment plate and screw. See **Figure 4**

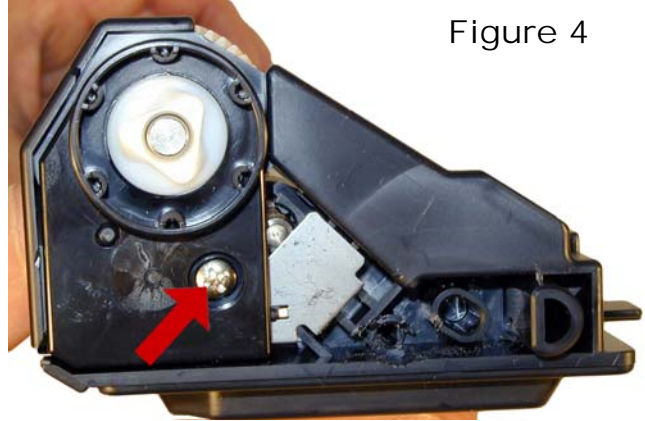


Figure 4

4) On the small gear side, remove the metal axle pin with wire cutters. The pin comes out easily, there are already 2 notches in the plastic that allow the wire cutters access. See **Figure 5**



Figure 5

5) Remove the Photoconductive Drum, and place aside. See **Figure 6**



Figure 6

6) Remove the Primary Charge Roller (PCR), by prying it out of the clips on either end. Clean the PCR with your preferred cleaner and place the aside. See **Figure 7**



Figure 7

7) Remove the white PCR holder by carefully prying it off the cartridge. This holder must be removed to allow the wiper blade to be removed. See **Figure 8**

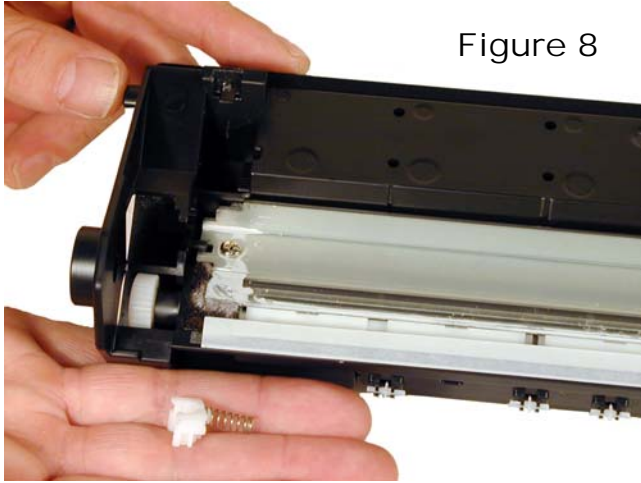


Figure 8

8) Remove the wiper blade and 2 screws. See **Figure 9**

Figure 9



NOTE: Be very careful not to damage or distort the thin Mylar Recovery Blade next to the wiper blade. If this blade is bent or damaged in any way, it should be replaced.

9) Clean out any remaining waste toner. Make sure the foam seals under the wiper blade are clean and not damaged. See **Figure 10**



Figure 10

10) Lightly coat the new blade with your preferred lubricant. Install the Wiper Blade and 2 screws into the cartridge. See **Figure 11**



Figure 11

11) Install the white PCR holder and spring. Clean both of the PCR holders, and place a small amount of conductive grease on the black side, install the PCR. See **Figures 12 & 13**

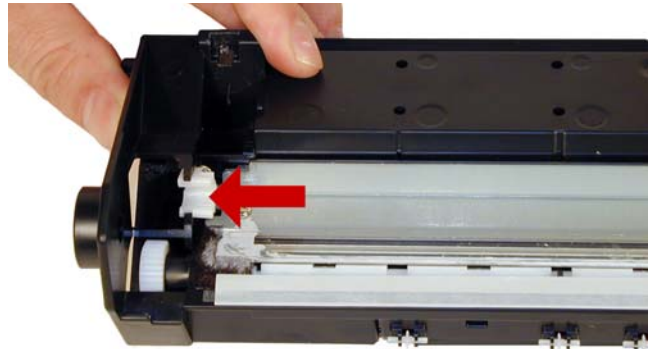


Figure 12



Figure 13

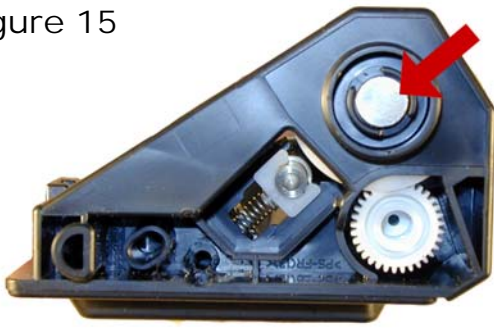
12) Coat the drum with your preferred lubricant. Install the drum. See **Figure 14**



Figure 14

13) Replace the metal drum axle pin, and install on the cartridge. See **Figure 15**

Figure 15



14) Install the plastic drum alignment plate and screw. See **Figure 16**

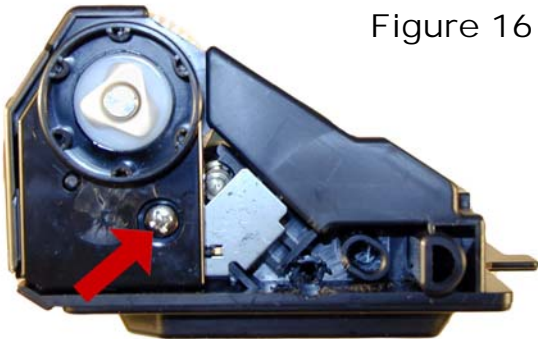


Figure 16

15) Place the waste chamber aside.

16) Remove the drum cover by prying up the metal bar on each side of the toner hopper. Pry off the spring loaded arm. Be careful not to lose the spring! See **Figures 17 & 18**

Figure 17

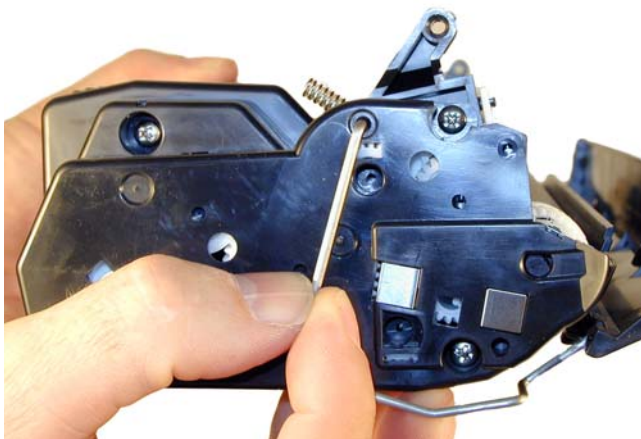
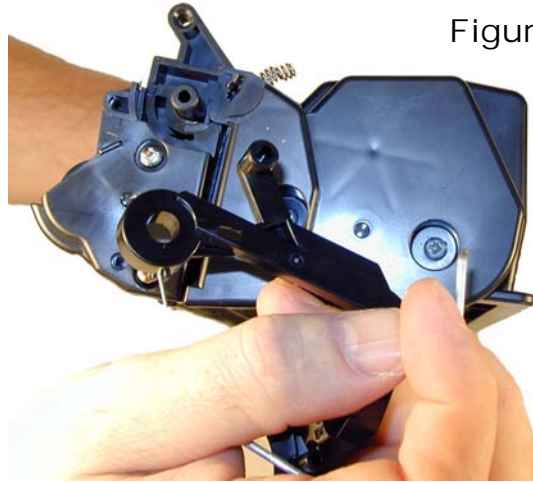


Figure 18



17) Take the supply section, on the plastic end cap that is held on with plastic rivets, using a common screwdriver, snap the rivets off. Remove the end cap. See **Figures 19 & 20**

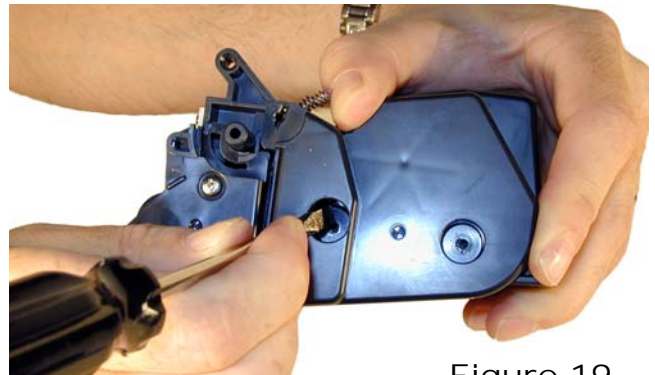


Figure 19

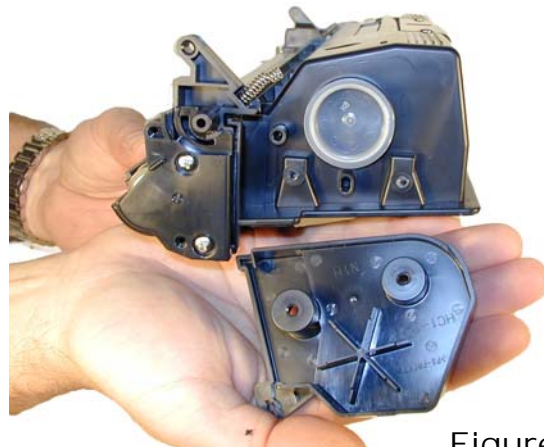


Figure 20

18) Remove the three screws on the large gear side end cap. Remove the end cap. Not that most of the gear train will come with it. The gears will not fall off. See **Figures 21 & 22**

Figure 21

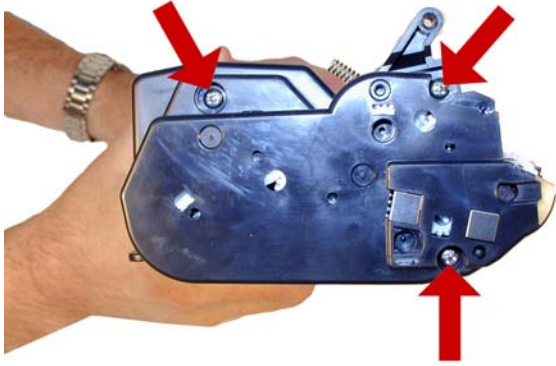
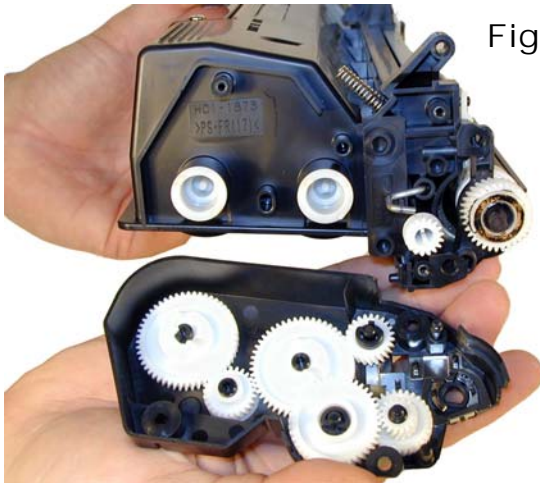


Figure 22



19) Remove the 2 screws from the left side (Non-Gear side) small end cap. See **Figure 23**

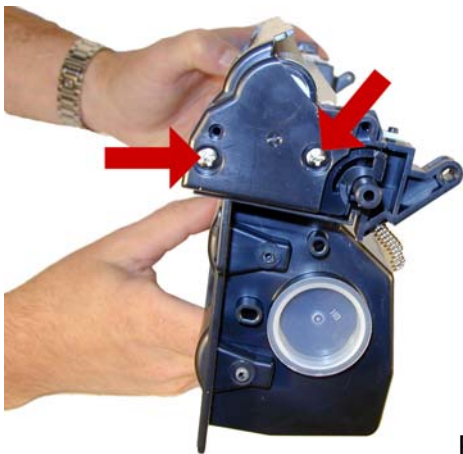


Figure 23

20) Remove the magnetic roller assembly from the cartridge. See **Figure 24**



Figure 24

21) Remove the mag. roller drive gear and copper contact plate so they do not get lost. See **Figure 25**

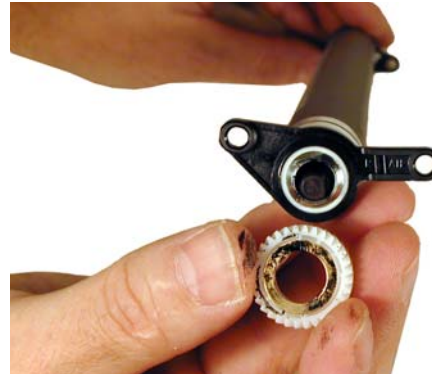


Figure 25

22) Remove the 2 screws and doctor blade. Pry the bar up being very careful not to break the alignment pins. Note the screws used here are of a darker color and are longer than other screws in this cartridge. See **Figures 26 & 27**

Figure 26



Figure 27

23) Clean out any remaining toner. Be very careful not to lose the clear Doctor Blade shims! See **Figure 28**

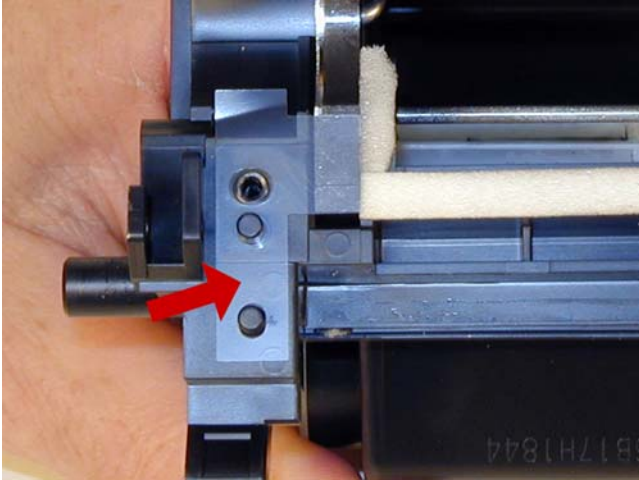


Figure 28

24) If a seal is available, install it now.

25) Make sure the doctor blade seals are clean. Install the doctor blade and 2 screws. (Be sure to use the darker colored screws). See **Figures 29 & 30**



Figure 29



Figure 30

26) Clean the mag roller contact plate you removed from the drive gear. See **Figure 31**



Figure 31

27) Clean the mag roller sleeve with a dedicated mag roller cleaner.

28) Install the Mag. Drive gear and copper contact plate on to the mag roller assy. Make sure the contact fits tight! See **Figure 32**



Figure 32

29) Install the mag roller assembly. Set the bearings so they fit into their respective slots. Replace the conductive grease on the contact plate. See **Figures 33 & 34**



Figure 33

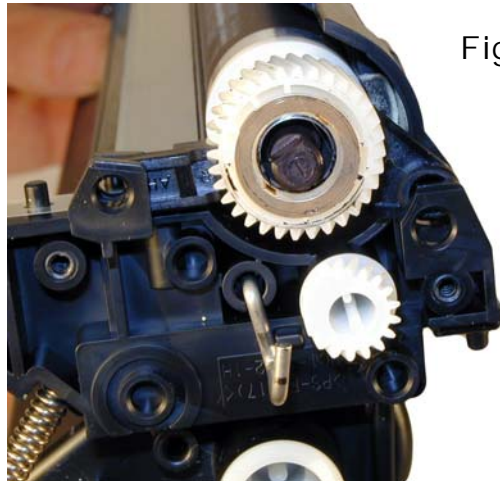


Figure 34

30) Clean the contacts on the gear end cap, replace the conductive grease. See **Figure 35**

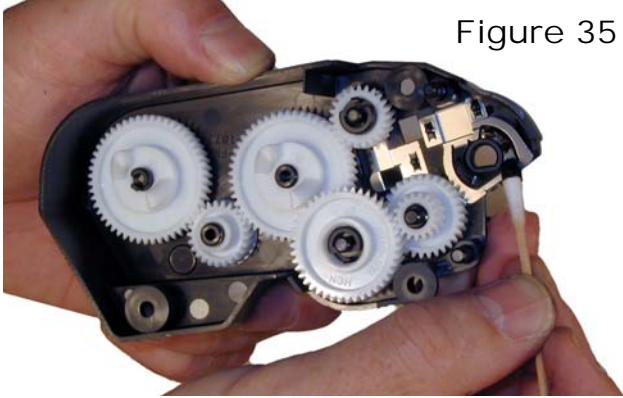


Figure 35

33) Fill the toner hopper with 525g (Preliminary amount) of Canon 105 toner. Replace the fill plug. See **Figure 38**



Figure 38

31) Install the gear end cap and 3 screws. If the end cap does not fit, the stationary magnet needs to be turned so it fits properly. See **Figure 36**

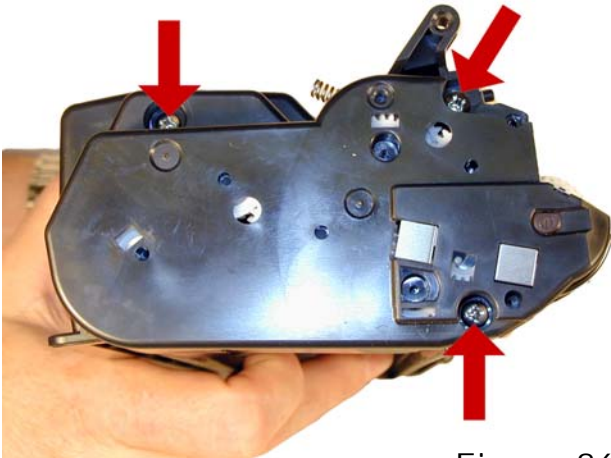


Figure 36

34) On the remaining end cap, while holding it in place, drill 2 small shallow holes into where the plastic pins were. Install 2 screws to hold the end cap in place. See **Figures 39 & 40**



Figure 39

32) Install the small end cap and 2 screws. See **Figure 37**

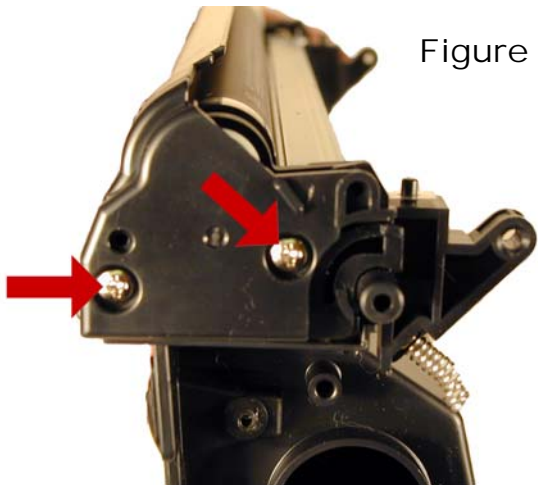


Figure 37

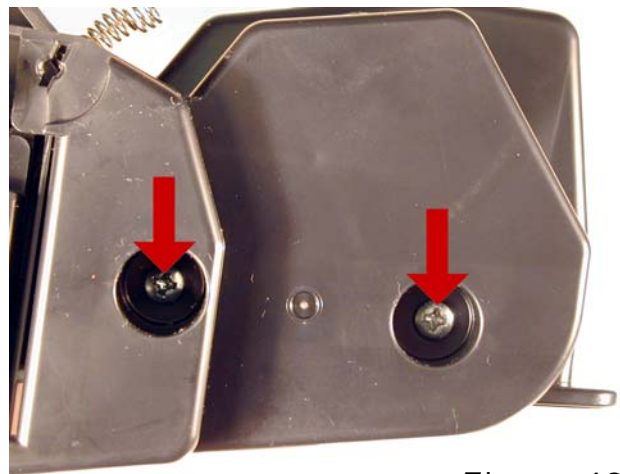


Figure 40

35) Set the spring on the drum cover arm as shown. Install each end of the metal bar into its proper holes. Snap the arm into place. Make sure the spring loaded arm is set right. See **Figures 41, 42 & 43**



Figure 41

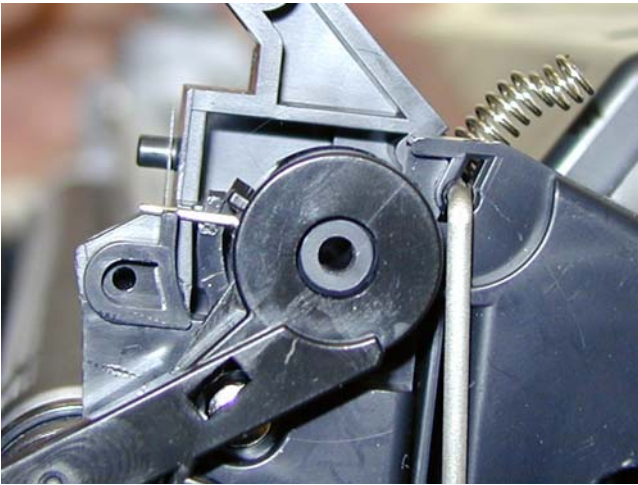


Figure 42

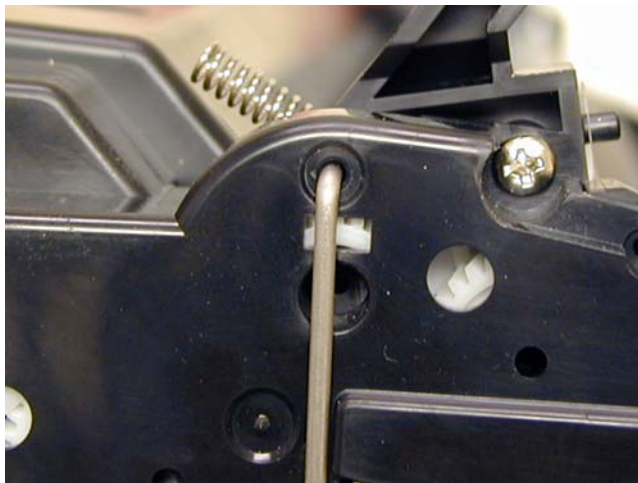


Figure 43

36) Place the 2 halves together. Make sure the springs are set, and install the 2 pins. See **Figures 44 & 45**

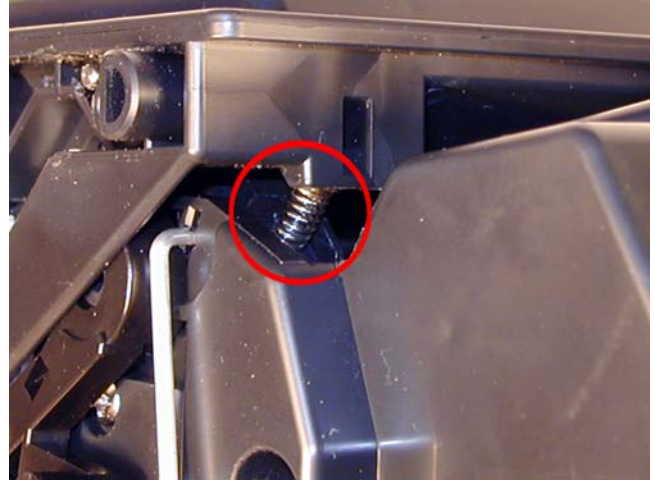


Figure 44

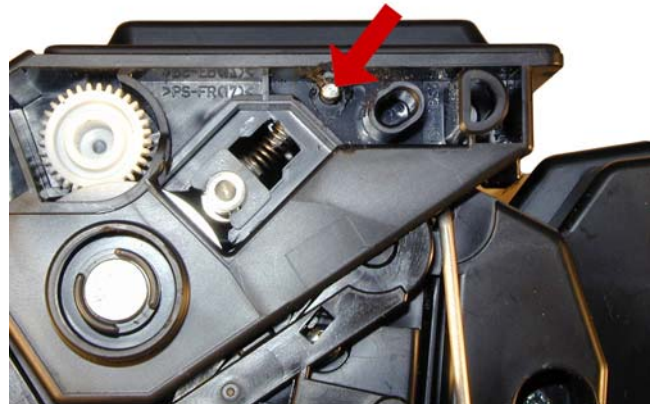


Figure 45

Printing Test Prints

As this is a copier, the simply way is to just take a good test sheet and make a copy.

Repetitive Defect Chart

95mm Drum
63mm Magnetic roller
45mm PCR

Printer Troubleshooting

Most of the error messages are text messages and are fairly specific. There are however a few that are number only. We are listing some of the more common ones here:

001 paper jam
009 no paper
037 memory full

Changing the Density

Press "ADDITIONAL FUNCTIONS", then "ADJUSTMENT/CLEANING"

Press the Up or down arrow until "SPECIAL MODE M" appears on the display.

Press "SPECIAL MODE M"

Select "Normal", "LOW", or "HIGH".

The mode is set.

Press "DONE" repeatedly until the BASIC FEATURES screen appears.

