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# Samsung® ML 2150/2550, Xerox® Phaser® 3450 and Tally® T9220 Remanufacturing Instructions



## Reference Info

The following report contains preliminary information on the Samsung® ML2150 printer and cartridge. In order to keep you informed of important market developments, additional information and product availability will be posted on our website as it becomes available.

One of the first office printers to have wireless networking built in is Samsung's ML2152W mono laser. No cables are required, the wireless antenna receives print jobs from any computer with an 802.11b adaptor, directly or via a wireless hub.

## Use of Compressed Air

As of April 28, 1971, the Occupational Safety & Health Administration (OSHA) Standard, 29 CFR 1910.242 paragraphs a & b for general industry requires effective chip guarding and personal protective equipment (PPE) when using compressed air. When cleaning residual toner particles from cartridges using a compressed air system, you must use air nozzles meeting OSHA requirements. Air nozzles that regulate air pressure to a maximum of 30 psi comply with this standard. Refer to the OSHA publication for any updates or changes that have occurred since the date noted above.

The Samsung® ML2100 series of printers are designed for high volume paper handling in the small office. The ML2100 series offer features such as standard automatic duplexing, multiple interfaces, print speeds up to 21ppm and a first time out of 12 seconds.

Although rich in features and impressive in speed, print testing revealed that all three printers handled text fine. With high resolution images, signs of vertical lines and imperfections were present even when using print image optimization and OEM cartridges.

All three printers use the same cartridges and all ship with 4,000-page starter cartridges. Replacement cartridges are OEM rated at 8,000 pages.

The Samsung® ML 2550 was introduced in November of 2003. The ML 2550 has a 266MHz processor, with a first page out of less than 12 seconds. The ML 2550 prints 25 pages per minute and 100K per month. The OEM page yield for the ML 2550 is 10K.

## Use of Isopropyl Alcohol

For best results, we recommend using ONLY 91-99% for cleaning as directed in these instructions. 91% isopropyl alcohol is available at most major drug stores; 99% isopropyl alcohol is available through distributors of chemical products. Follow the alcohol manufacturer's safety instructions.

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[www.scc-inc.com](http://www.scc-inc.com)

## Tools and Supplies You Will Need

### For Basic Remanufacturing:

- 91-99% Isopropyl Alcohol .....(See cover)
- Compressed Air for Cleaning .....(See cover)
- Phillips Screwdriver .....
- Needlenose Pliers .....
- Lint-Free Swab .....(LFSWAB)
- Conductive Cartridge Lubricant .....(CONCLUBE )
- Cartridge Lubricant .....(CLUBE)
- Lint-Free Cleaning Cloth .....(LFCLOTH)
- Air Gun .....(AIRGUNSET)(AIRGUNSET-PU)
- Samsung® ML2150/2550 Doctor Blade Sealing Foams  
.....(SAM2550DBSFM)
- Samsung® ML2150/2550 Doctor Blade Endfoams  
.....(SAM2550DBEFM)
- Samsung® ML2150/2550 Sealing Channel Endfoams  
.....(SAM2550SCEFM)
- Samsung® ML2150/2550 Sealing Channel Rail Foams  
.....(SAM2550SCRFM)

### Printer Information

Printer Name .....	Samsung® ML 2150/2550	Xerox® Phaser® 3450B
Printer Intro Price .....	\$399/\$735	\$549
Date of Printer Introduction.....	04-03/11-03	9-03
First Page Out (seconds).....	12/<12	12
Paper Input Tray(sheets) .....	600/600	600
Memory .....	16MB/144MB-32MB/160MB	32MB/160MB
Processor.....	166MHz/266MHz	266MHz

### Engine Information

Engine.....	Samsung® ML 2150/2550	Xerox® Phaser® 3450B
Print Speed (pages per minute) .....	21/25	25
Duty Cycle (pages per month).....	100K/100K	100K
Print Resolution (dpi) .....	600-600/ 1200-1200	1200-1200

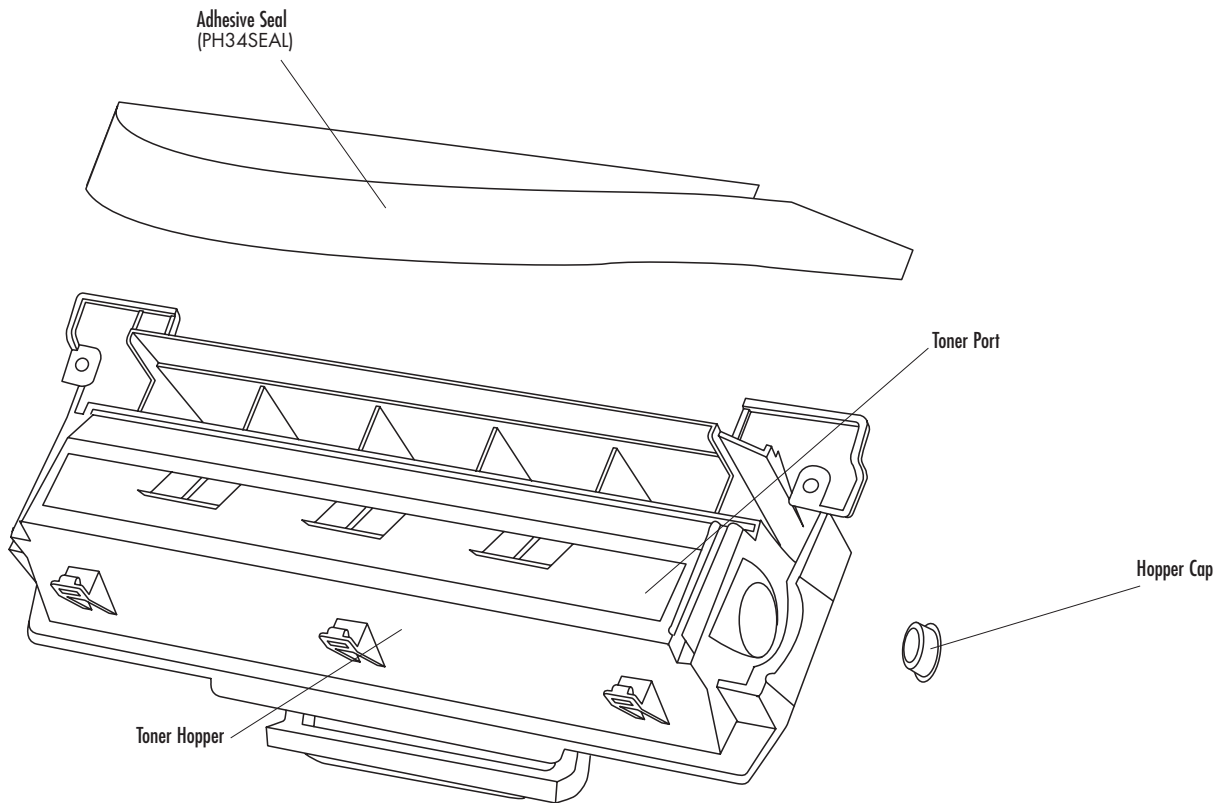
### Cartridge Information

Cartridge Part Number (OEM) .....	ML-2150D8/ML-2550DA	106R00687
Cartridge List Price .....	\$158/\$153	\$130(Strd) \$177(HY)
OEM Rated Page Yield .....	8K/10K	5K(Strd) 10K (HY)

\*Prices as of December 2001

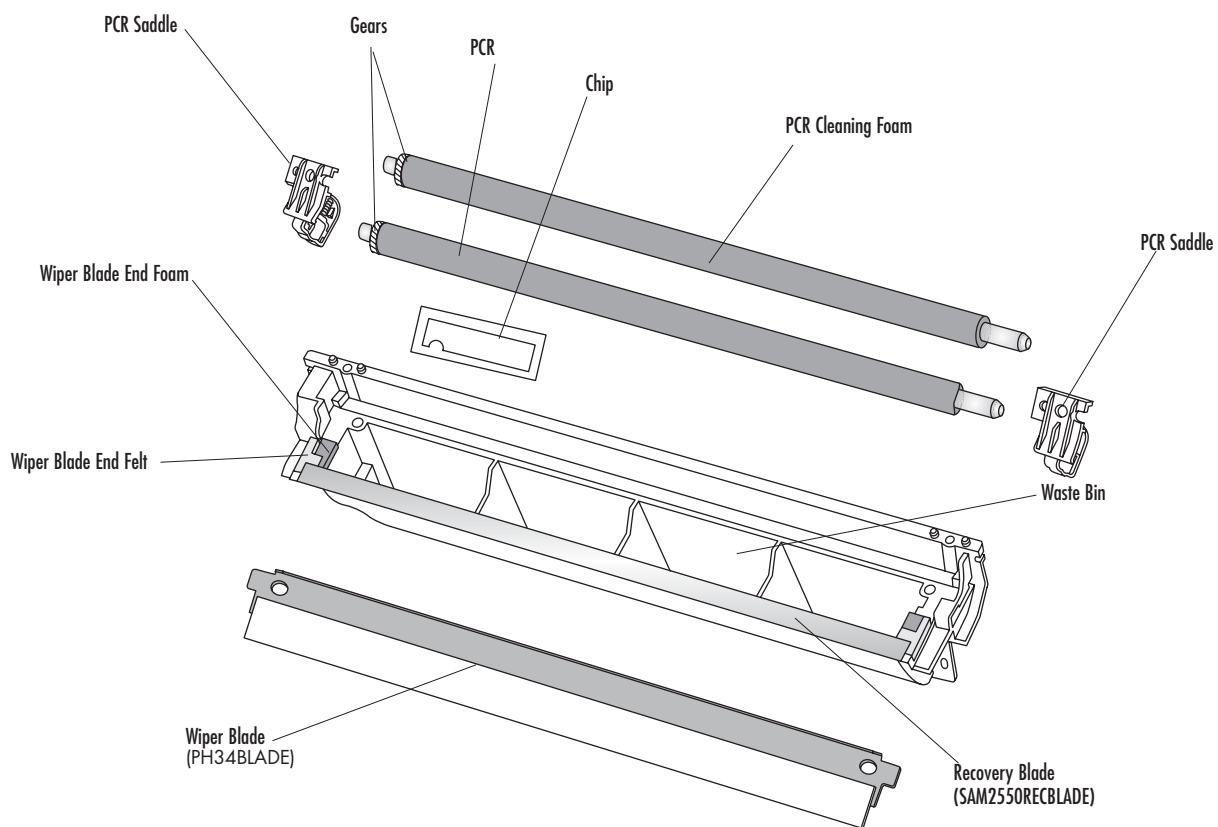
# SAMSUNG® ML2150/2550

## TONER HOPPER UNIT



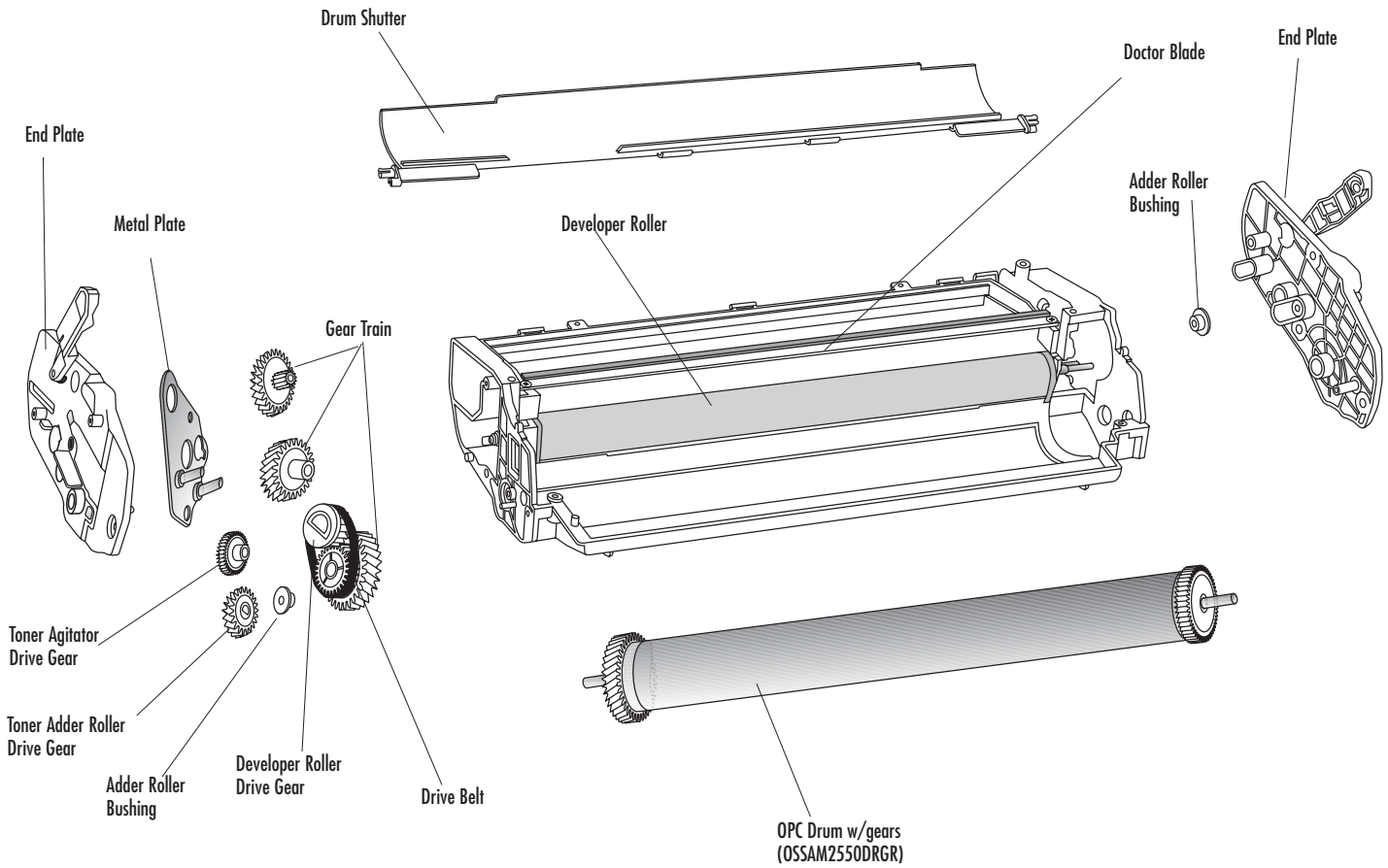
# SAMSUNG® ML2150/2550

## WASTE BIN UNIT



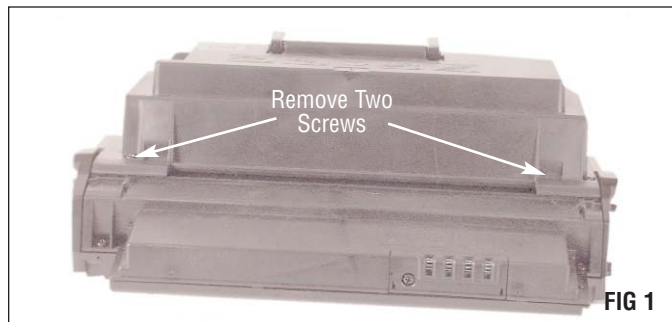
# SAMSUNG® ML2150/2550

## DRUM UNIT



## Disassembly of the Cartridge

1. Use a Phillips screwdriver to remove the two screws on top of the cartridge (FIG 1).

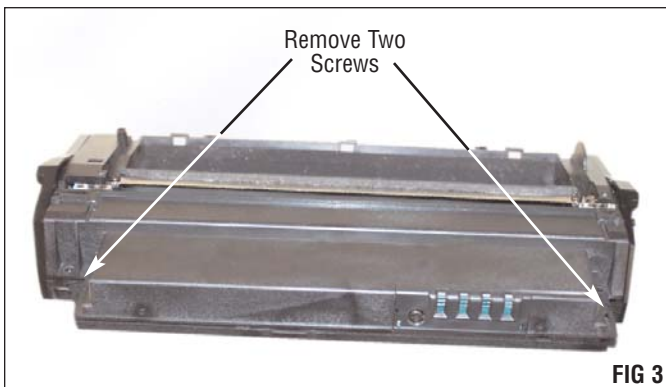


**Note:** Careful, toner may spill out upon the removal of the hopper.

2. Rotate the top back and separate the sections (FIG 2).

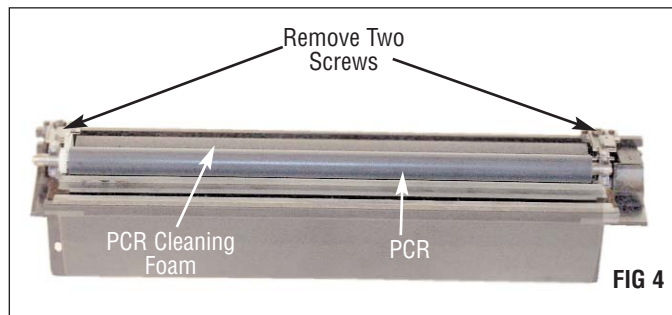


3. Use a Phillips screwdriver to remove the two screws that secure the waste bin (FIG 3). Remove the waste bin.

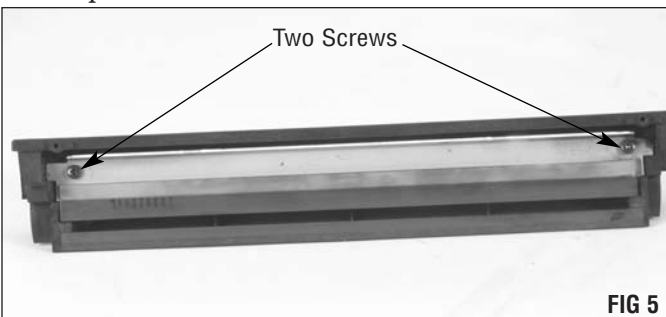


## Disassembly of the Waste Bin

1. Use a Phillips screwdriver to remove the two screws that secure the PCR saddles (FIG 4). Remove the PCR and PCR cleaning foam along with the saddles.



2. Use a Phillips screwdriver to remove the two screws that secure the Wiper Blade (FIG 5). Remove the Wiper Blade.

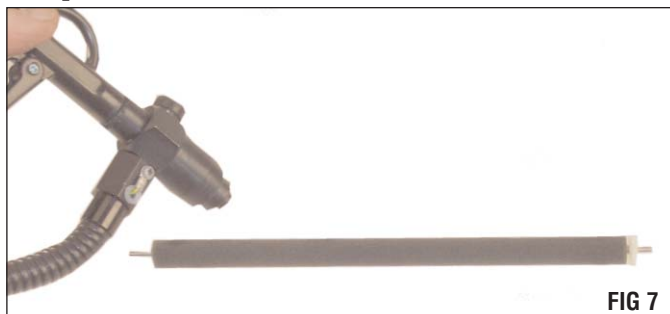


3. Clean the Waste Bin with dry, filtered, compressed air (FIG 6).



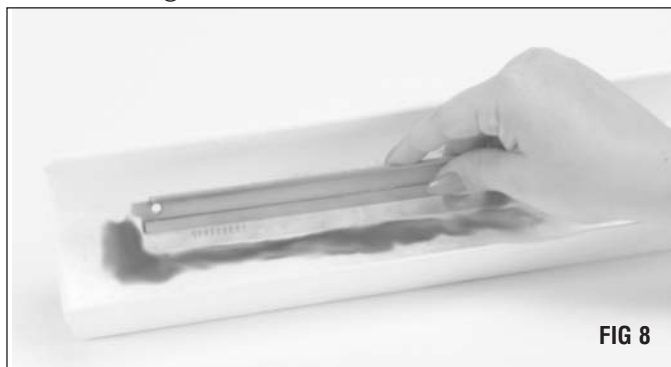
4. Use a lint free cloth dampened with water, to clean off the PCR.

5. Clean the PCR cleaning foam with dry, filtered, compressed air (FIG 7).

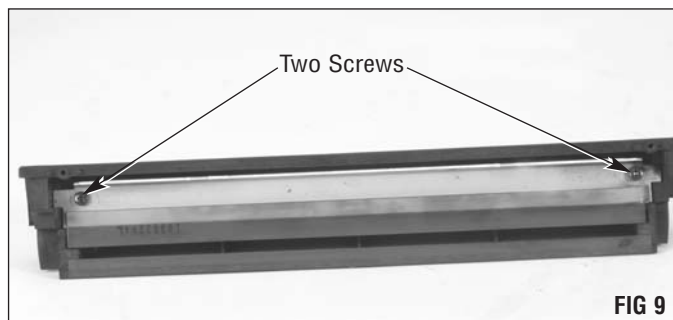


## Assembly of the Waste Bin

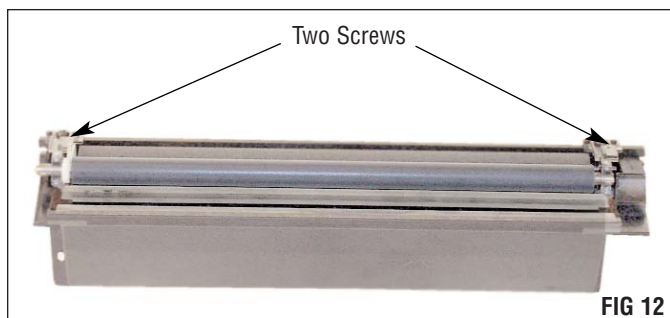
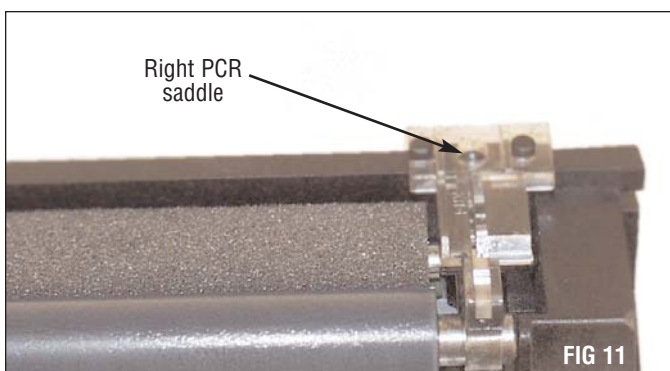
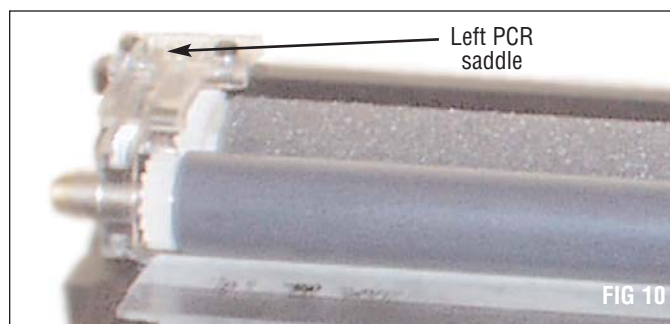
1. Dip the edge of the Wiper Blade in a long, shallow container of new toner to prevent the Blade from flipping (FIG 8). Examine the blade to ensure even coverage.



2. Replace the Wiper Blade and secure with two screws (FIG 9).



3. Replace the PCR and PCR saddles. Note the position of the left saddle (FIG 10) and the right saddle (FIG 11). Secure with two screws (FIG 12).







## Toner Hopper (Cleaning and Sealing)

1. Clean the Toner Hopper with dry, filtered, compressed air (FIG 13).

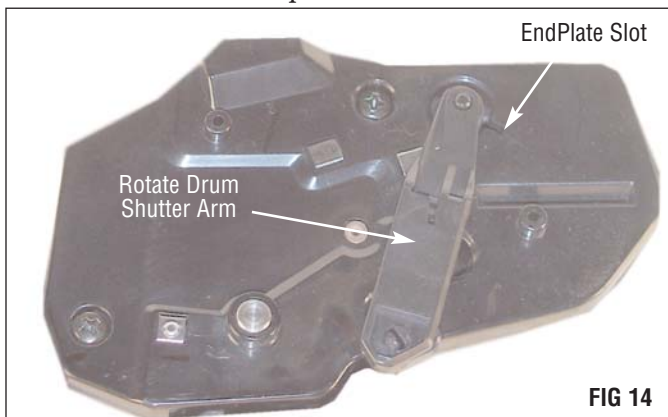


2. SCC recommends sealing the cartridge to ensure against toner leakage. For complete sealing instructions refer to SSS™ 453; Phaser® 3400/3450; Samsung® 2150/2550 Adhesive Seal.

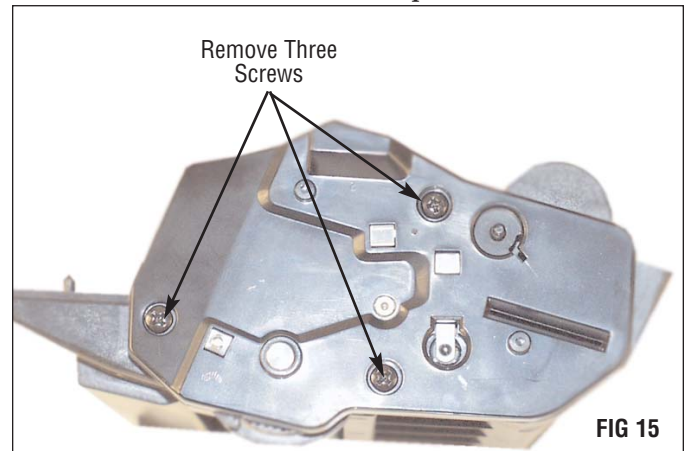


## Disassembly of the Drum Unit

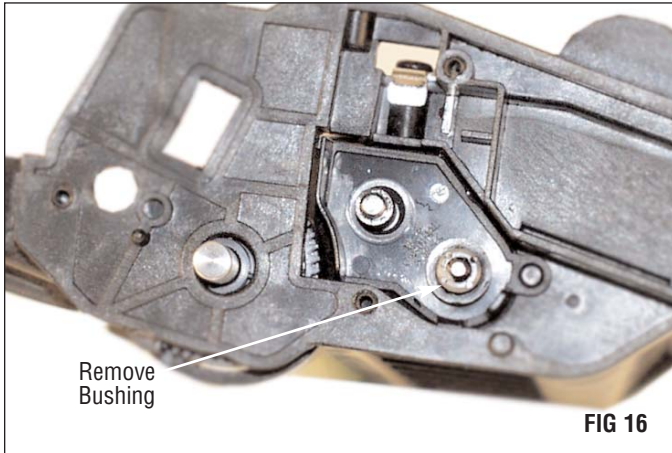
1. The shutter arms can be easily removed by rotating the arm until the arm of the spring lines up with the slot on the endplate. (FIG 14).



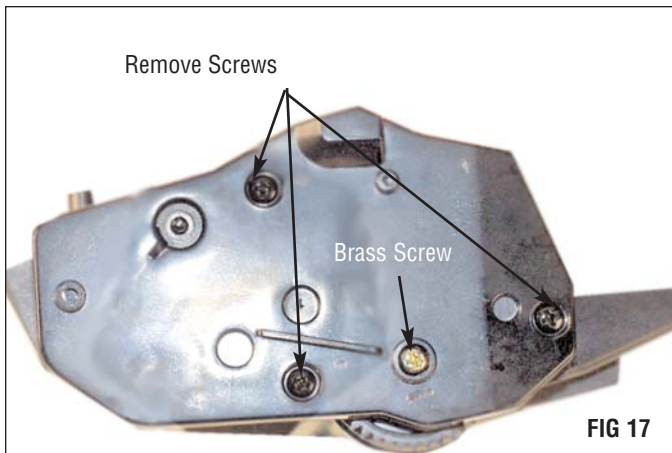
2. Use a Phillips Screwdriver to remove the three screws from the Spur Gear Side Endplate (contact side) (FIG 15). Remove the Endplate.



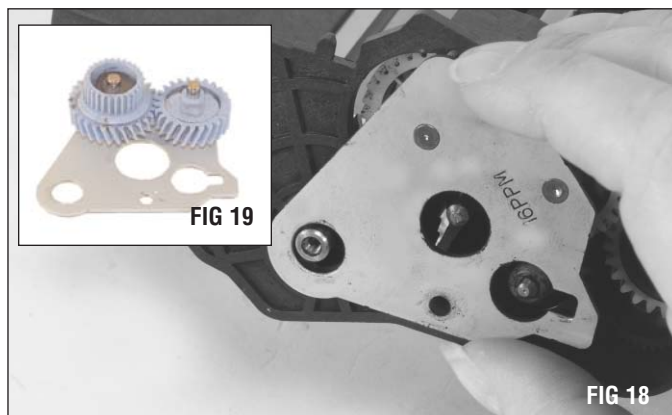
3. Remove the Toner Adder Roller Bushing (FIG 16).



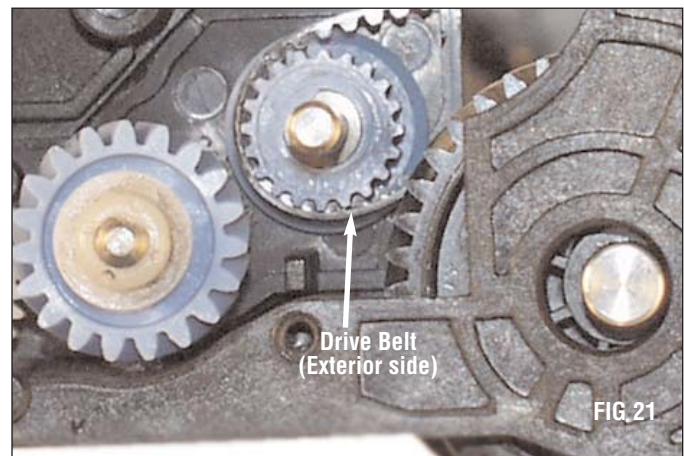
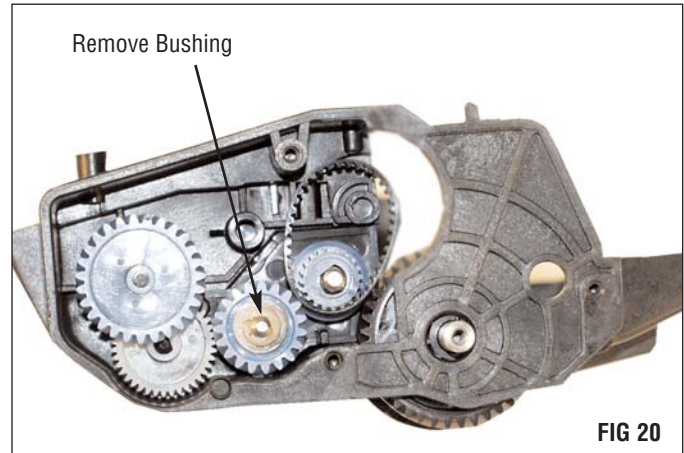
4. Use a Phillips Screwdriver to remove the four screws from the helical gear side endplate (FIG 17). The Drum Axle screw is a brass screw. Since it is different from all the other screws, it should be stored in a separate location. Remove the endplate.



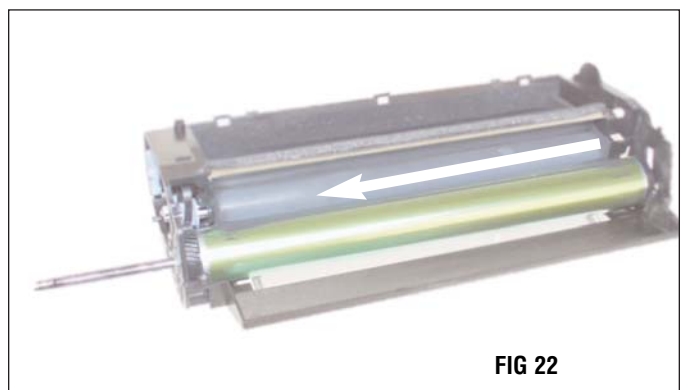
5. Remove the metal plate with two Transfer Gears (FIG 18) (FIG 19).



6. Remove the gears, Adder Roller Bushing and drive belt (FIG 20). Note the location of the Drive Belt (FIG 21).



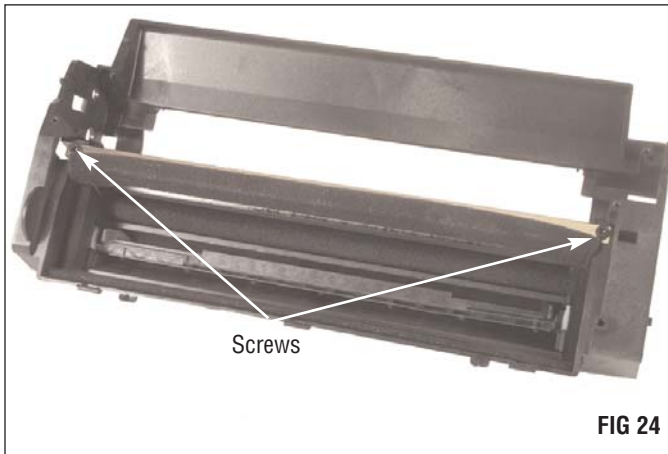
7. Push the Drum Axle toward the helical gear as shown; Remove the Drum Axle from the helical gear side of the cartridge. (FIG 22).



8. Remove the Drum. (FIG 23).



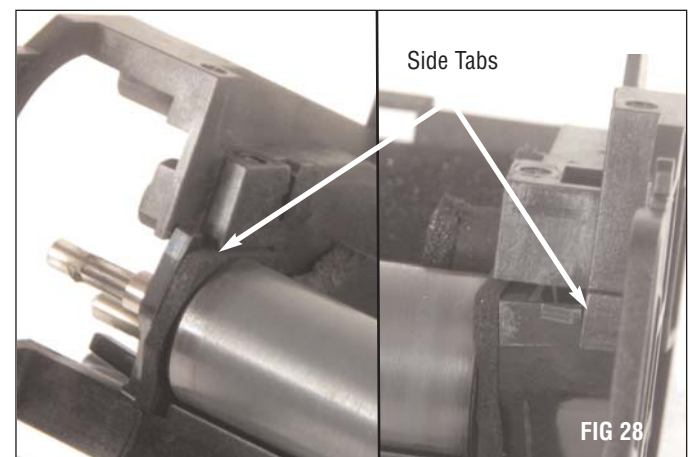
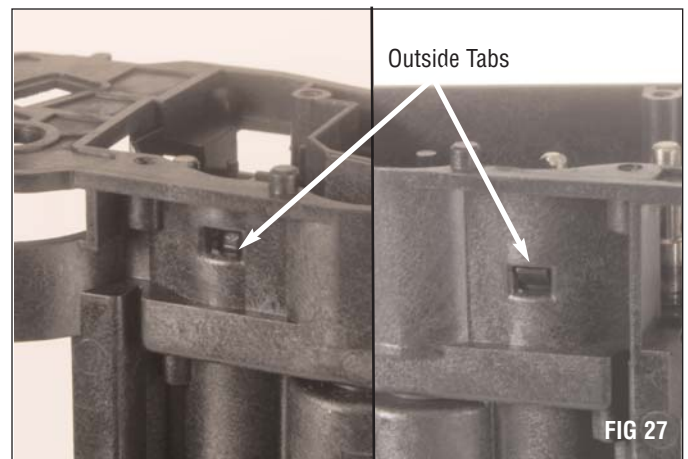
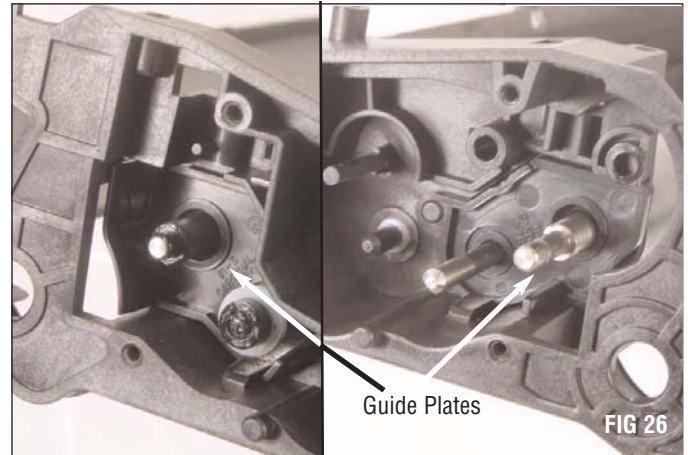
9. Using a Phillips Screwdriver, remove the two screws from the Doctor Blade. (FIG 24).



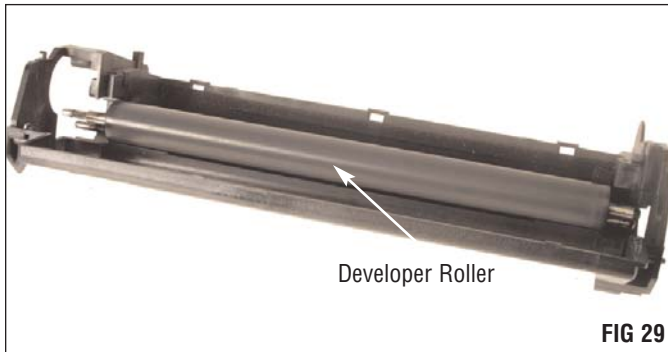
10. Lift the Doctor Blade up and then rotate forward in order to rip the foams out (FIG 25).



11. Remove the Developer Roller Guide Plates on each side (FIG 26). Press down on the outside tabs (FIG 27) and the side tabs (FIG 28) in order to pull out the guide plates.

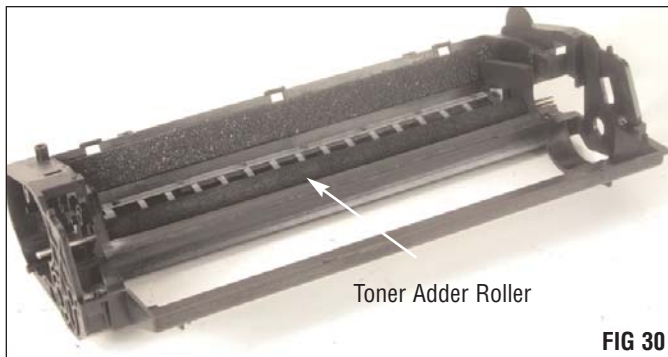


12. Remove the Developer Roller (FIG 29).

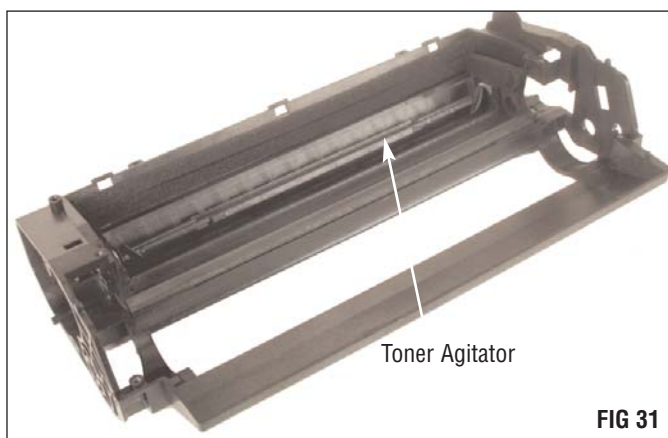


13. Remove the Toner Adder Roller from the Hopper (FIG 30).

**NOTE:** When removing the Toner Adder Roller, the Sealing Channel Endfoams may rip, but will be replaced.



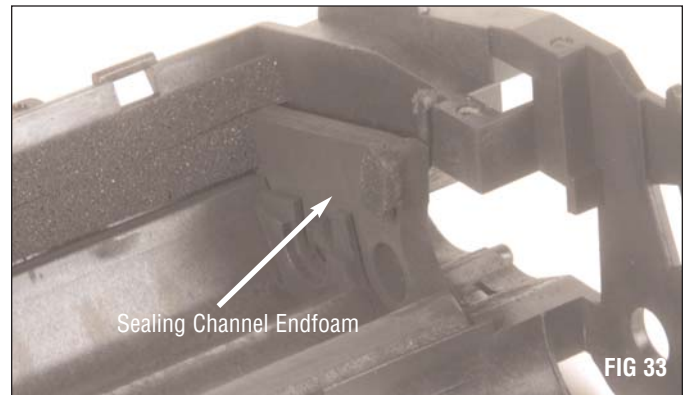
14. Remove the Toner Agitator by gently pulling up on the Agitator at the center (FIG 31).



15. Remove the Toner Agitator Bushings on each side of the Hopper (FIG 32).



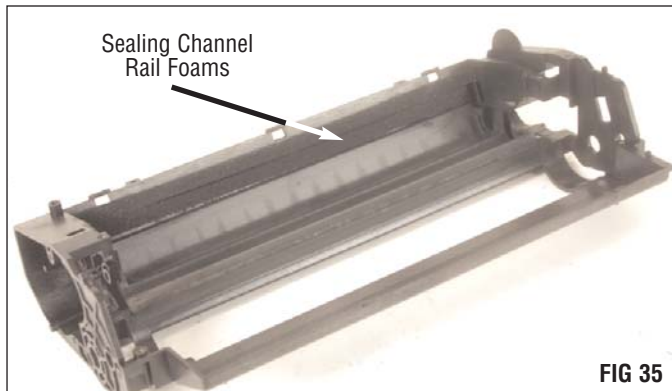
16. Remove the two Sealing Channel Endfoams on each side of the hopper (FIG 33).



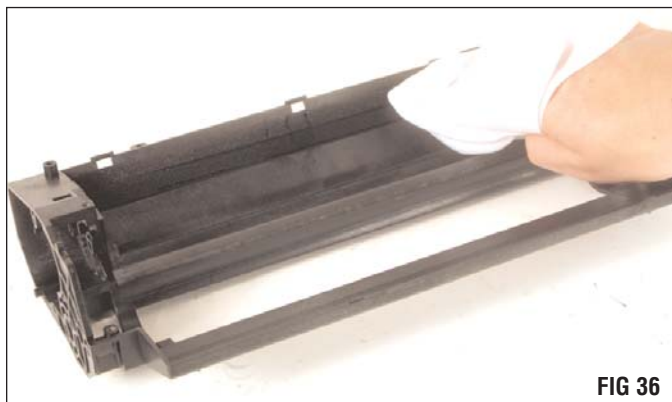
17. Clean the Hopper with dry, filtered, compressed air to remove all toner residue. (FIG 34).



**18.** Inspect and remove the Sealing Channel Rail Foams if necessary. Using a Scraper Tool, remove the two Sealing Channel Rail Foams on the back of the Hopper (FIG 35).



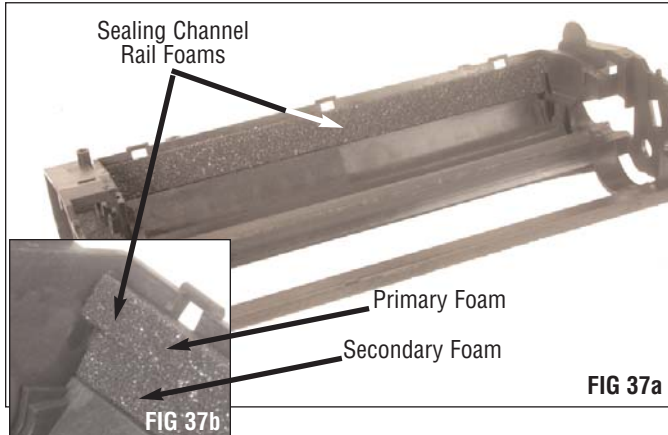
**19.** Moisten a lint-free Cleaning Cloth with 91%-99% Isopropyl Alcohol and clean the hopper. (FIG 36).



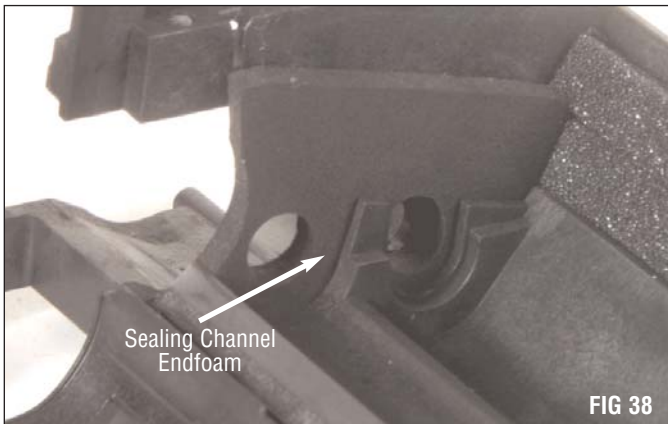


## Assembly of the Drum Unit

1. Install the two Sealing Channel Rail Foams (Primary & Secondary Foams) on the back of the Hopper (FIG 37a & 37b).



2. Install the two Sealing Channel Endfoams on each side of the hopper (FIG 38).

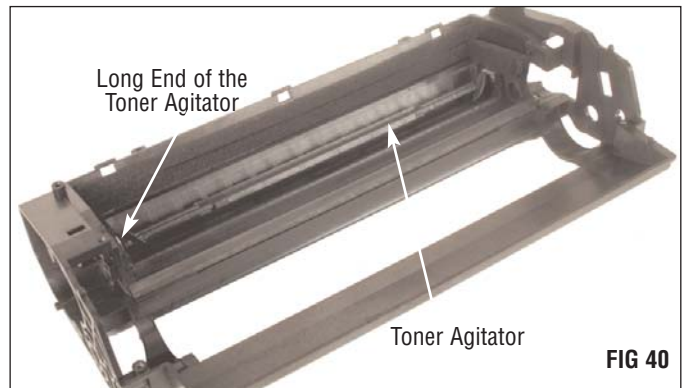


3. Replace the Toner Agitator Bushings on each side of the Hopper (FIG 39).



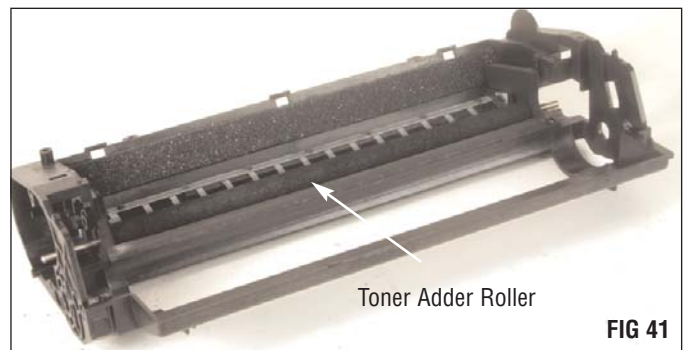
4. Replace the Toner Agitator (FIG 40).

**NOTE:** When replacing the Toner Agitator, insert the long end into the drive side.

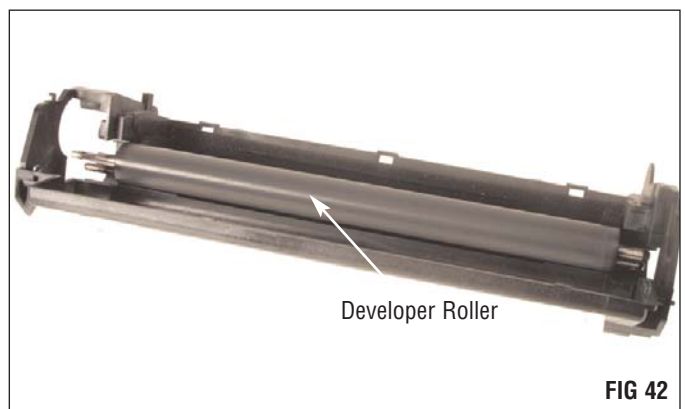


5. Replace the Toner Adder Roller from the Hopper (FIG 41).

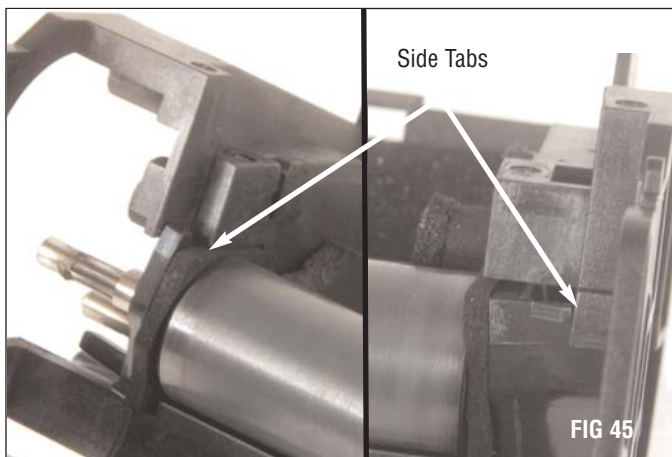
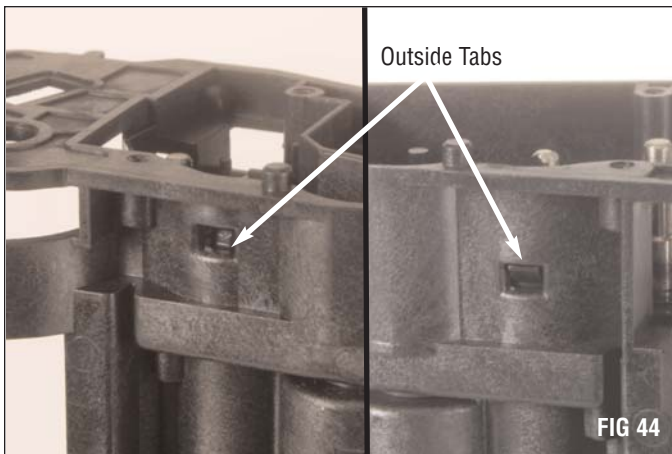
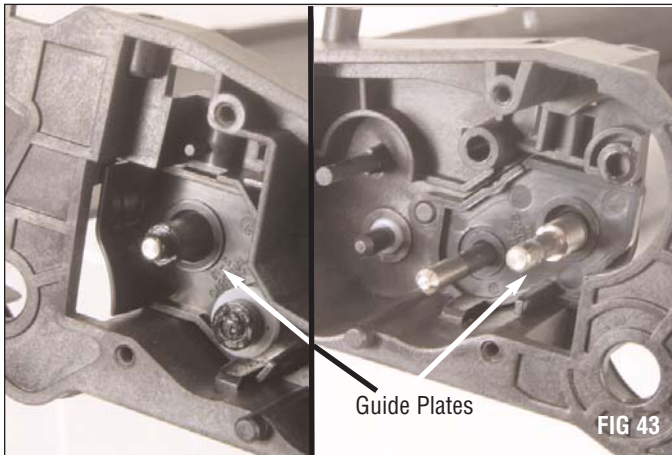
**NOTE:** Be careful not to tear the Sealing Channel Endfoams when replacing the Toner Adder Roller.



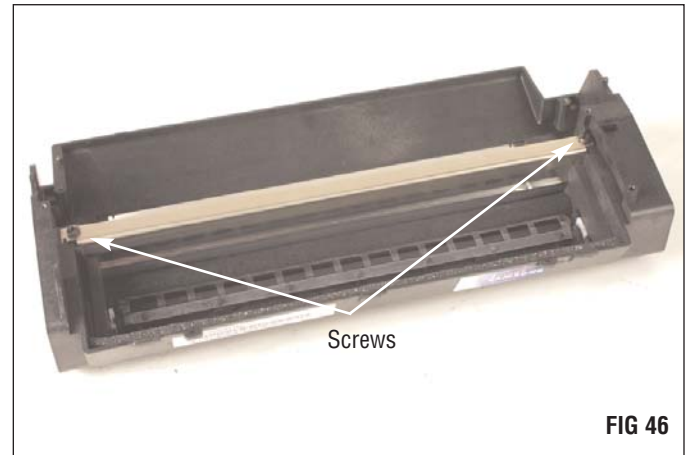
6. Replace the Developer Roller (FIG 42).



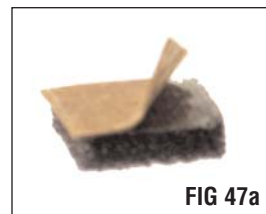
7. Replace the Developer Roller Guide Plates on each side (FIG 43). Press down on the Guide Plates until the tabs are locked into place (FIG 44 & 45).



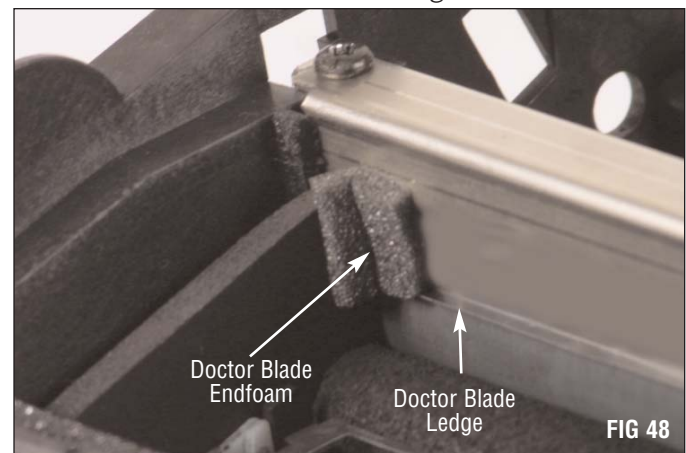
8. Install the new Doctor Blade, secure with two screws as shown (FIG 46).



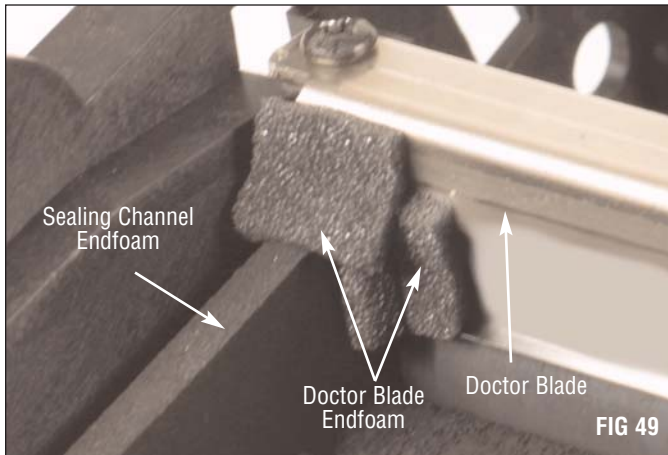
9. Remove the backing from the two Doctor Blade Endfoams (FIG 47a). Fold the Endfoam as shown (FIG 47b).



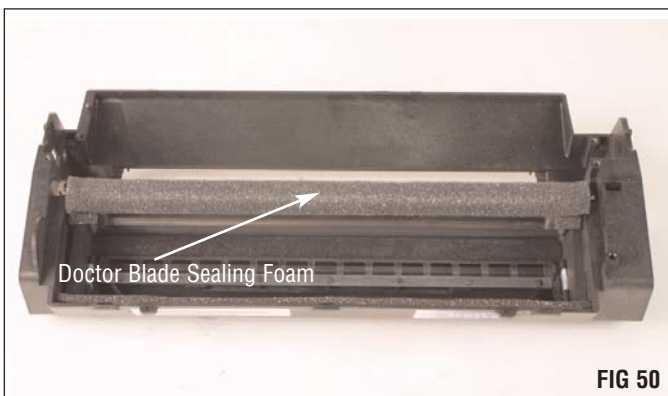
10. Install the two Doctor Blade Endfoams on either side of the Hopper as shown (FIG 48). Each Foam should create a 90 degree angle against the Endfoams and Doctor Blade Ledge.



**11.** Install the other two Doctor Blade Endfoams on either side of the Hopper as shown (FIG 49). The Foams should lay adjacent to the Doctor Blade and overlap both the Sealing Channel Endfoams and the Doctor Blade Endfoams.



**12.** Install the Doctor Blade Sealing Foam (FIG 50).

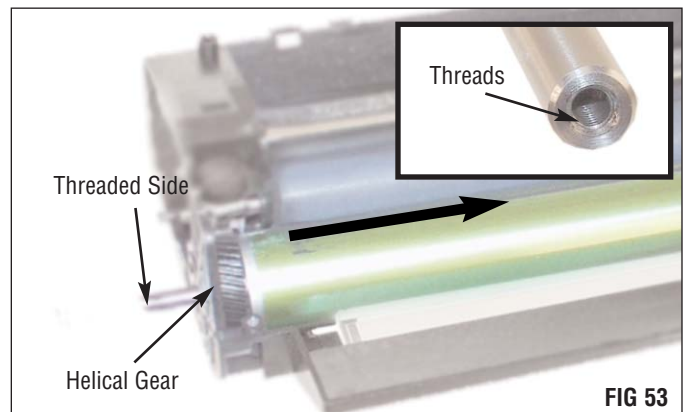


**13.** Pad the coated area of the Drum with new toner to lubricate the contact between the Drum and Wiper Blade. Be careful to avoid getting toner on the gears.

**14.** Place the Drum into the cartridge as shown (FIG 51 & 52).

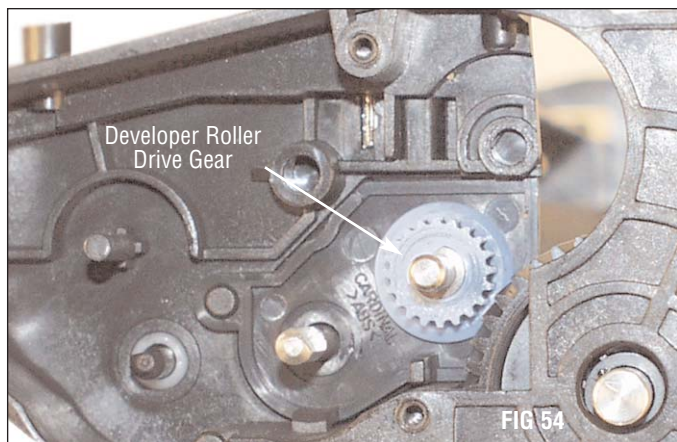


**15.** Push the Drum Axle toward the helical side of the Drum as shown (FIG 53). The threaded side of Drum Axle goes on the helical gear side of the Drum.

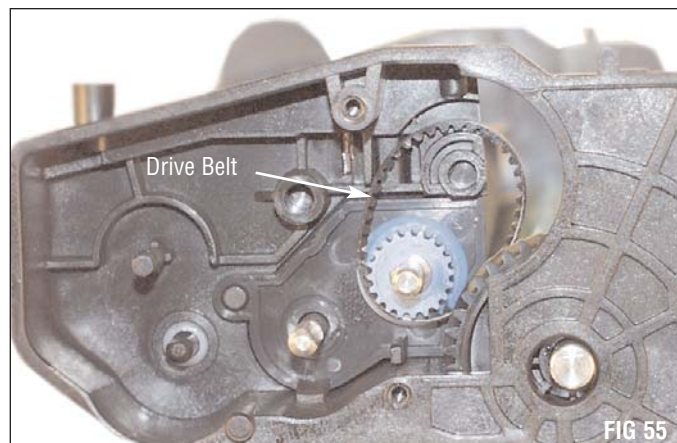




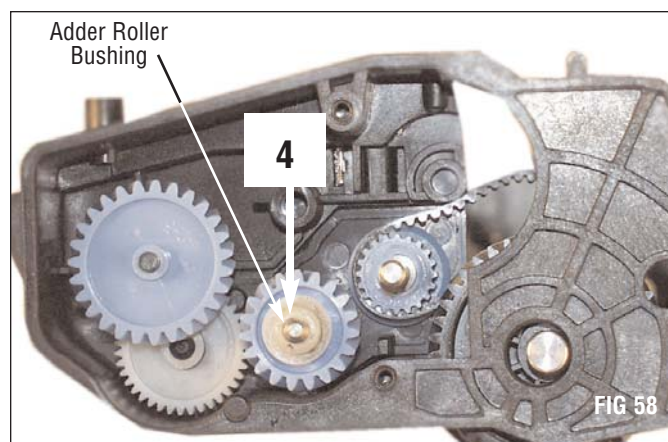
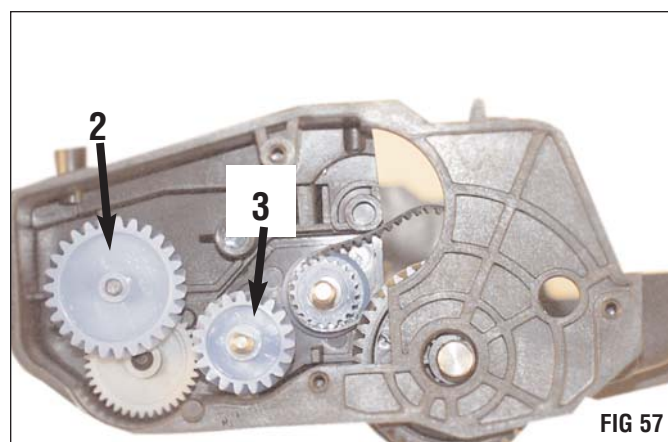
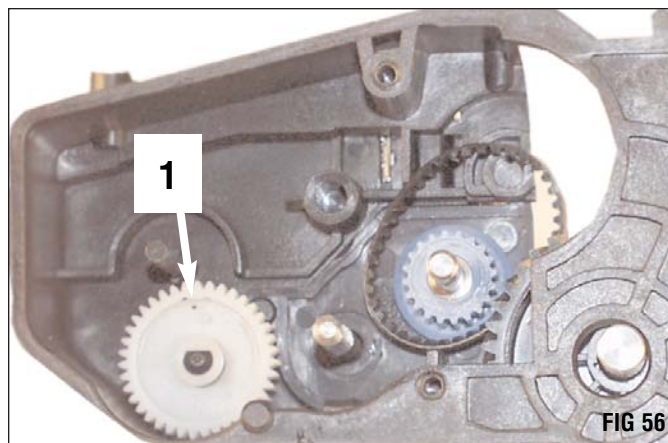
16. Place the Developer Roller drive gear on the cartridge as shown (FIG 54).



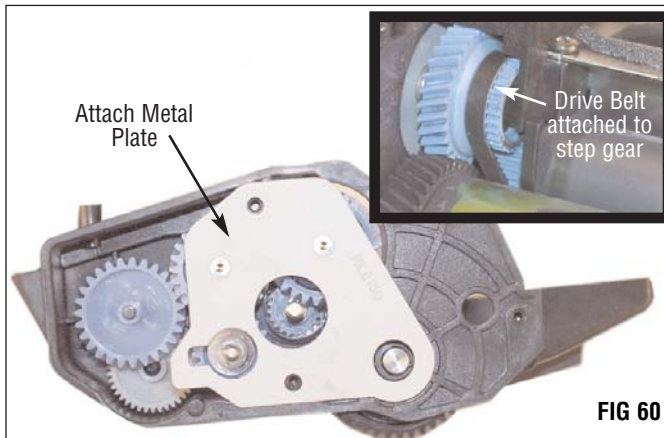
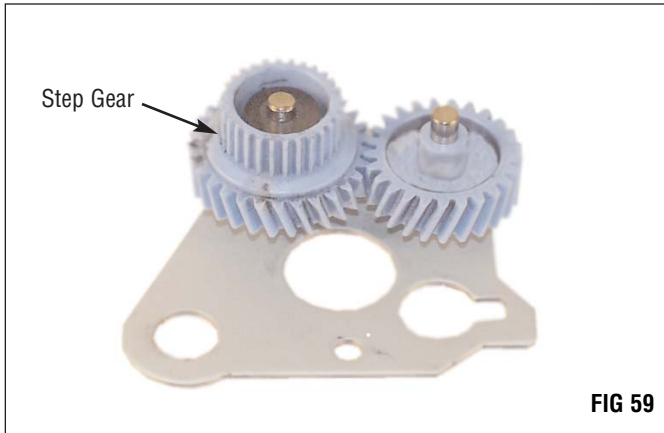
17. Place the Drive Belt on the cartridge as shown (FIG 55).



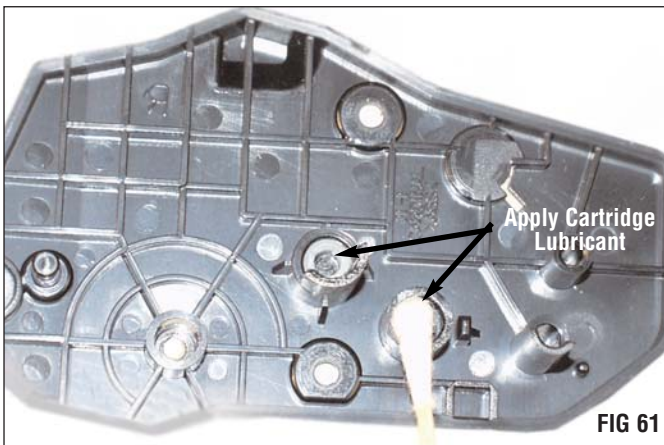
18. Begin replacing the gears and bushing in the sequence as shown (FIG 56 through 58).



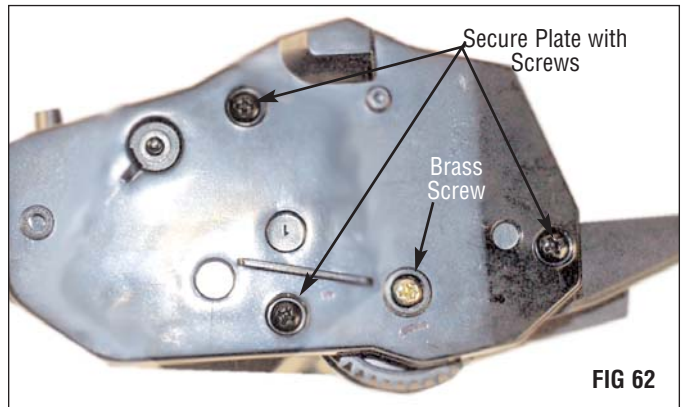
19. Install the metal plate and two gears attached to the plate. Be sure that the drive belt is connected to the step gear, as shown in (FIG 59 and 60).



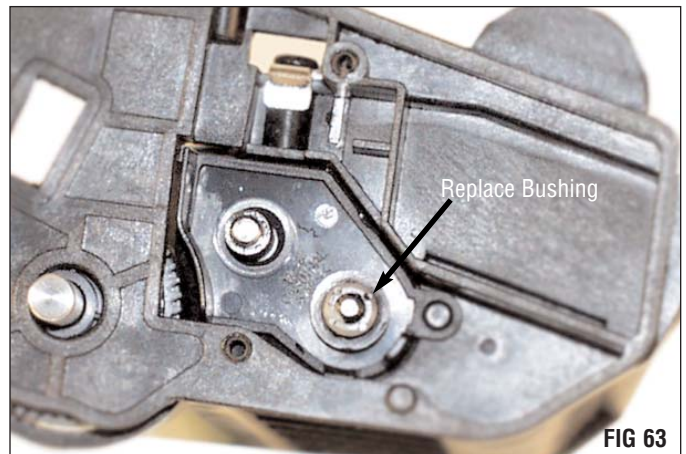
20. Using a lint-free swab clean the two areas shown where lubricant has been applied (FIG 61), and then apply a thin layer of cartridge lubricant. Use the wooden end of a swab as an applicator.



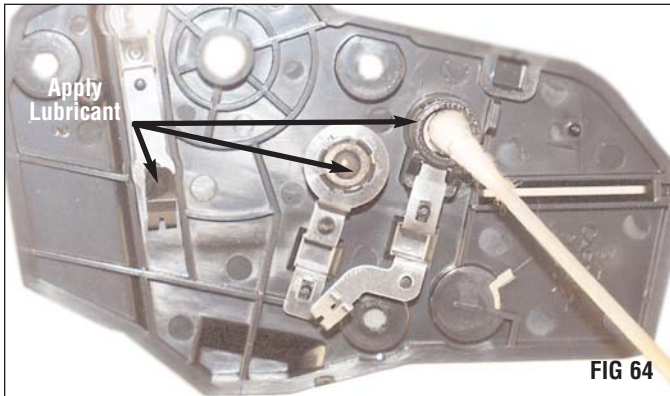
21. Replace the helical side endplate and secure with the four screws (FIG 62). The Drum Axle screw is a brass screw and should only be attached into the Drum Axle.



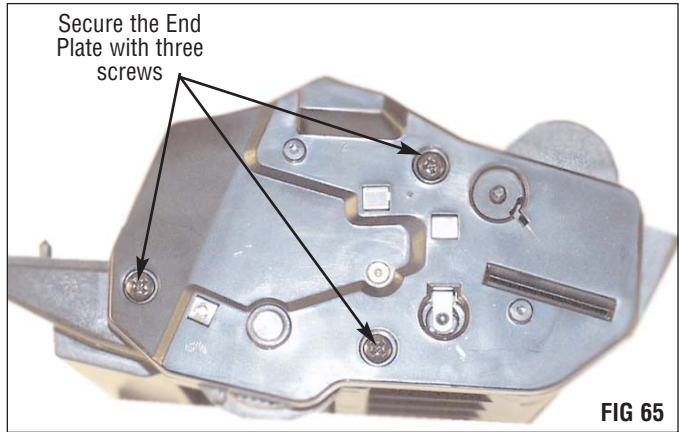
22. Replace the Toner Adder Roller Bushing on the contact side (FIG 63).



23. Use a lint-free swab to clean the electrical contacts where conductive lubricant has been applied as shown (FIG 64). Then use the wooden end of the swab to reapply a thin layer of conductive lubricant.



24. Replace the spur gear side endplate and secure with the three screws (FIG 65).

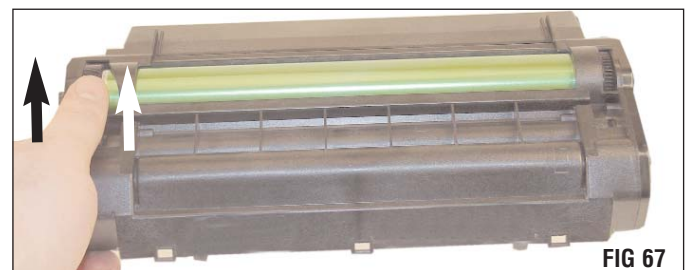


## Assembly of the Cartridge

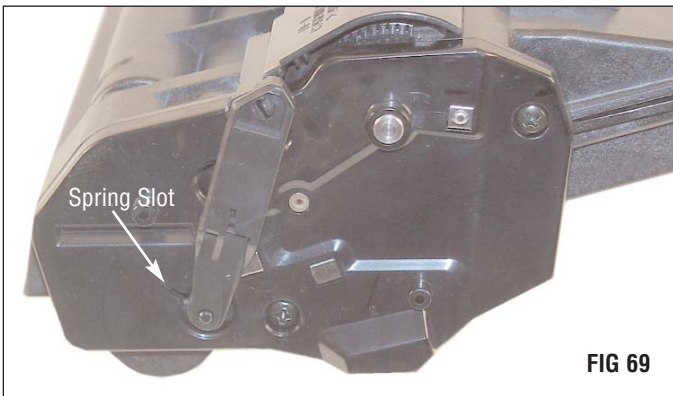
1. Replace the Waste Bin and secure with two screws (FIG 66).



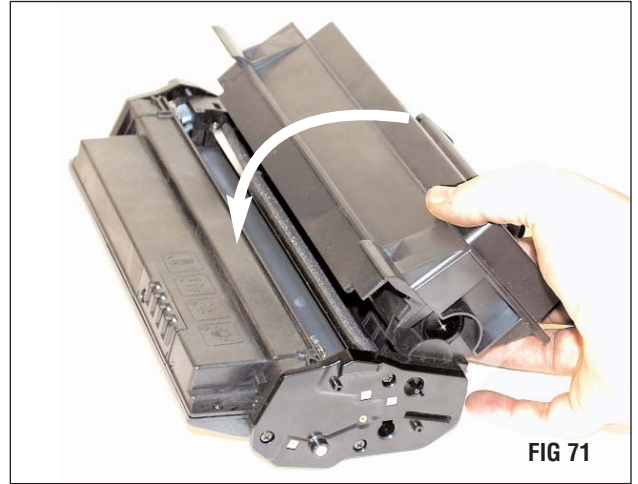
2. Rotate the Drum in its normal rotational direction, at least six full Drum rotations (FIG 67). Rotating the Drum will help lubricate the Wiper Blade and prevent the potential of Blade "flip overs". The lubricating powder wiped from the Drum by the Wiper Blade will deposit in the Waste Bin.



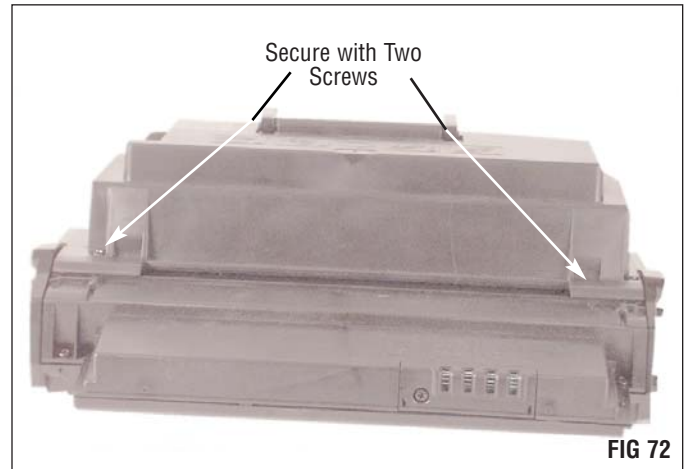
3. Install the Drum Shutter as shown. FIG 68 shows the position of the helical side shutter arm and FIG 69 shows the position of the spur side shutter arm. Be sure that the springs are placed in the proper position, see figures below.



4. Align the three tabs on the Toner Hopper with the three tabs on the cartridge as shown (FIG 70), then rotate the Hopper back together with the cartridge as shown (FIG 71).



5. Use a Phillips screwdriver to replace the two screws on top of the cartridge (FIG 72).



6. For instructions on Chip installation and post testing please refer to SSS™ # 665 "Samsung 2150/2550 Chip Solution".





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