



Brother HL® 1240/ Brother HL® 1650 Remanufacturing Instructions



About the Printer

In August 1999 Brother® International Corp. announced the successors to their successful HL-1040 and HL-1050 personal laser printers, the multi-platform HL-1240, HL-1250 and HL-1270N. With print speeds of up to 12 pages per minute, first-page out speeds of less than 15 seconds, true 600x600 dpi output, and ports for both Macintosh and PC connectivity, these printers appealed to a wide range of both home and small corporate users.

The HL-1200 series printers included Brother® engines, offering no new technology, but sporting a new "commercial" design. The overall footprint had been reduced, with the 250 sheet paper tray feeding from the bottom of the printer and the output located on the top, making them ideal for the desktop environment. Improvements over the HL-1000 series included expanded paper handling capabilities, increased duty cycle, and higher-capacity toner cartridges.

The consumer-targeted HL-1240 was offered through office superstores, computer resellers and regional retailers, and available

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.

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.

September 1999. Aimed more toward corporate environments, the HL-1250 and HL-1270N was sold through computer resellers, VARs and mail order via Brother® distributors beginning October 1999. Both the HL-1250 and HL-1270N shipped with bundled Automatic e-mail Printing software, which automatically prints a user's e-mail messages at prescheduled times. The software also features filtering, which allows users to discard unwanted e-mail messages, saving time and increasing productivity.

All three models use the same toner cartridges and drum units. The TN-430 toner cartridge (North and South America) / TN6300 (all other areas) standard-capacity unit has an OEM-stated page yield of 3,000 pages, and 6,000 for the TN-460 (North and South America) / TN6600 (all other areas) high-capacity cartridge. All four versions are compatible with numerous printers and fax machines.

The drum unit utilizes a recovery blade, cleaning felt and cleaning brush in place of a wiper blade, and a corona wire and transfer roller for charging. As with many Lexmark® cartridges, there is no air gap between the developer roller and OPC drum.

The engine's toner sensing system allows the high-capacity cartridge to obtain twice the yield with only 50% more toner. Apparently up to 80g of toner is left in the cartridge once the "toner out" message is received and printing stops.

Table of Contents

Introduction	1-2
Tools & Supplies You Will Need ..	2
Use of Compressed Air	2
Use of Isopropyl Alcohol	2
Toner Unit	3
Waste Bin Unit	4
Gear Inspection	5
Disassembly Toner Hopper Section	6-7
Assembly Toner Hopper Section	8-9
Disassembly of the Drum Section	10-11
Assembly of the Drum Section	12-13

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Version 4
October 2005

Compatibility:

HL-1240

HL-1440	MFC-8600	MFC-9850
HL-1450	MFC-8700	MFC-9870
HL-1470N	MFC-8750P	MFC-9870LT
HL-P2500 MFP	MFC-8750P-NLT	MFC-9870NLT
INTELLIFAX 4750	MFC-9600	MFC-9880
INTELLIFAX 5750	MFC-9650	MFC-9880N
INTELLIFAX 8350P	MFC-9650N	MFC-P2500
INTELLIFAX 8750P	MFC-9660	PB1630
MFC-2500	MFC9660N	PPF4750
MFC-8300	MFC-9750	PPF5750
MFC-8500	MFC-9750LT	

HL-1650

HL-1650
HL-1670N
HL-1850N
HL-1870N
HL-5040

Tools and Supplies You Will Need

For Basic Remanufacturing:

- Phillips Screwdriver
- Standard Flat Blade Screwdriver
- Small-Tipped Flat Blade Screwdriver
- Needlenose Pliers
- Funnel for Toner Bottle
- Compressed Air for Cleaning(See left)
- 91-99% Isopropyl Alcohol(See left)
- Lint-Free Foam Tip SwabLFSWAB
- Lint-Free Cleaning ClothLFCCLOTH
- Cotton SwabQTIP
- Aluminum MalletWXHAMMER
- Liquid Cartridge LubricantCLUBE

Engine Information

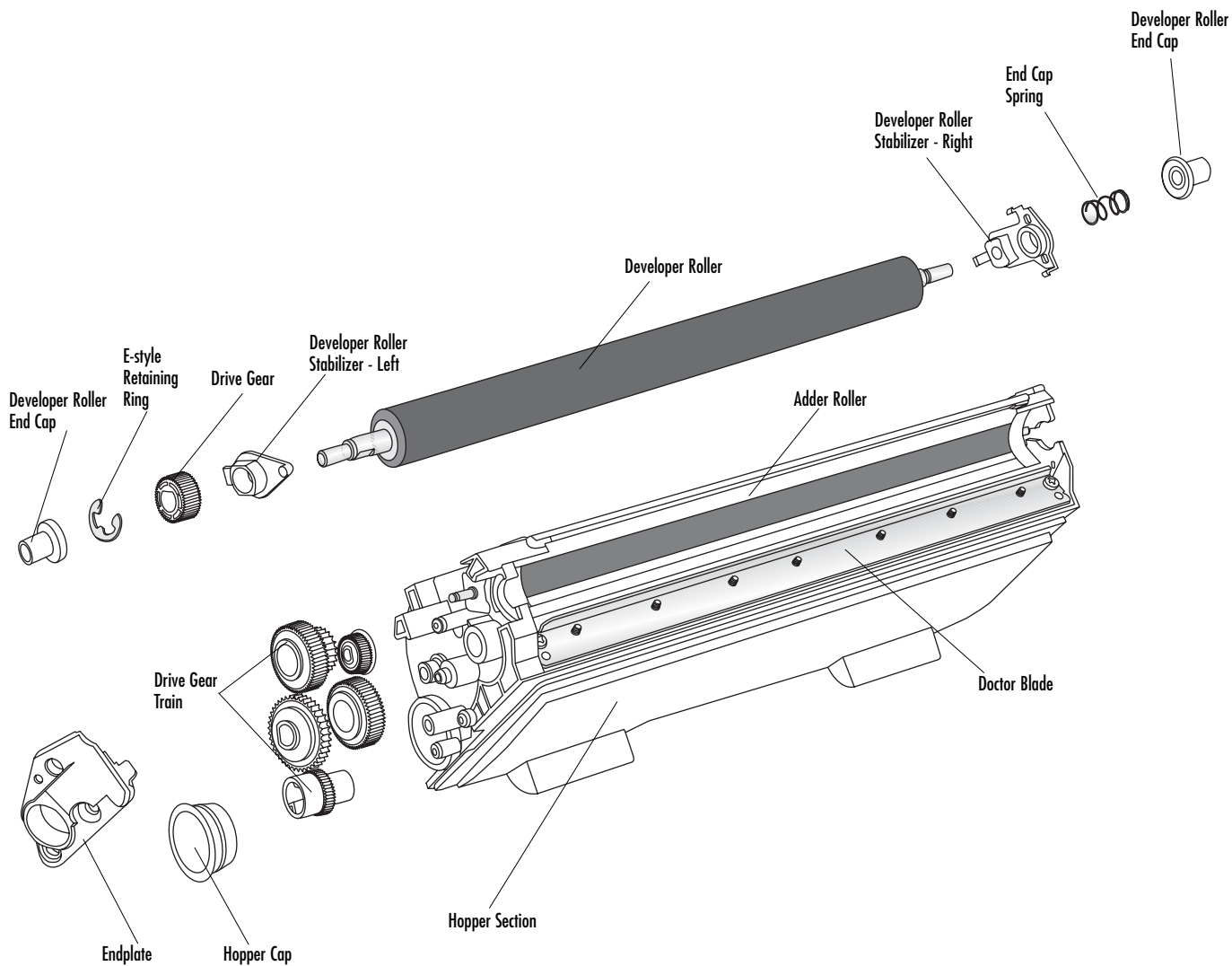
Engine Name	Brother® HL1240	1650
Printer Price	\$399	\$599
First Page Out	Less than 15 seconds	Less than 15 seconds
Charger	Corona	Corona
Date of U.S. Printer Introduction	Jan. 2001	Jan. 2001
Print Speed (pages per minute)	15 ppm/ 16ppm	
Duty Cycle	10,000 pages per month	30,000 pages per month
Print Resolution (dpi)	300 x 300 / 600 x 600 dpi	600 x 600/ 2400 x 2400 dpi

Cartridge Information

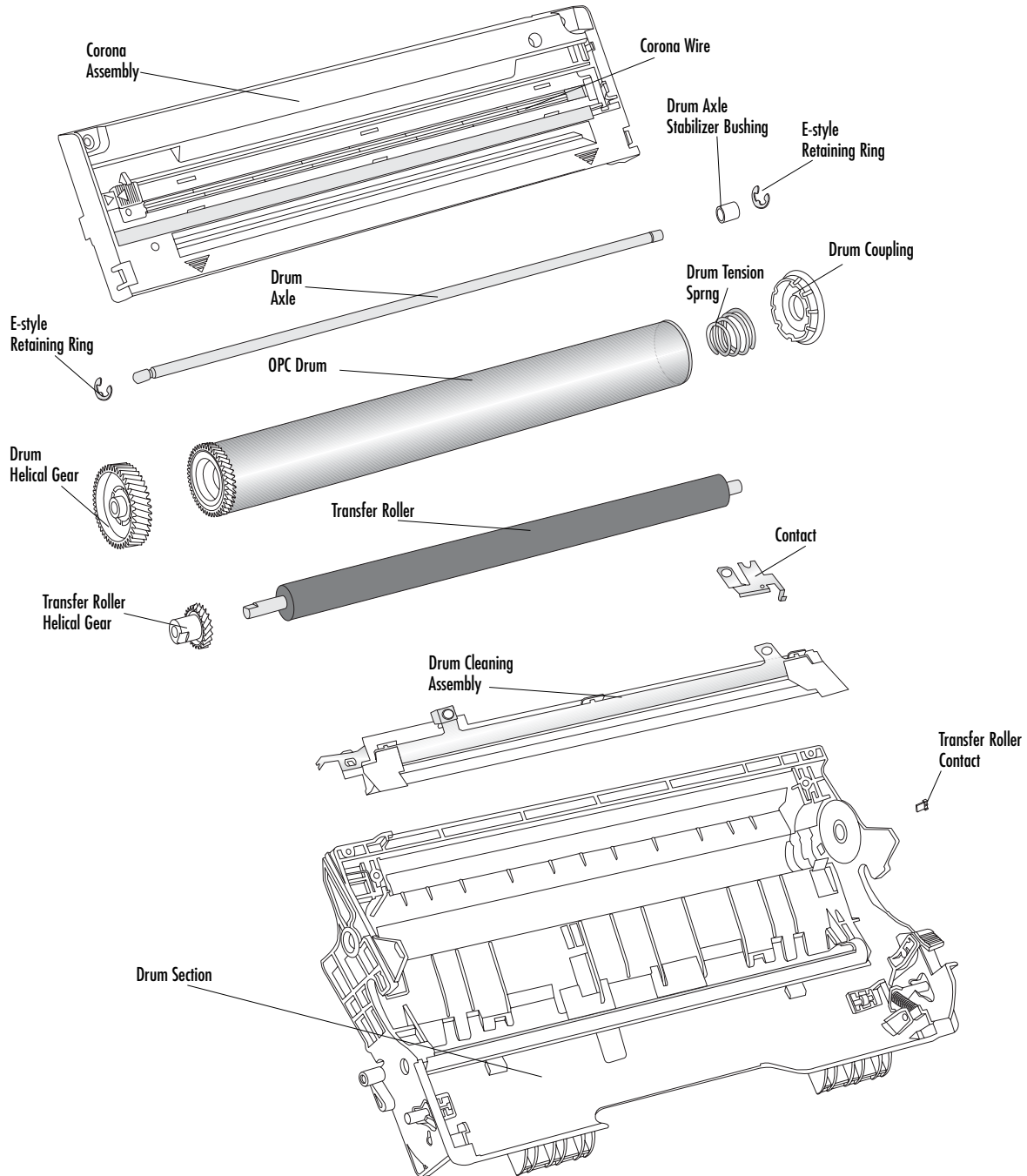
Part Number HL-1240	TN430 / DR-400	TN6300 / DR-6000	TN460	TN6600
Cartridge List Price*	\$40.00 / \$200	£40 / £129	\$86.00	£51
OEM Rated Page Yield	3,000 / 20,000	3,000 / 20,000	6,000	6,000
Typical Cartridge Wholesale Price*	\$41.00 / \$105	£26 / n/a	\$57.00	
Part Number HL-1650	TN-530 / DR-500	TN-560	TN-7600 / DR7000	
Cartridge List Price*	n/a / \$270	\$90	£89 / £178	
OEM Rated Page Yield	3,300 / 20,000	6,500	6,500 / 20,000	
Typical Cartridge Wholesale Price*	n/a / \$113	\$61	£59 / £109	

*Prices as of February 2001

Brother® HL 1240/1650 Toner Unit



Brother® HL 1240/1650 Waste Bin Unit





Gear Inspection

Note: This section applies to the Brother HL-1240 only.

Proper identification of a potential gear meshing problem. The teeth are fully engaged with one another, with the tip of one tooth deeply rooted in the valley of the mating teeth (FIG 1).

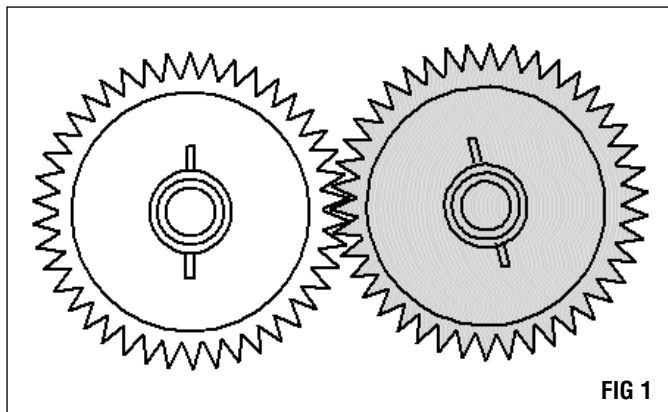
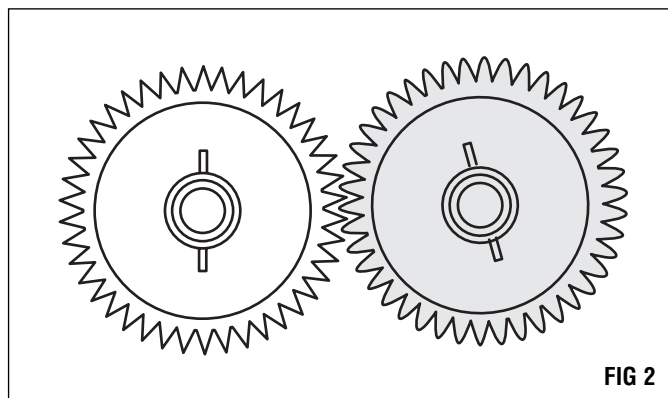


Fig 2 shows the condition of inadequate meshing. In this case, only a small portion of the teeth are mating with one another.



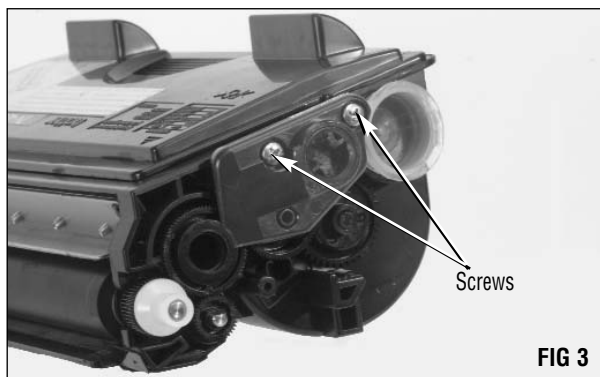
As a general rule, if less than half of the tooth height is mating, gear skipping can occur. Additionally, SCC's recommendation is to always inspect teeth for damage and wear before proceeding.

NOTE:

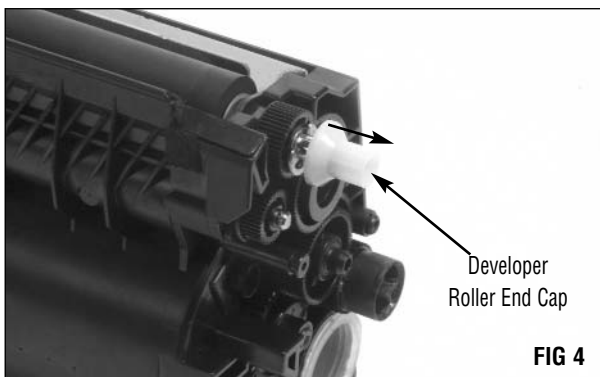
1. In some cases the gear meshing problem that causes clicking can be due to an out-of-round developer roller stabilizer bearing. If this has occurred, replace with SCC's developer roller stabilizer (B1240DRSTAB). Refer to *Disassembly of the Hopper Section* for removal/installation instructions of the developer roller stabilizer. This will fix the cause of the problem, but the drive gear may already be damaged.
2. You can check your developer roller drive gear for damage by looking for rounded or missing teeth. If damaged, the drive gear will need to be replaced. Replace with SCC's Developer Roller Drive Gear (B1240DEVRLGR). Refer to *Disassembly of the Hopper Section* for removal/installation instructions of the developer roller drive gear.
3. The stabilizers are qualified for use in the TN-430/460, TN-530/560, and the TN-540/570, but the B1240DEVRLGR is only qualified for use in the TN-430/460. We also recommend that all of these actions be taken in conjunction with using the B1240HTRETKIT.

Disassembly of the Toner Hopper Section

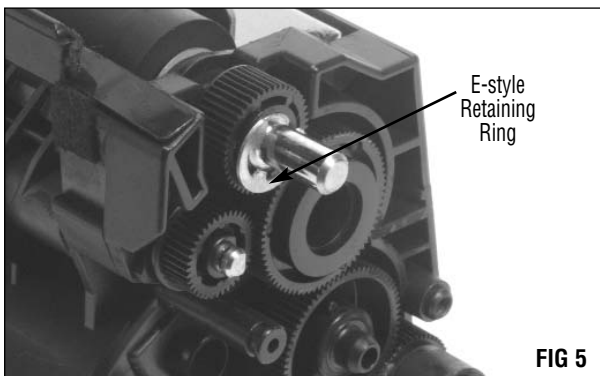
1. Using a Phillips screwdriver, remove the two screws and the endplate (FIG 3).



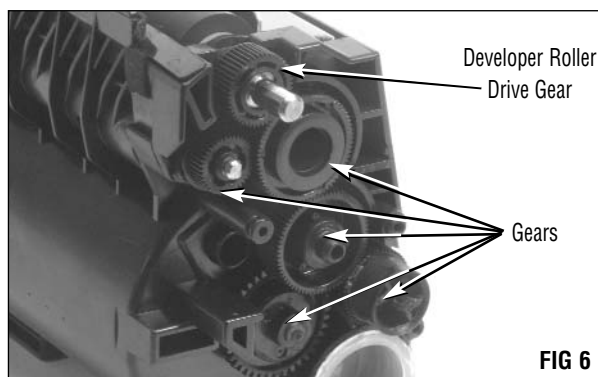
2. Remove developer roller end cap by sliding it completely off the developer roller shaft (FIG 4).



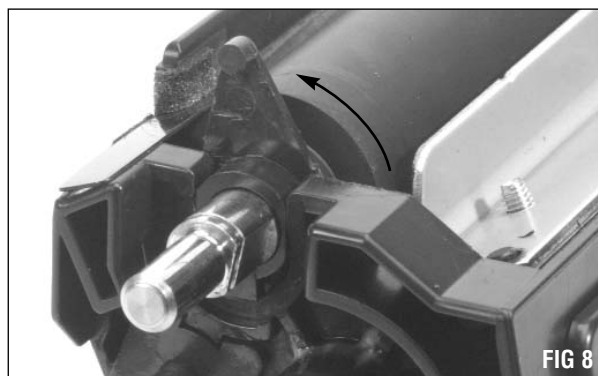
3. Remove the e-style retaining ring from the developer roller (FIG 5).



4. Remove the developer roller drive gear and the five gears connected to the developer roller gear train (FIG 6).



5. Using a flat blade screwdriver, wedge in between the stabilizer and the cartridge in order to pull the tab out as shown (FIG 7). Then rotate the stabilizer toward the top of the cartridge as shown (FIG 8).



6. Using a flat blade screwdriver, remove the developer roller end cap from the other side of the cartridge (FIG 9). Remove the spring once the end cap is removed (FIG 10).



FIG 9



FIG 10

7. Using a flat blade screwdriver, remove the stabilizer by releasing the locking clip (FIG 11).

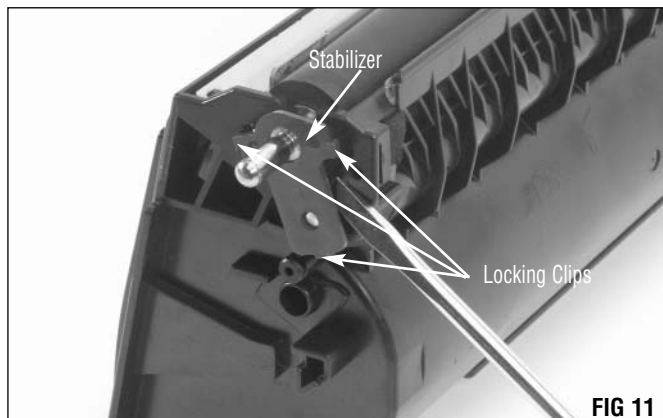


FIG 11

8. Carefully remove the developer roller from the cartridge and clean with dry, filtered compressed air and a lint-free cloth dampened with water (if necessary) (FIG 12). Inspect for damage and replace with SCC's developer roller (B1240DEVROLL) if necessary.

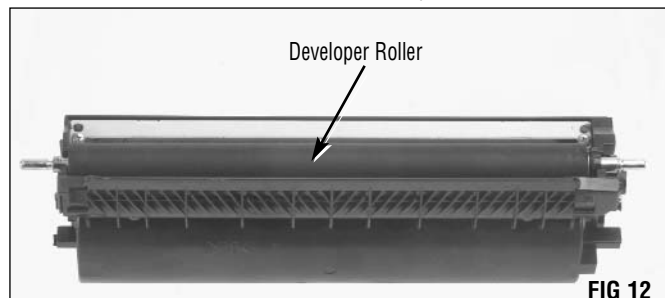


FIG 12

9. Remove the hopper cap and dump out any residual toner (FIG 13). Careful not to damage the Hopper Cap.



FIG 13

10. Clean the toner hopper section with dry, filtered, compressed air and wipe the doctor blade with a clean, dry cloth (FIG 14).

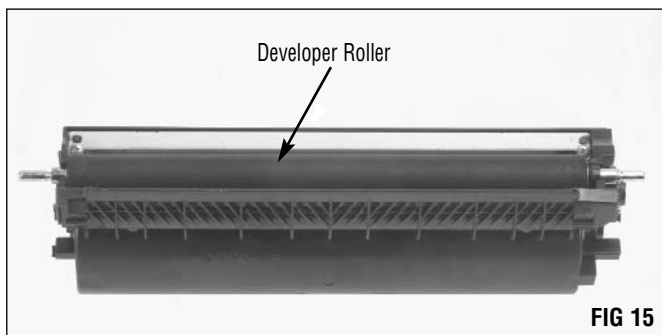


FIG 14

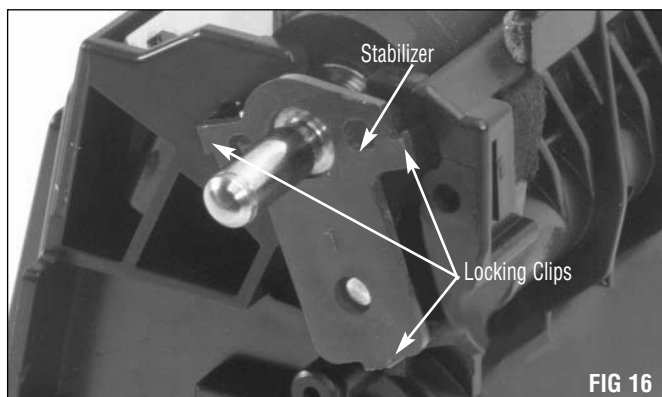
NOTE: See SSS#759 for detailed instructions on the removal and installation of the doctor blade and sealing foam (B1240DBLADE) (B1240DBSFM).

Assembly of the Toner Hopper Section

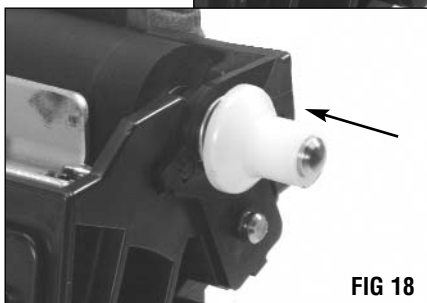
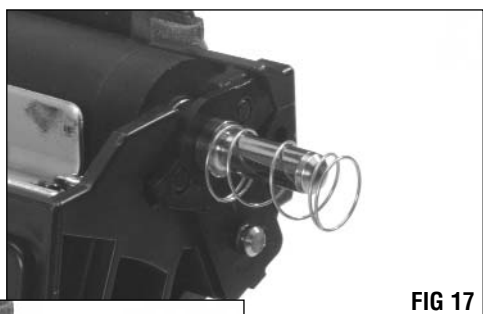
1. Replace the developer roller (FIG 15).



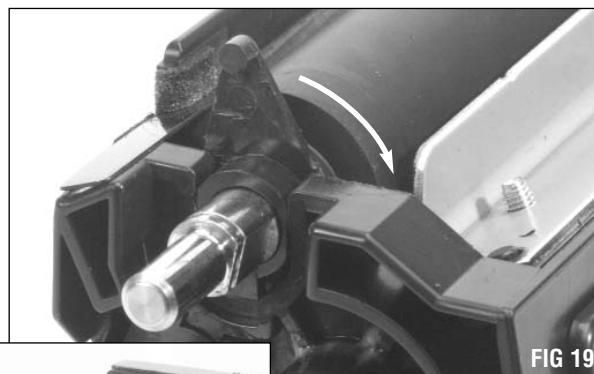
2. Replace the stabilizer (FIG 16). Make sure that the locking clips are secure.



3. Replace the end cap spring (FIG 17). Replace the developer roller end cap to the cartridge (FIG 18).



4. Turn the stabilizer down until the tab snaps into place as shown (FIG 19 & 20).

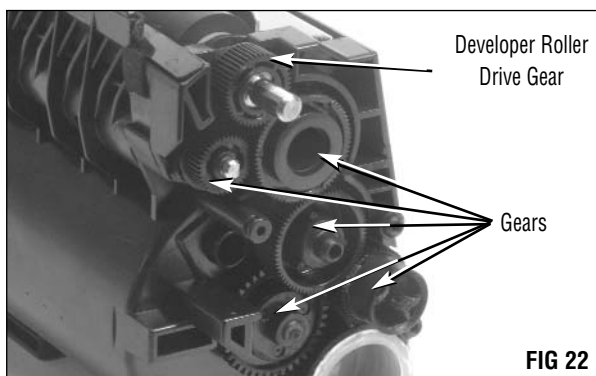


5. Fill the hopper with toner and replace, use SCC's hopper cap (HCAP-A) if damaged (FIG 21).

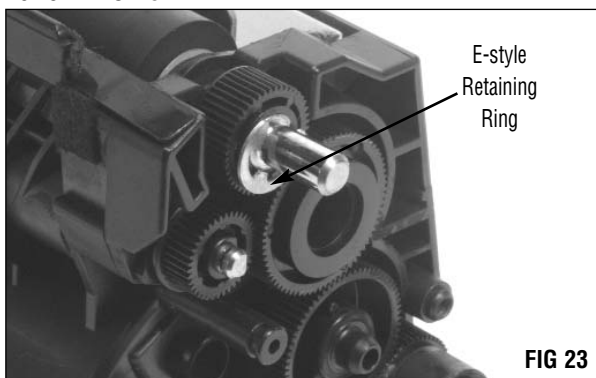


NOTE: Determine if the Developer Roller Drive Gear should be replaced. Refer to *Gear Inspections* for the proper inspection process.

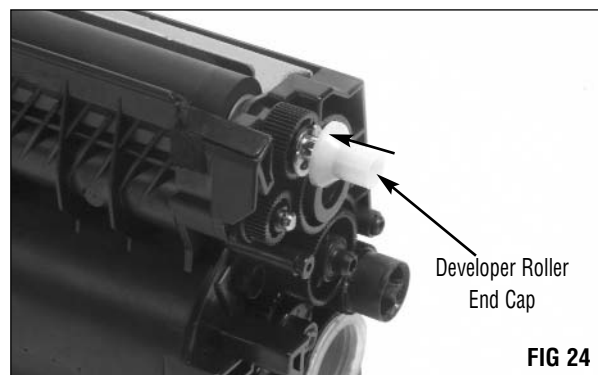
- Using CartridgeLube™ Liquid Plastic Lubricant (CLUBE) lightly coat the back of the gears. This will prevent noise as the gears rub against the cartridge. Replace the Developer Roller Drive Gear and the five gears connected to the developer roller gear train as shown (FIG 22).



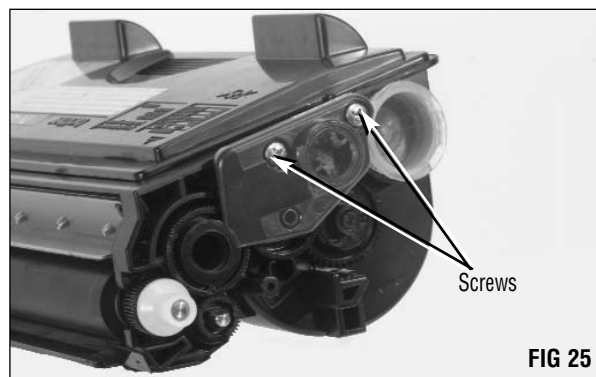
- Replace the e-style retaining ring to the developer roller (FIG 23).



- Replace the developer roller end cap by sliding it completely on the developer roller shaft (FIG 24).

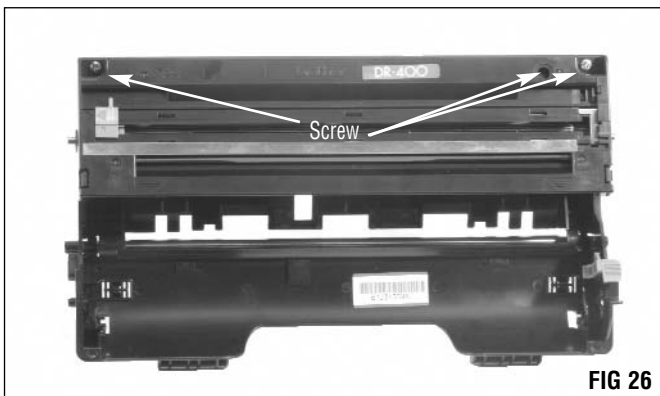


- Using a Phillips screwdriver, replace the two screws and the endplate (FIG 25).

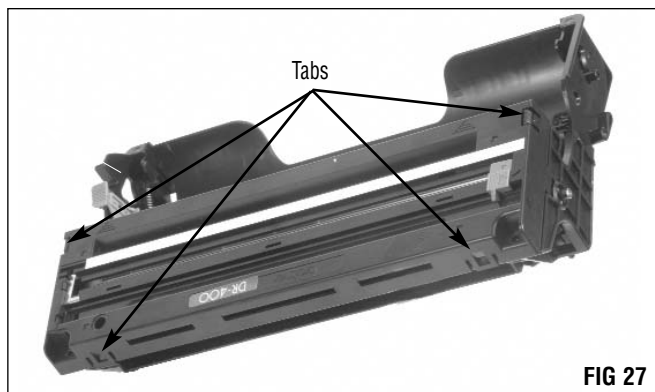


Disassembly of the Drum Section

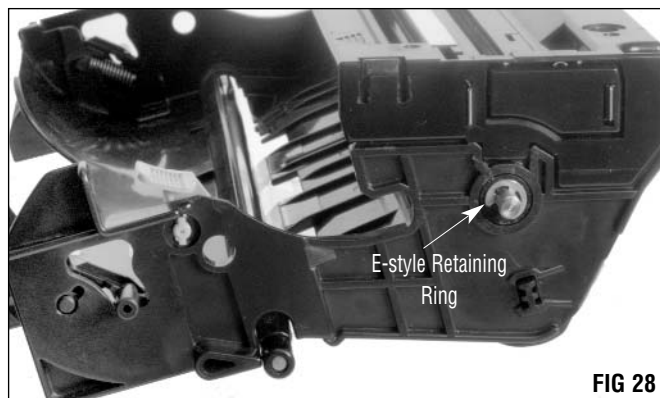
1. Using a Phillips screwdriver, remove the three screws securing the corona assembly (FIG 26).



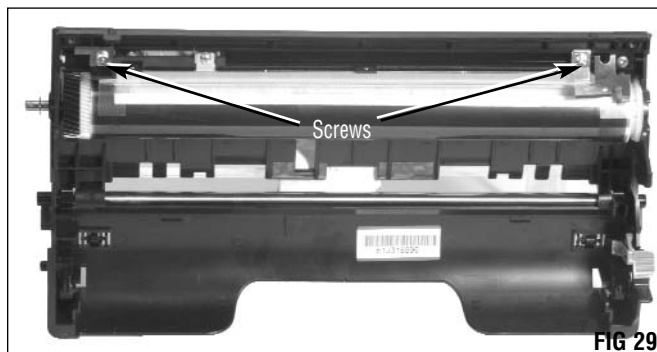
2. Press tabs down and remove assembly (FIG 27).



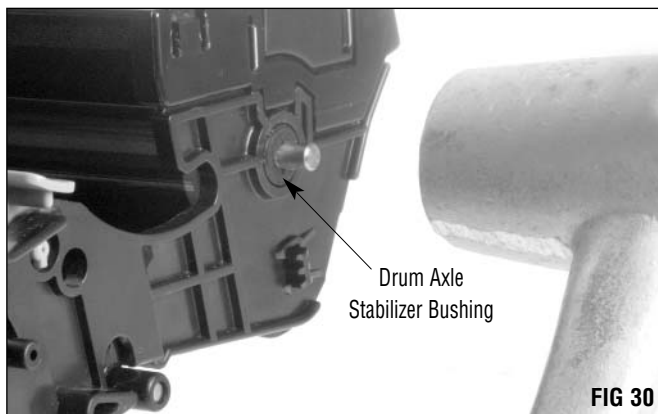
3. Remove e-style retaining ring from the drum axle (FIG 28).



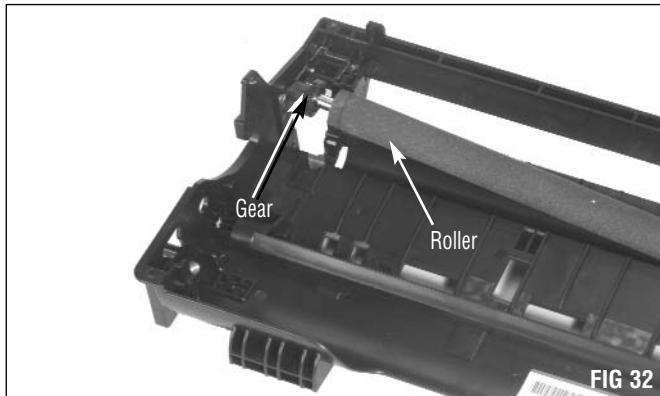
4. Using a Phillips screwdriver, remove the two screws securing drum cleaning assembly (FIG 29).



5. Using an aluminum mallet, gently tap out the drum axle and remove the drum axle stabilizer bushing (FIG 30). Pull the drum axle from the other side and remove the drum and gears (FIG 31).



7. Remove the transfer roller (FIG 32). Make sure not to lose the transfer roller helical gear, the transfer roller contact, or the drum axle stabilizer bushing.



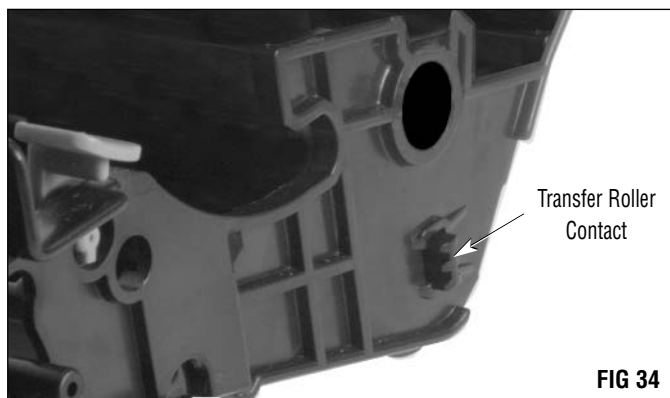
8. Clean the drum section with dry, filtered, compressed air (FIG 33).



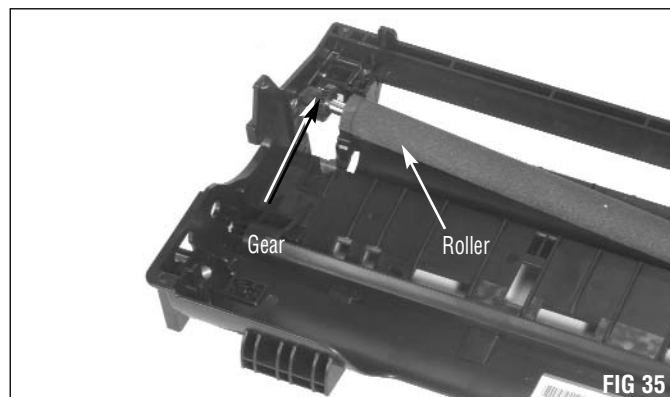


Assembly of the Drum Section

1. Ensure the transfer roller contact is in place (FIG 34).



2. Replace transfer roller and transfer roller helical gear (FIG 35).

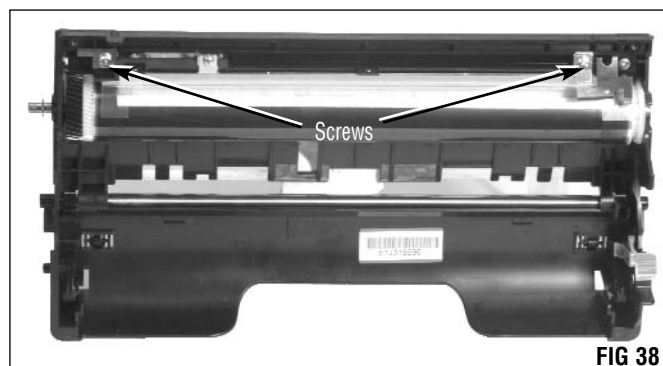


NOTE: See further instructions in System Support Series™ SSS#425 for drum and gear placement.

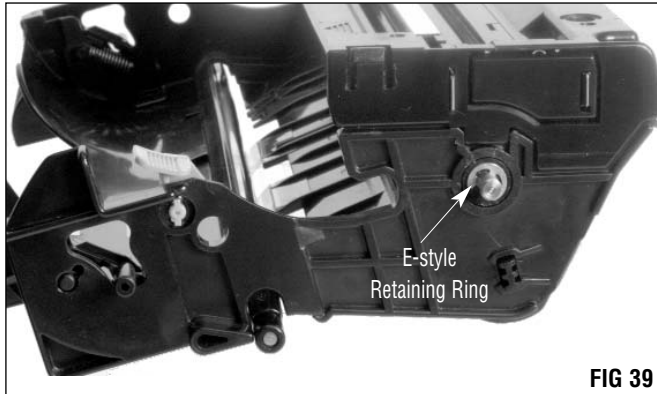
3. Replace the drum and gears and push the drum axle back into the cartridge (FIG 36). Replace the drum axle stabilizer bushing (FIG 37).



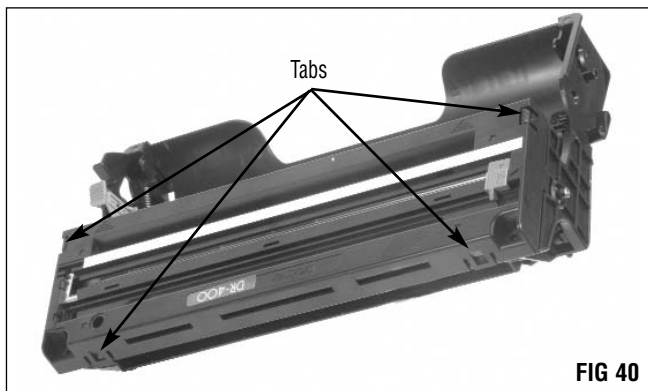
4. Using a Phillips screwdriver, replace the two screws securing drum cleaning assembly (FIG 38).



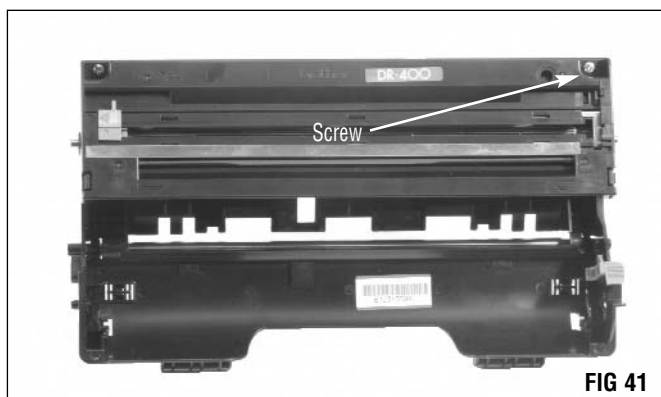
5. Replace e-style retaining ring on the drum axle (FIG 39).



6. Replace corona assembly and press down on the cartridge to engage the tabs (FIG 40).



7. Replace and secure the corona assembly with the screws (FIG 41).



Drum Reset Information

Brother DR-400

Fax Reset Information

1. While the front cover is open, press and hold the clear button. The following screen will appear.

Replace Drum?

1. Yes 2. No

2. Press 1 and close the front cover when ACCEPTED appears in the display window.

Printer Reset Information

1. With the cover open, press and hold the button on the left side of the printer until all LEDs turn on, then release the button.
2. Ensure that the Drum LED is off, then close the front cover.

Brother DR-500

1. Open the Front Cover of the Printer.
2. Press and hold the GO button for approximately 4 seconds to reset the drum counter before closing the front cover. Close the front cover.



Notes:

Technology and Support You Can Rely On!

We realize that the success of your business directly affects the success of Static Control. It's no longer a matter of keeping up with your competition, but surpassing them. That is why we invest so much time and effort in the technology necessary for your business to address new market opportunities quickly, and with confidence.

Where monochrome once ruled the industry color is now emerging and taking a foothold. It is our pledge to you, our customer, to do all we can to help you move into this new opportunity and others, as quickly and effortlessly as possible. We will continue to support monochrome markets, while building a comprehensive color technology library for your reference, along with products to support your growing business. Together we can build a partnership for a successful future.



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