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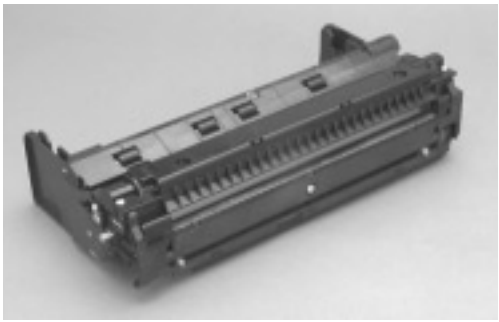
Brother® 600 Drum Unit
Remanufacturing Instructions



This manual provides instructions for cleaning and replacement of parts. As more products and information become available, these instructions will be updated accordingly. Contact your SCC Sales Team or Technical Support for further updates.

About the Cartridge

The Brother® HL-600 series is a two-piece cartridge system comprised of an OPC drum unit and a separate toner cartridge that mounts to the drum unit. The drum unit contains the OPC drum, wiper blade, developer roller, transfer roller, doctor blade, primary corona wire and 125 grams of developer material. The developer material is a magnetite and toner mixture. The rated life of the OPC unit is 16,000 pages, while the toner cartridge is rated at 3,000 pages. Therefore, in normal applications 5 toner cartridges would be consumed for each OPC cartridge.

Reuse of the OEM toner cartridge requires a seal, which is available from multiple suppliers. The most common print problems experienced with the OEM drum unit are backgrounding, shadowing, streaking and light print density. Contributing components to these conditions can include the OPC drum, developer roller, developer material and doctor blade.

The folowing instructions should be followed if planning to replace the drum and wiper blade.

Remanufacturing Information

Estimated Remanufacturing Time	15 minutes
Developer Weight	125 grams
Toner Weight	130 grams
Toner Class	Magnetic, dual component
Seal Type	Toner Port Seal (Plastic Component)
Recommended Test Machine	Brother HL-630

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World Wide Web

www.scc-inc.com

Machine Compatibility

Printer Models

- *HL-630*
- *HL-631*
- *HL-641*
- *HL-645*
- *HL-650*
- *HL-650M*
- *HL-660*
- *WL-660*

Fax Models

- *IntelliFAX1350ML*
- *IntelliFAX1450ML*
- *IntelliFAX2300ML*
- *IntelliFAX2400ML*
- *IntelliFAX2500ML*
- *IntelliFAX3500ML*
- *IntelliFAX4000ML*

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first edition

About the Toner Cartridge

Tools and Supplies You Will Need:

- Phillips Screwdriver
- Needlenose Pliers
- Lint-Free Cleaning Cloth . . . . . .LFCCLOTH
- 91-99% Isopropyl Alcohol . . . . . *(See below)*
- Compressed Air for Cleaning . . . . . *(See below)*

Use of Compressed Air

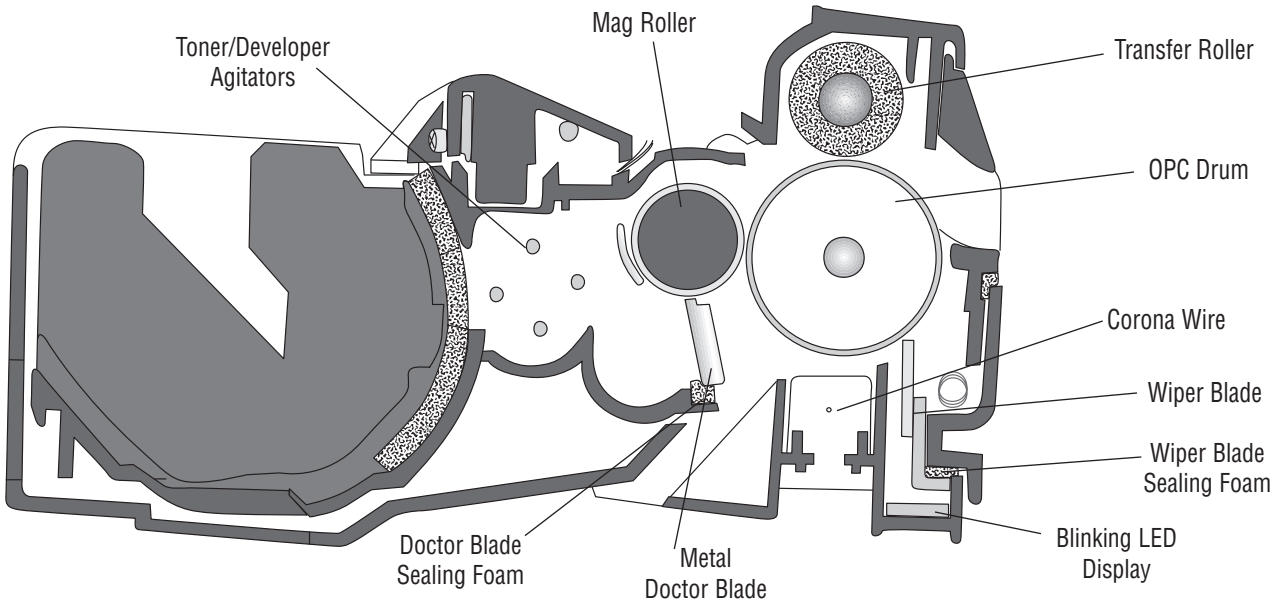
As of April 28, 1971, the Occupational Safety & Health Administration (OSHA) Standard, 29 CFR 1910.242 paragraphs a & b for general industry requires effective chip guarding and personal protective equipment (PPE) when using compressed air. When cleaning residual toner particles from cartridges using 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.

Toner Cartridge Cross-section

This illustration below is a schematic of the Brother 600 Drum Unit as viewed from the right side of the cartridge.



Disassembly Instructions

1. **Remove the corona wire assembly.**
   Lay the cartridge upside-down. Use a Phillips screwdriver and remove the two screws from the corona wire assembly (FIG 1).

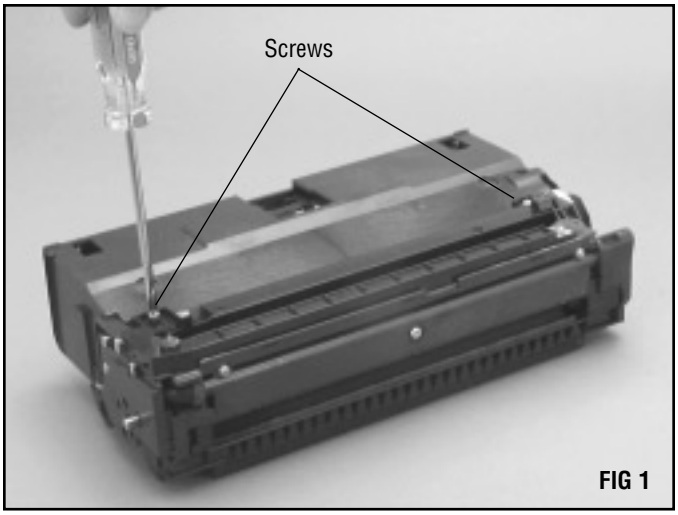


FIG 1

There are three tabs that hold the corona wire assembly in place. Remove the assembly by tilting it up and away from the cartridge.

Carefully clean the corona wire assembly with dry, filtered, compressed air and/or a foam (lint-free) swab.

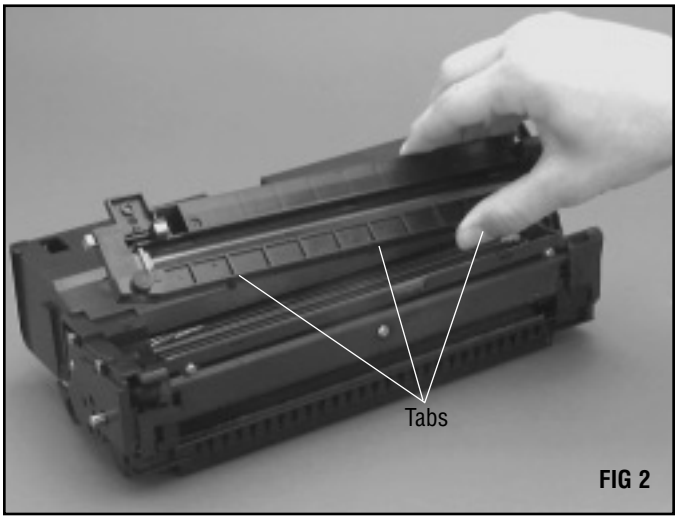


FIG 2

2. **Remove the wiper blade.**
   Use a Phillips screwdriver and remove the two screws on the front of the cartridge (FIG 3).

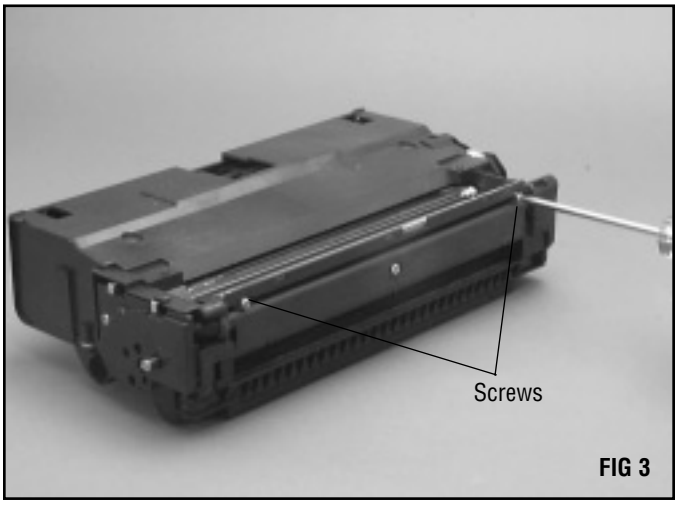


FIG 3

Disassembly Instructions

Use a flat-head screwdriver and carefully pry the wiper blade from the ends of the sealing foam (FIG 4). On the OEM cartridges there is a small amount of Locktite™ applied to the wiper blade and the sealing foam.

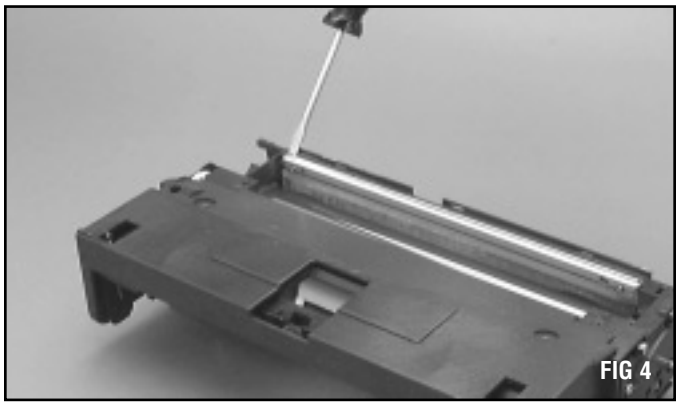


FIG 4

3. Clean the waste area.
Use a vacuum and carefully clean the area under the wiper blade and around the drum (FIG 5).

Be careful not to stretch or damage the spring inside the waste bin. Use caution not to scratch the drum if planning to reuse it.

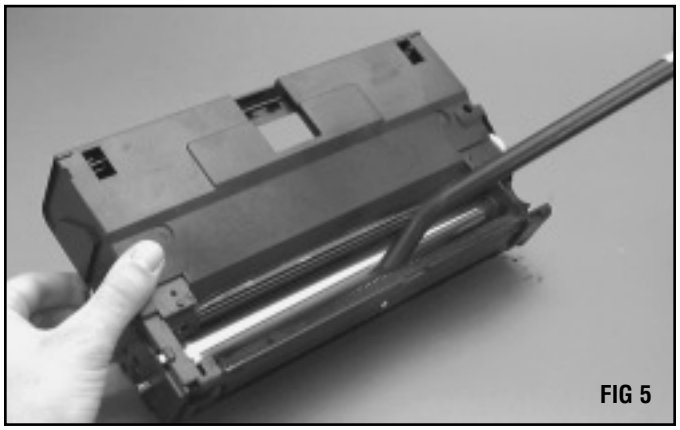


FIG 5

If reusing wiper blade clean it using compressed air (FIG 6). If installing new wiper blade, dip the working edge in Kynar® powder before installing.

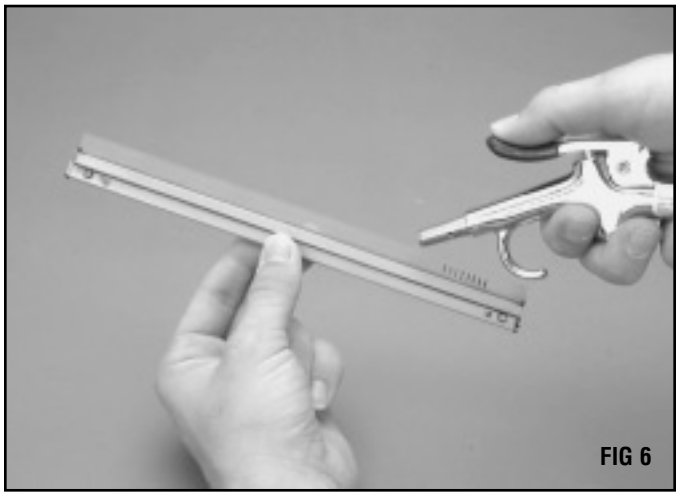


FIG 6

Make sure that the foam strip is positioned properly and not pushed into the waste bin. Then, install the wiper blade into the cartridge. While holding the wiper blade in place, secure it with the two Phillips screws (FIG 7).

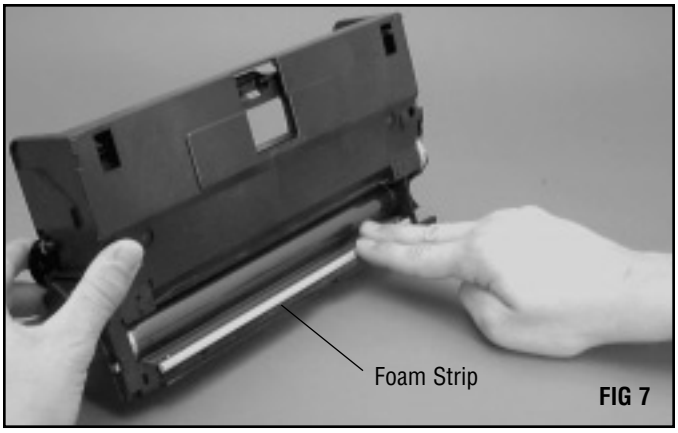


FIG 7

4. Install the corona wire assembly.
Install the corona wire assembly by placing the three tabs in the slots and securing it using the two screws. (Refer to step #1)

5. Remove the hopper tension springs.
Place the cartridge so that it is resting on it's front. Use a pair of needlenose pliers and unhook the hopper tension springs from the waste bin section. There is a small amount of locktite on the ends of the springs to help secure them to the mag roller and developer sections (FIG 8).

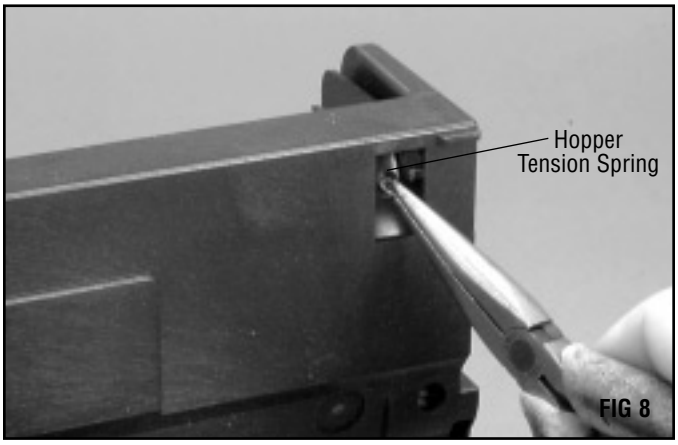


FIG 8

6. Remove the end plate.
Use a Phillips screwdriver and remove the two screws that secure the end plate (FIG 9).

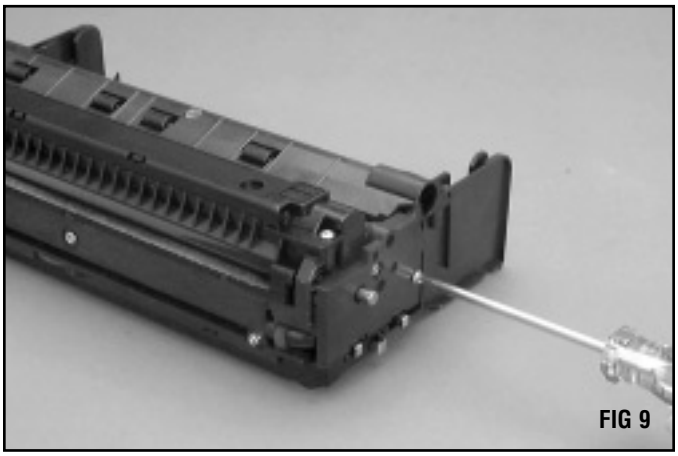


FIG 9

Disassembly Instructions

Release the two clips that secure the end plate to the cartridge and gently pull the end plate from the cartridge (FIG 10).

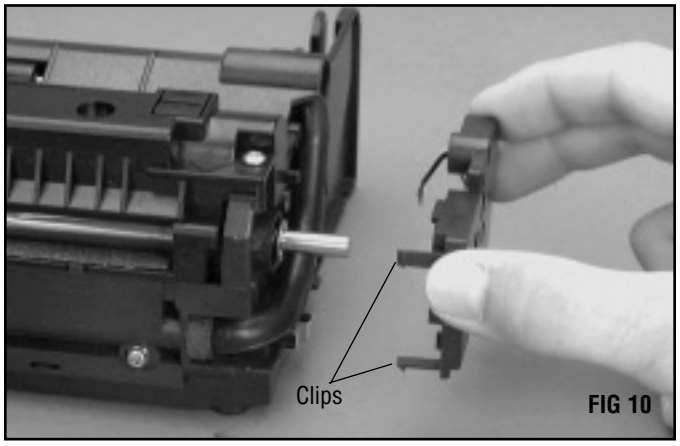


FIG 10

7. Remove the waste toner/developer transfer assembly. Remove the two screws that secure the waste toner/devel-oper transfer assembly (FIG 11).

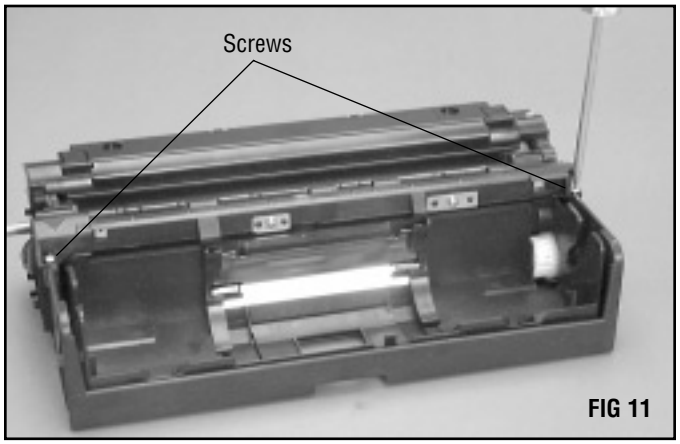


FIG 11

Carefully remove the waste toner/developer transfer assembly and carefully place it to the side of the cartridge (FIG 12). The transfer tube houses a spring that augers the waste back to the developer unit.

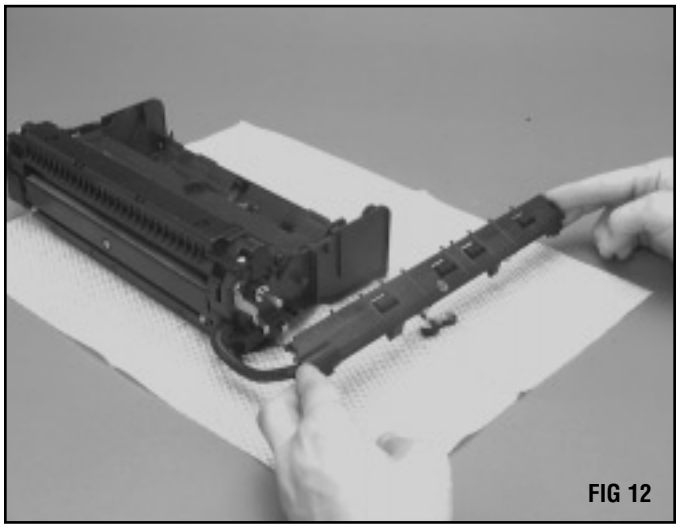


FIG 12

8. Remove the hopper section.
Rotate the hopper section upwards about 45º. Remove it by lifting the left side up and gently sliding it out (FIG 13).

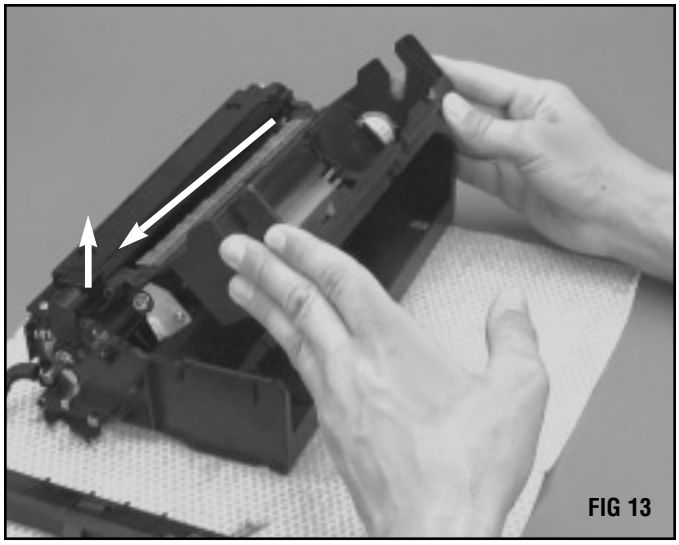


FIG 13

9. Remove the transfer roller assembly.
Remove the two screws that secure the transfer roller assembly (FIG 14).

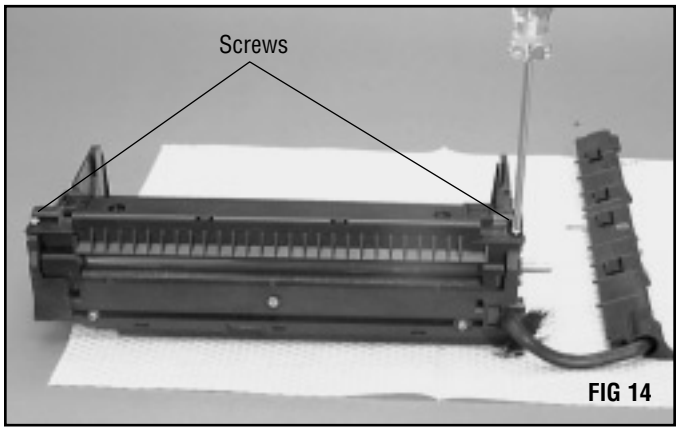


FIG 14

Depress the two clips on the front of the cartridge and remove the transfer roller assembly (FIG 15). Be careful not to break the plastic tabs on the assembly.

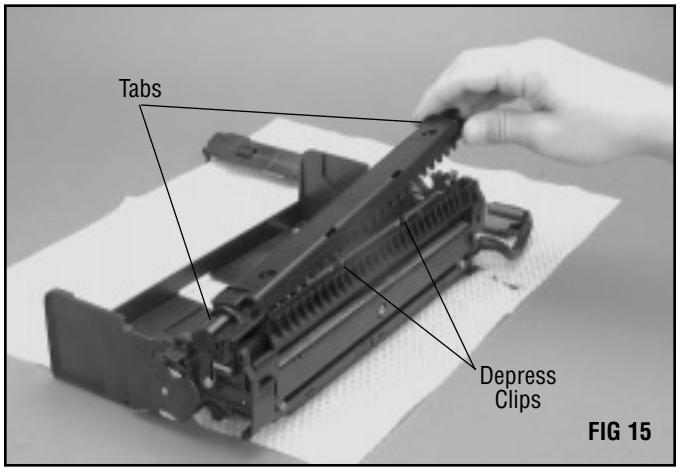


FIG 15

Disassembly Instructions

Clean the transfer roller assembly with dry, filtered, compressed air (FIG 16).

Do not touch the transfer roller with your fingers or with a toner cloth.

FIG 16

10. Remove the OPC drum and axle.
Slide the drum axle out of the cartridge until about one inch remains. Hold on to the drum and drive gear and slide the drum out of the cartridge (FIG 17).

IMPORTANT If you plan to reuse the drum, store it in an area that is protected from light and impact damage.

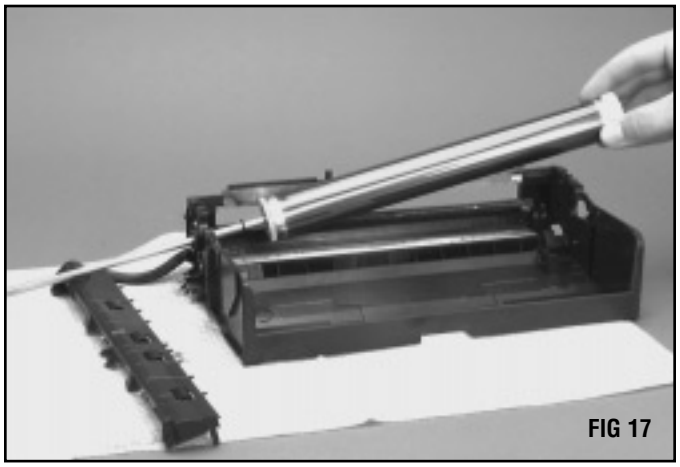


FIG 17

Remove the two washers from the axle (FIG 18). Note the positioning of the two washers in the illustration. Remove the axle from the cartridge and clean any toner or grease build-up on the axle with 99% isopropyl alcohol.

Use compressed air with a light setting to clean the waste section. Be careful not to damage the corona wire or the waste toner/developer assembly spring while cleaning.

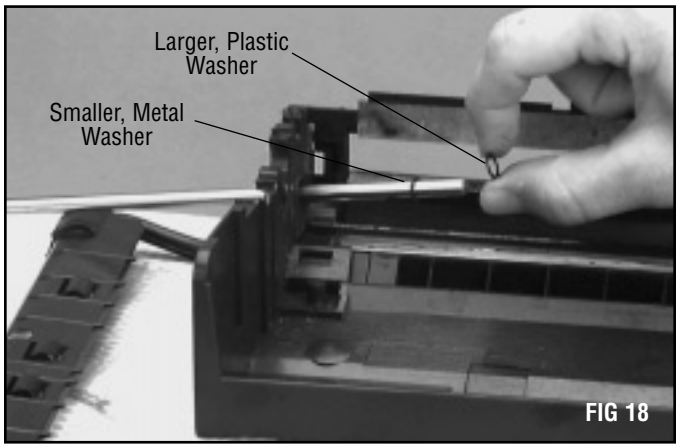


FIG 18

Assembly Instructions

11. Install the drum and axle.

Pad the coated area of the OPC drum with Kynar® lubricating powder and install the drum into the drum unit. Remove the E-ring, two washer and spring from the end of the axle.

Apply a small amount of conductive lubricant to the axle where it contacts the drum contact. Align the axle with the hole in the right side of the cartridge and slide it completely through the drum.

Place the washers on the axle and finish sliding the axle into the cartridge. Make sure that the smaller, metal washer is against the OPC gear.

Install the axle spring washer and e-ring on the axle on the outside of the cartridge.

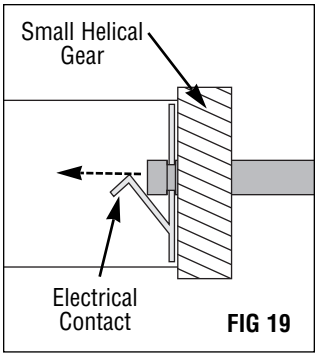


FIG 19

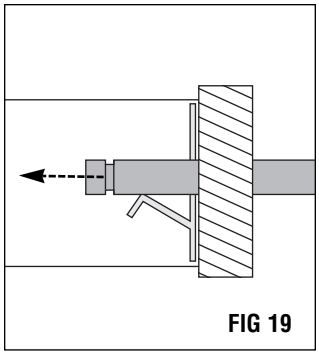


FIG 19

12. Install the transfer roller assembly.

Install the transfer roller assembly and secure it with two screws (FIG 19).

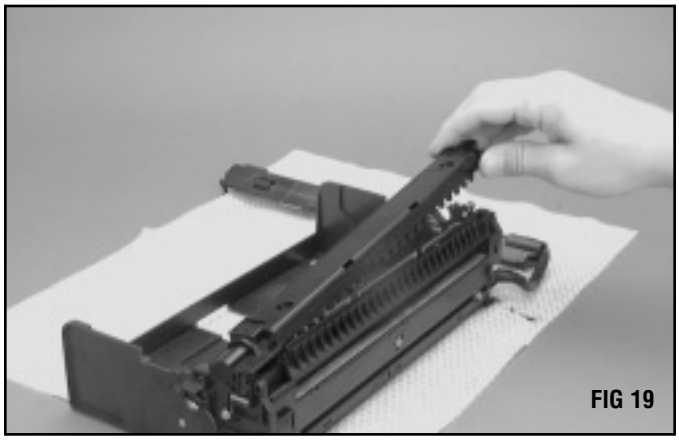


FIG 19

13. Install the hopper section.

Install the hopper section the same way it was removed (FIG 20).

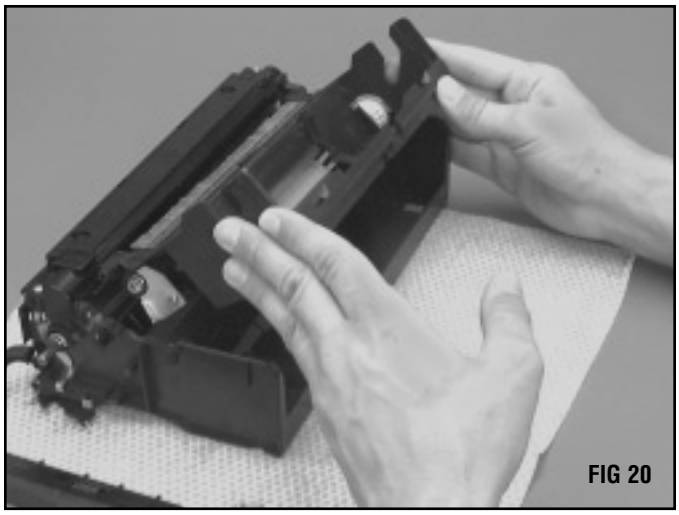


FIG 20

Assembly Instructions

14. Install the toner/developer assembly.
Install the toner/developer assembly and secure it with two screws (FIG 21).

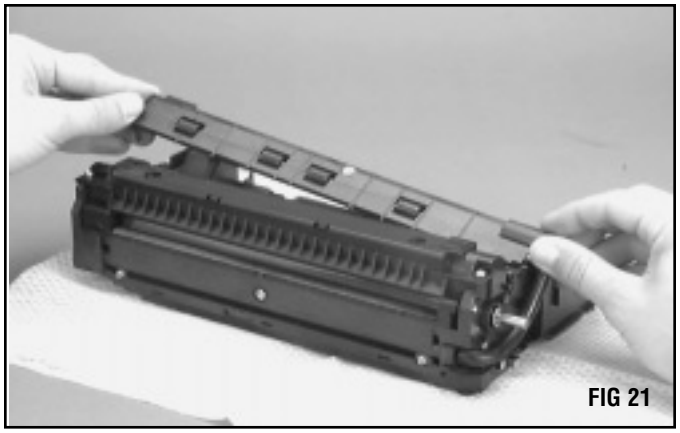


FIG 21

Make sure that both ends of the toner/developer transfer tube are properly seated in the cartridge (FIG 22).

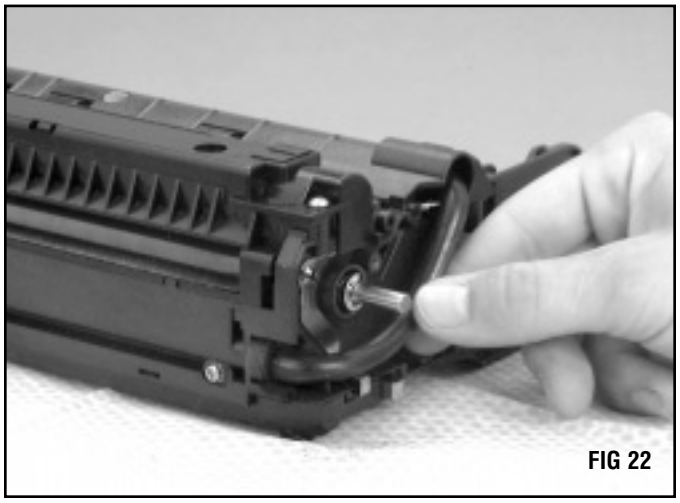


FIG 22

15. Install the end cap.
Apply a thin layer of conductive cartridge lubricant to the electrical contact on the end cap (FIG 23A). Install the end cap making sure that both clips are hooked in place (FIG 23).

The clips are very fragile and if they are broken, they do not affevt the performance of the cartridge.

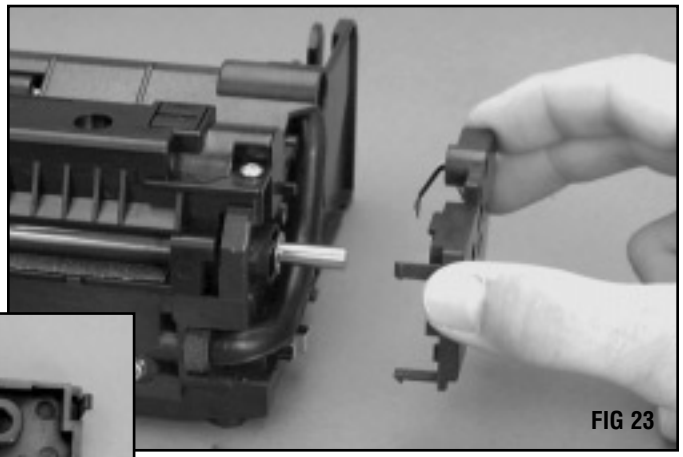


FIG 23

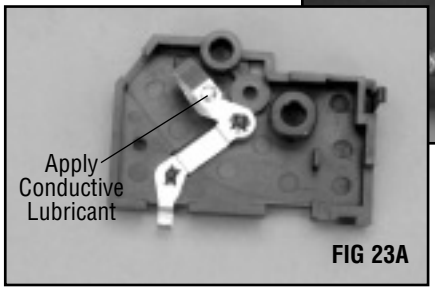


FIG 23A

16. Install the hopper tension springs.
Use needlenose pliers and rehook both hopper tension springs on the underside of the cartridge (FIG 24).

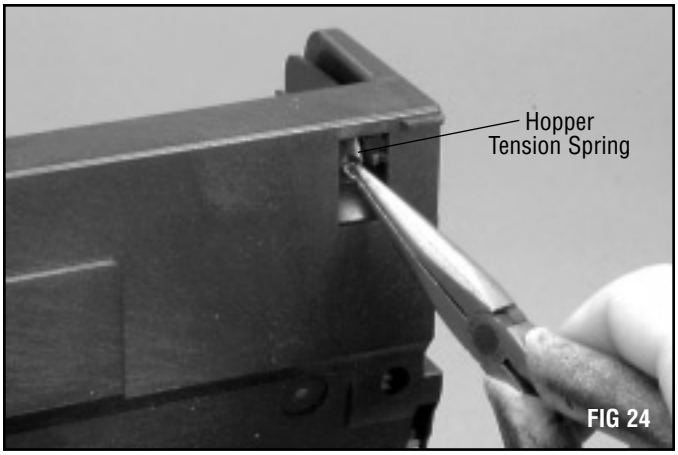


FIG 24

Imaging System Technology You Can Count On!

The development of cartridge imaging systems, such as the Brother 600, is the primary mission of our technology laboratories. Through extensive testing and research, we develop the optimum combination of matched components for each cartridge system. Our engineering and manufacturing expertise provides us with total control in design, quality and development to produce products from the ground up. The result is a system of components that seamlessly work together in each cartridge application.

This dedication and commitment results in integrated cartridge systems that Static Control fully supports, allowing you to quickly attack new market opportunities with complete confidence in the reliability and performance of your cartridges.

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