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Brother® HL 2140/2170, MFC 7320/7440N/7840W, DCP 7030

Purpose of this SSS

The purpose of this SSS is to provide you a guide and the basic information needed to remanufacture a Brother® 2140/2170 toner cartridge. This SSS contains information about:

- Remanufacturing the cartridge
- Basic cleaning

Your cartridge might have been changed by the original equipment manufacturer (OEM) and include parts or features which are not described in this documentation. The documentation might be updated occasionally to include information about those changes, or technical updates might be available from the SCC Web site.

Visit www.scc-inc.com/Library/ to check for updated documentation and technical updates:

Before you begin, read the entire SSS to familiarize yourself with the procedures and take notes.

Be sure to follow all necessary safety precautions while working with tools, and chemicals, such as toner and alcohol.

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.

CARTRIDGE REMANUFACTURING INSTRUCTIONS FOR: BROTHER® HL2140/2170, MFC/7320/7440N/7840W, DCP 7030 TONER CARTRIDGE

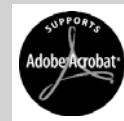
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Illustrations

The illustrations and photos in this document might differ slightly from your cartridge. Every effort is made to include the most up to date photos and illustrations at the time of printing. However, the OEM may make changes which were not available at the time of printing.

Safety

Statement 1: Always wear eye protection while operating power tools.

Statement 2: Always wear eye protection and protective clothing while working with toner and or other chemicals.

Statement 3: Do not swallow or ingest toner, isopropyl alcohol, toner dust, or any chemicals or materials used in the process of remanufacturing

Additional Tools & Supplies

Additional Items:

- Qualified Toner

For Basic Remanufacturing:

- Phillips Screwdriver
- Compressed Air for Cleaning
- Lint-Free Cleaning Cloth (LFCLOTH)
- 91-99% Isopropyl Alcohol
- Narrow Toner Pour Spout (TPS-90)
- Lint-Free Foam Tip Swab (LFSWAB)
- Small Flat Blade Screwdriver
- Felt Foam Scraper Tool (FSTOOL)
- Conductive Lubricant (CONCLUBE)

The following is a summary of the printer and cartridge information for the Brother® 2140/2150/2170/7320

	Brother® 2140	Brother® 2150	Brother® 2170	Brother® 7320
Printer Information				
Print Technology	B/W Laser	B/W Laser	B/W Laser	B/W Laser
Printer Introduction Price	\$199.99	£116.33	\$149.99	£198.58
Print Resolution (dpi)	2400 x 600	2400 x 600	2400 x 600	2400 x 600
Print Speed (pages per min)	23 ppm	22 ppm	23 ppm	18 ppm
First Page Out	<10 sec	<10 sec	<10 sec	<10 sec
Duty Cycle	10,000 ppm	10,000 ppm	10,000 ppm	10,000 ppm
RAM	8 MB	16 MB	32 MB	16 MB
Cartridge Information				
OEM Cartridge Number	LY: TN-330 HY: TN-360 Drum: DR-360	LY: TN-2110 HY: TN-2120 Drum: DR-2100	LY: TN-330 HY: TN-360 Drum: DR-360	LY: TN-2110 HY: TN-2120 Drum: DR-2100
OEM Rated Page Yield	1,500 low yield 2,600 high yield	1,500 low yield 2,600 high yield	1,500 low yield 2,600 high yield	1,500 low yield 2,600 high yield
Cartridge Price List (MSRP)	LY: \$44.99 HY: \$64.99	LY: \$44.99 HY: \$64.99	LY: \$44.99 HY: \$64.99	LY: \$44.99 HY: \$64.99

The following is a summary of the printer and cartridge information for the Brother® 7030/7040/7440/7840.

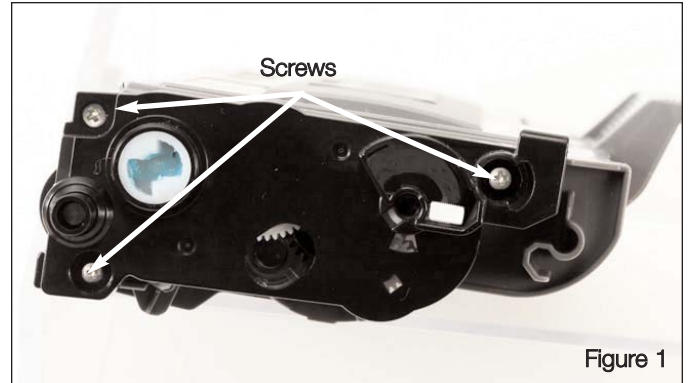
	Brother® DCP 7030	Brother® DCP 7040	Brother® MFC 7440	Brother® MFC 7840
Printer Information				
Print Technology	B/W Laser	B/W Laser	B/W Laser	B/W Laser
Printer Introduction Price	\$179.99	\$199.99	\$249.99	\$299.99
Print Resolution (dpi)	2400 x 600	2400 x 600	2400 x 600	2400 x 600
Print Speed (pages per min)	23 ppm	23 ppm	23 ppm	23 ppm
First Page Out	<10 sec	<10 sec	<10 sec	N/A
Duty Cycle	10,000 ppm	10,000 ppm	10,000 ppm	10,000 ppm
RAM	16 MB	16 MB	32 MB	32 MB
Cartridge Information				
OEM Cartridge Number	LY: TN-330 HY: TN-360 Drum: DR-360	LY: TN-330 HY: TN-360 Drum: DR-360	LY: TN-330 HY: TN-360 Drum: DR-360	LY: TN-330 HY: TN-360 Drum: DR-360
OEM Rated Page Yield	1,500 low yield 2,600 high yield	1,500 low yield 2,600 high yield	1,500 low yield 2,600 high yield	1,500 low yield 2,600 high yield
Cartridge Price List (MSRP)	LY: \$44.99 HY: \$64.99	LY: \$44.99 HY: \$64.99	LY: \$44.99 HY: \$64.99	LY: \$44.99 HY: \$64.99



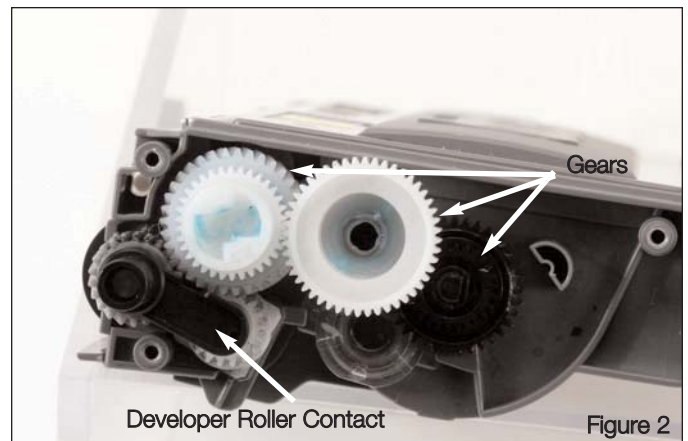
disassembling the cartridge

REMANUFACTURING THE BROTHER® 2140/2170 TONER CARTRIDGE

1. Using a Phillips screwdriver, remove the three screws on the drive side end cap as shown in Figure 1. Remove the end cap.



2. Remove the gears and developer roller contact from the drive side as shown in Figure 2.

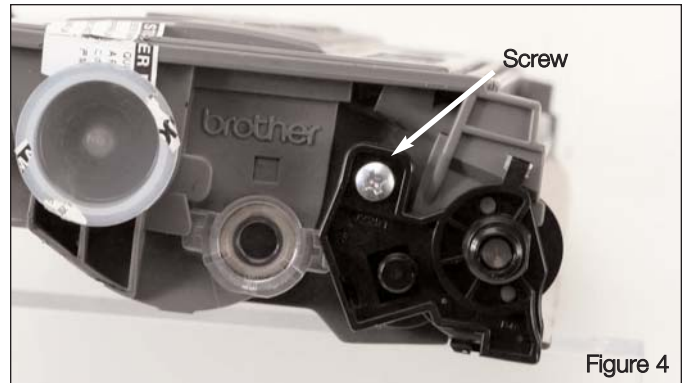


3. Using a small flat blade screwdriver, carefully remove the e-clip from the developer roller drive gear as shown in Figure 3. Remove the developer roller drive gear.

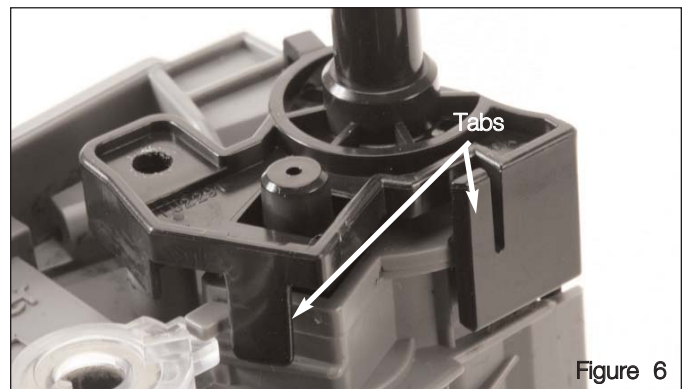
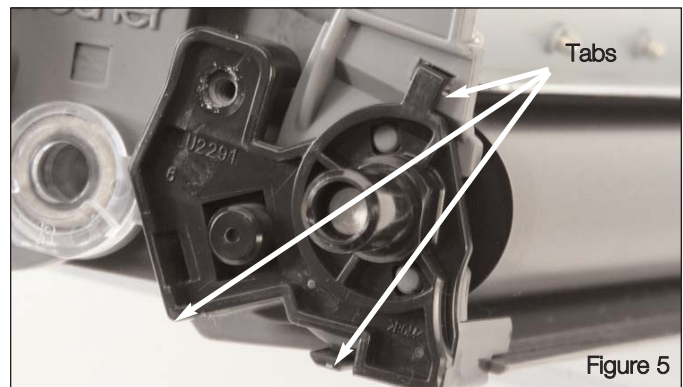


disassembling the cartridge

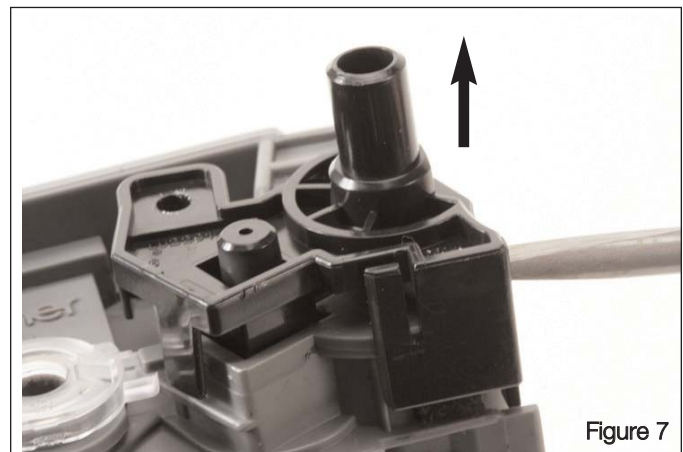
- Using a Phillips screwdriver, remove the one screw on the non-drive side end plate as shown in Figure 4.



- Using a small flat blade screwdriver or the felt scraper tool, release the three locking tabs on the non-drive side end plate. Insert the head of the screwdriver into the slot as shown in Figure 5 & 6 and press down on the tab. This will release the end plate from the cartridge.



- Remove the end plate from the cartridge as shown in Figure 7. A flat blade screwdriver may be needed to gently pry the end plate away from the cartridge.



7. Rotate the white developer roller stabilizer on the drive side forward, then lift out of the cartridge as shown in Figure 8.
8. Clean the developer roller with dry, filtered compressed air.
9. Using a lint-free cloth with isopropyl alcohol, wipe down the developer roller. Then, wipe again with a lint-free cloth and deionized water. Dry the roller completely with dry, filtered compressed air.



Figure 8

10. Remove the hopper cap as shown in Figure 9.



Figure 9

11. Using compressed air, clean out the cartridge completely as shown in Figure 10.



Figure 10

12. Using a dry, lint-free cloth, clean off the rubber working surface of the doctor blade as shown in Figure 11.

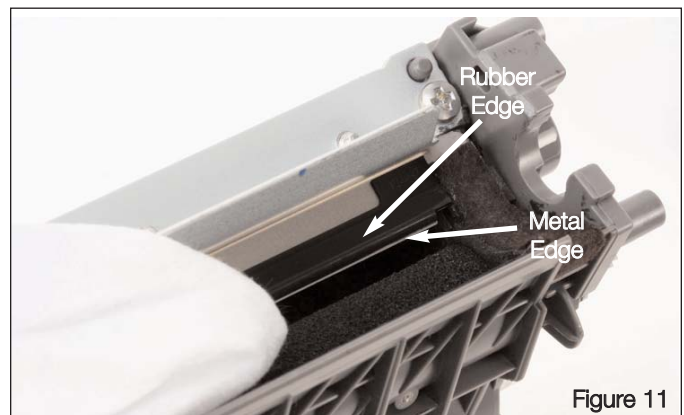


Figure 11

13. Using the wooden end of a cotton or lint-free Q-tip, scrape the metal working edge gently to remove the built in additives as shown in Figure 12.



Figure 12

14. Vacuum the toner adder roller to remove all toner residue. Rotate the toner adder roller to insure that all the toner is removed.



Figure 13

15. Using a flat blade screwdriver, fluff the end felts and vacuum any residual toner as shown in Figure 14.



Figure 14



reassembling the cartridge

REMANUFACTURING THE BROTHER® 2140/2170 TONER CARTRIDGE

1. Replace the developer roller. Rotate the white developer roller stabilizer inward until the roller is fully seated as shown in Figure 15.

Note: Installing the roller other than as directed will crease the felts and cause leakage.



Figure 15

2. Replace the non-drive side plate and secure with the screw as shown in Figure 16.

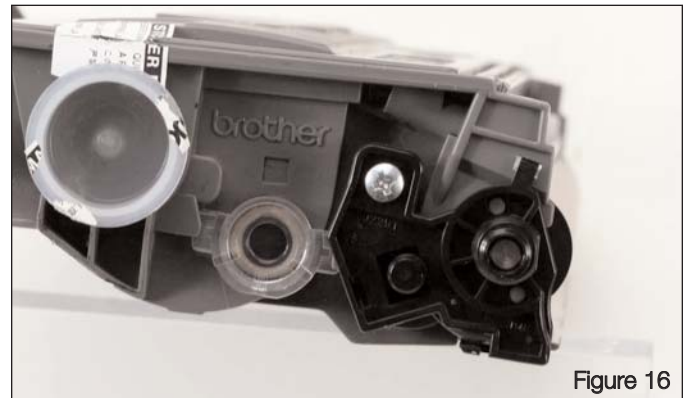


Figure 16

3. Replace the developer roller drive gear and secure with the e-clip as shown in Figure 17.

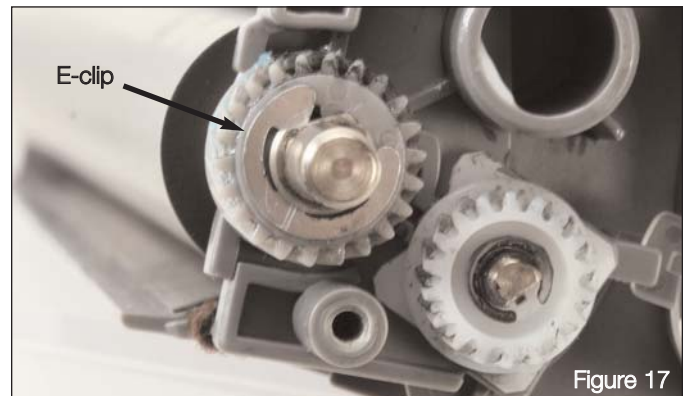


Figure 17

4. Replace the gears as shown in Figure 18.
5. Replace the developer roller contact as shown in Figure 18.

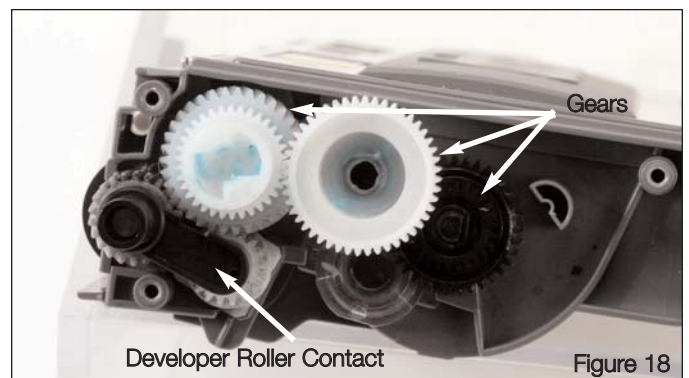


Figure 18

- Refer to Figures 19a & 19b for the various components of the low yield and high yield flag gears.

High-Yield Flag Gears



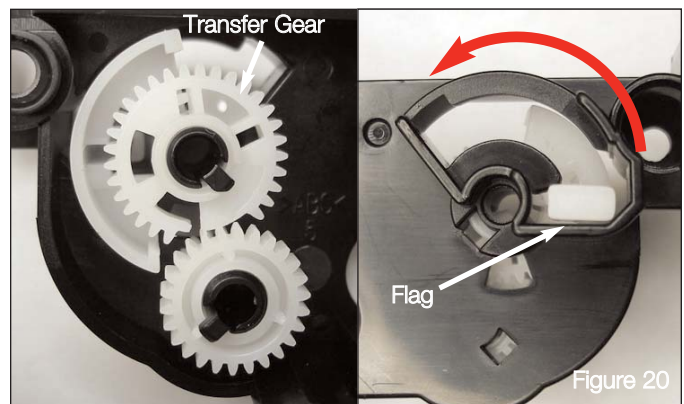
Low-Yield Flag Gears



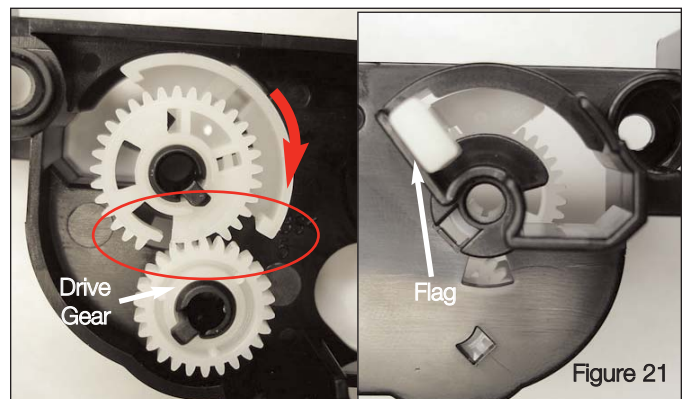
- Before reinstalling the drive side end plate, the flag gears must be reset. Rotate the flag counter clockwise as shown in Figure 20. This will reset the flag gear. See Figure 21.

Note: The transfer gear will need to be rotated separately clockwise after resetting the flag gear. Turn the gear until the teeth no longer mesh with the drive gear as shown in Figure 21.

High-Yield Flag Gear - Spent Position

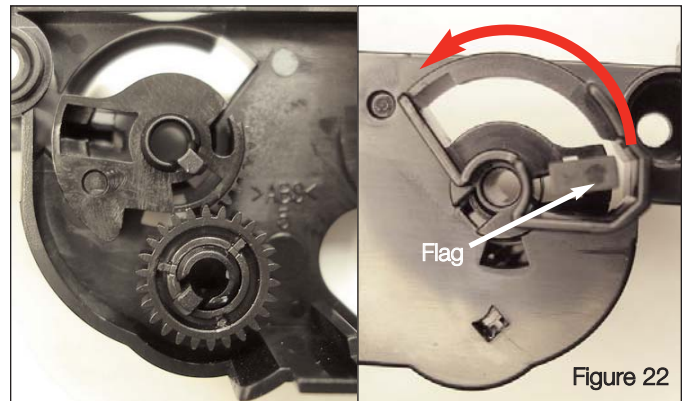


High-Yield Flag Gear - Reset Position

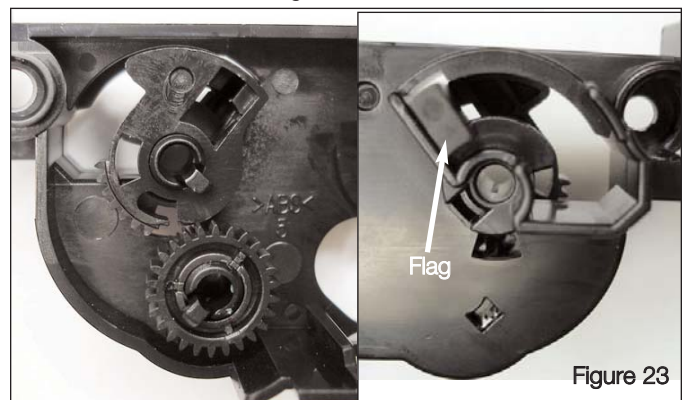


8. Before reinstalling the drive side end plate, the flag gears must be reset. Rotate the flag counter clockwise as shown in Figure 22. This will reset the flag gear. See Figure 23.

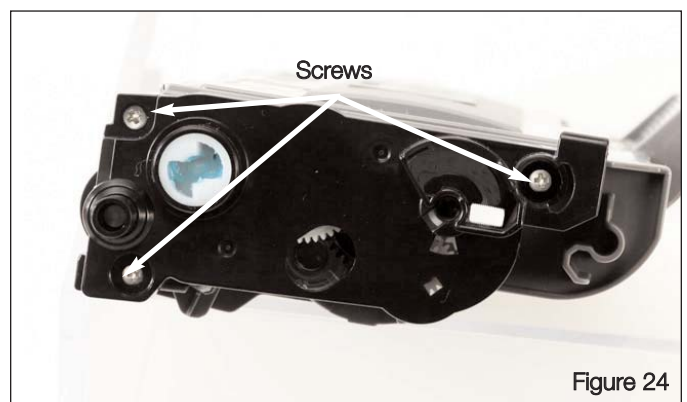
Low-Yield Flag Gear - Spent Position



Low-Yield Flag Gear - Reset Position



10. Reinstall the drive side end plate and secure with the three screws as shown in Figure 24.



11. Fill the cartridge with the qualified toner and replace the hopper cap as shown in Figure 25.



MOVING AT THE SPEED OF NEW TECHNOLOGY

The development of cartridge imaging systems is the primary mission of our Imaging Labs. 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.



STATIC CONTROL COMPONENTS, INC.

SCC Imaging Division

3010 Lee Avenue • PO Box 152 • Sanford, NC 27331
US/Can 800-488-2426 • US/Can Fax 800-488-2452
Int'l 919-774-3808 • Int'l Fax 919-774-1287
www.scc-inc.com

Static Control Components (Europe) Limited

Unit 30, Worton Grange
Reading • Berkshire RG2 0TG • United Kingdom
Tel +44 (0) 118 923 8800 • Fax +44 (0) 118 923 8811
www.scceurope.co.uk