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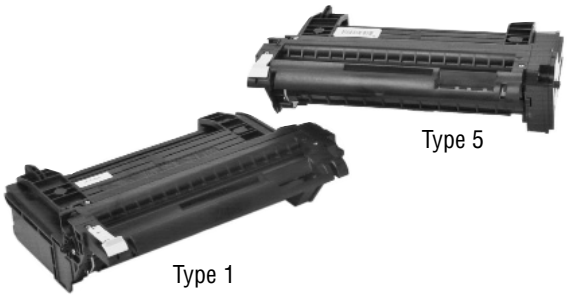
Xerox® 212DC/214DC, Toshiba® DP1250/DP1450
Remanufacturing Instructions



About the Cartridges

In May 1998 Xerox® introduced the 12ppm 212DC and the 14ppm 214DC digital copiers and the 212DPC/214DPC digital printer/copiers. Designed for small offices and small workgroups that share a copier and printer, these versatile 600 dpi machines included many features found in higher priced copiers. Though manufactured by Xerox, they were also offered by Toshiba® as the DP1250/DP1450 respectively.

All versions utilized single-piece print cartridges with a yield of 14,000 pages (at 6% coverage). The Xerox 212DC/214DC could be converted to printers with the installation of optional printer interface kits.

Several types of cartridges are available for the 212/214 machines, but only two types are sold in the US. Type 1 is sold through authorized Xerox dealers and carries the part number 113R180 or 113R181 (the 113R180 is an Environmental Partnership version which may be reconditioned by Xerox). All five types look identidal, with the only difference being the drum reset/cartridge identifier chip

Type 5 cartridges are those sold through retail outlets, with the part number 113R287.

Each cartridge variety has a different drum-reset chip that specifies its market type. Each printer is programmed to accept only one cartridge type, but can be reset to accept which ever version is installed. If a conflicting cartridge is inserted, a "J8" (Incorrect Copy Cartridge) error code will be displayed, and the machine can easily be manually reset through the diagnostic mode to accept the new cartridge.

Key Points

- The toner hopper and drum/waste bin sections are held together by two metal pins.
- The wiper blade is made of polyurethane attached to a metal stamping. It is located behind the corona assembly, which must be removed to allow access to the wiper blade screws.
- The doctor blade is made of white silicon and is attached to a thin flexible metal base with a sealing foam on the underside. These are affixed to a stainless steel stamping.
- A drum-reset chip tracks the copy count, as well as identifies the cartridge type (types 1 through 5).

Xerox® 212DC/214DC Engine Information

Copier Name	Xerox® 212DC/214DC
Date of Introduction	May 1998 (212DC, Discontinued/214DC, Current)
Print Speed	12 ppm (212DC)
	14 ppm (214DC)

Xerox® 212DC/214DC Cartridge Information

Toner /Drum Cartridge OEM Part Number (Code)	113R180/113R181 (Type 1, Xerox Dealers)
	113R287 (Type 5, Super store Outlets)
Cartridge List/Wholesale Price*	$385/$341
OEM Rated Page Yield	14,000 pages at 6% coverage
Toner Class	Magnetic, Mono-component

Model Compatibility

*Xerox® 212DC, 212DPC, 214DC, 214DPC, Toshiba® DP1250, DP1450, Olivetti® Copia 9814, Triumph Adler® DC140**

**Some modification may be necessary for cartridge compatibility*

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www.scc-inc.com/imaging/Imaging.htm

Get the latest information on the web at Static Control's Xerox® 212DC/214DC Online Engine Center at www.scc-inc.com/Engine/212DC

System Support Series™ Documents are available on our Web site in Adobe® Acrobat® format.

If you need additional information or technical assistance, please contact your Support Team.

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info@scc-inc.com (USA e-mail)
info@scceurope.co.uk.(UK e-mail)
www.scc-inc.com/imaging/Imaging.htm

Version 2 - October 2005

Tools and Supplies You Will Need

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.

Tools and Supplies

Recommended for Basic Remanufacturing:

- 91-99% Isopropyl Alcohol .....*(See left)*
- Compressed Air for Cleaning .....*(See left)*
- Kynar® Drum/Blade Lubricating Powder .....KPOW
- Odyssey™ Xerox 212DC/214 Drum OSDC212DRUM
- Xerox® 212DC/214 Gasket Seal Assembly .....GSA
- Xerox® DC 212/214 Chip w/Housing HDC212RCHIP
- Xerox® 212DC/214 Qualified Toner DC212-820B
- Phillips Screwdriver (2 pt)
- Small Flat-Blade Screwdriver
- Shallow Trough for dipping the wiper blade
- Xerox® 212DC/214 or Compatible Copier

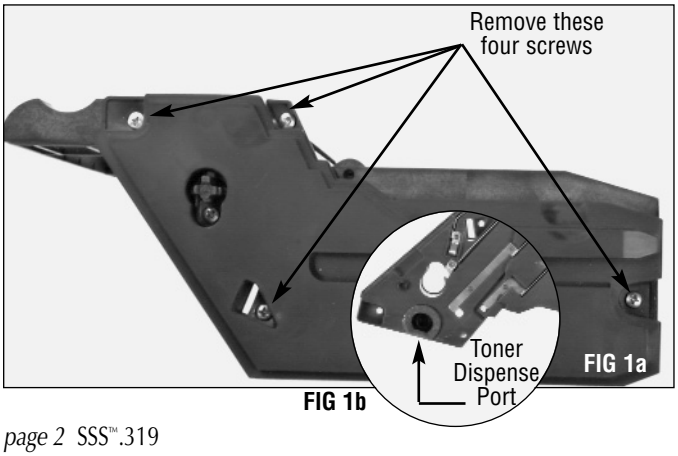
** Items with product codes are available from Static Control at the time of this printing. Contact your Support Team for more information.*

Separation of the Cartridge

NOTE There is no shutter on the 212DC/214 to protect the OPC drum. If you plan to reuse the drum, wear gloves or use other aids to prevent touching the drum surface with your bare hands, use extreme care not to damage the OPC while separating the cartridge, and protect from light and impact damage during the remanufacturing process.

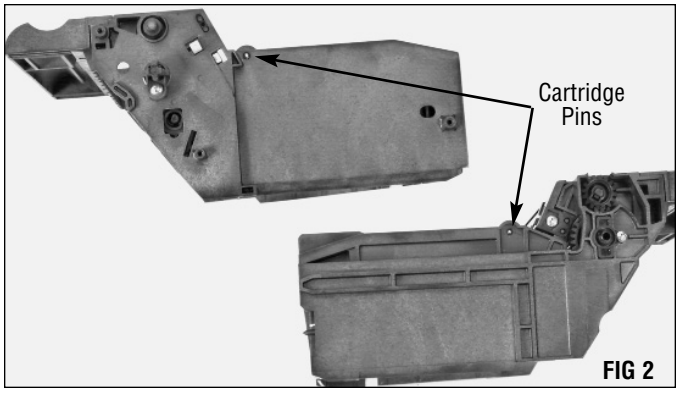
1. Remove the waste bin first

To avoid possible damage to the four electrical contacts located on the waste bin, remove the waste bin before separating the cartridge by removing the four screws that secure the waste bin to the drum unit (FIG 1a). Detach the waste bin and dump all waste materials through the toner dispense port (FIG 1b).



2. Separate the cartridge

Remove the two pins located on either side of the drum unit by pushing them into the cartridge (FIG 2). The pins will fall out when the sections are separated.



Disassembly of the Drum Unit

3. Remove the drum

On the waste bin end of the drum unit (opposite that of the helical gear), there is one screw securing a plastic drum axle pin (FIG 3a). Remove this screw and pull the axle pin out of the housing (FIG 3b).

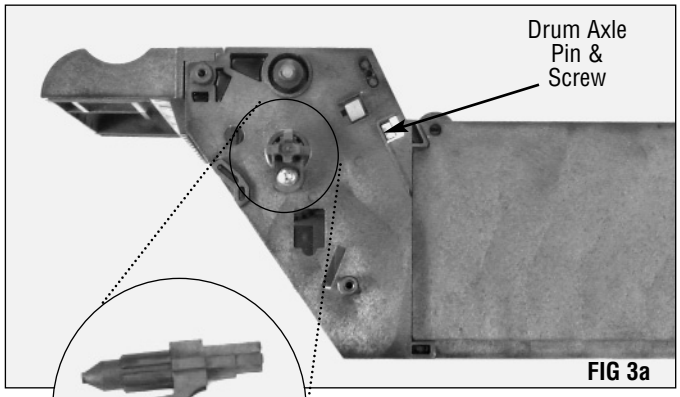


FIG 3a

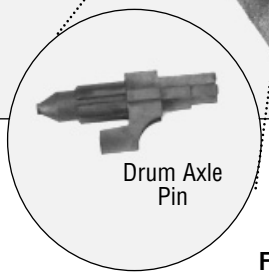


FIG 3b

NOTE The axle pin on the helical gear end of the drum is held in place by one screw and two release tabs. This pin cannot be removed while the drum is in place without damaging the release tabs. Static Control recommends this axle pin be left in place.

NOTE Static Control recommends replacing the OPC drum after the OEM cycle and after each remanufacturing cycle.

However, if you plan to reuse the drum, wear gloves or use other aids to prevent touching the drum with your bare hands. Be sure to protect the drum from light and impact damage until you are ready to install it in the cartridge.

Carefully push the side of the cartridge housing (non-geared end) out slightly as you lift the drum up and out of the housing. Take care not to bend or break the axle pin on the helical gear end (FIG 4).

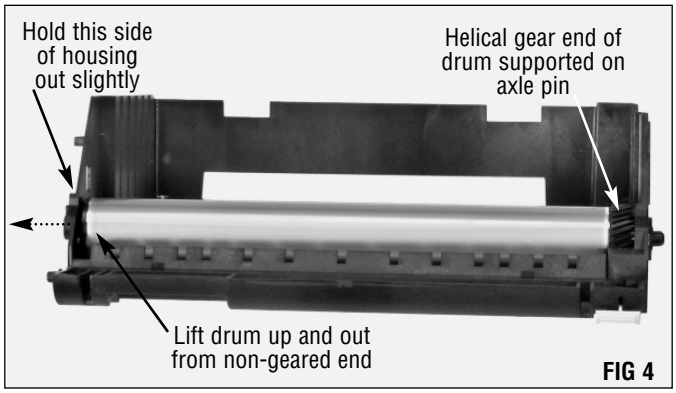


FIG 4

4. Remove the corona assembly

Beneath the area where the drum resides is the waste toner delivery area, made up of the wiper blade, waste toner auger and recovery blade (FIG 5). The corona assembly sits above the wiper blade, blocking the screws that hold the wiper blade in place.

The corona assembly must be moved to expose the wiper blade screws.

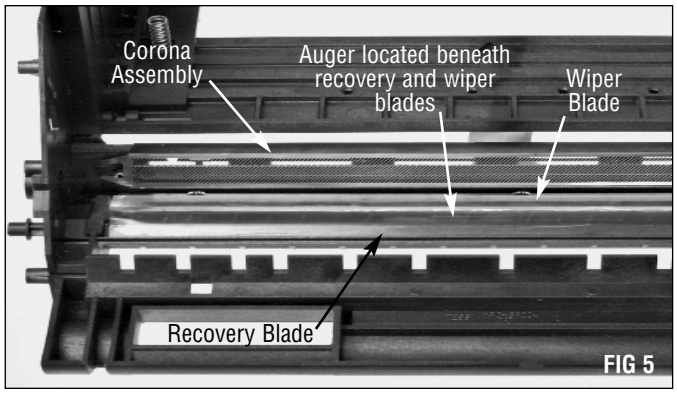


FIG 5

Remove the screw on top of the drum unit that holds the corona assembly in place (FIG 6).

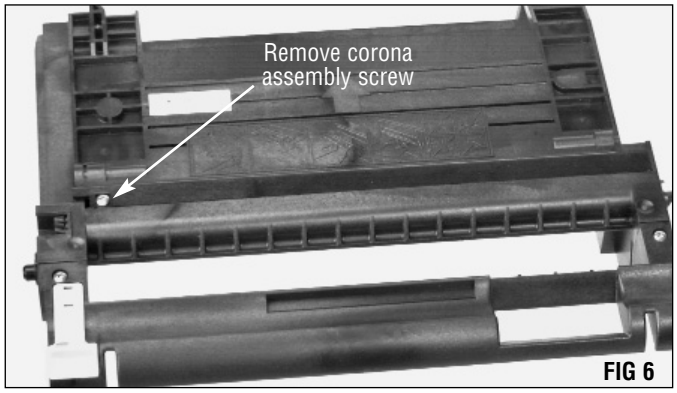


FIG 6

Using a small flat blade screwdriver, press in on the two alignment posts on the opposite (contact) end of the cartridge (FIG 7). This will shift the assembly toward the drive gear end enough for the electrical contact to clear the housing, and the corona assembly to clear the alignment posts on the drive gear side.

Do not press directly on the electrical contact.

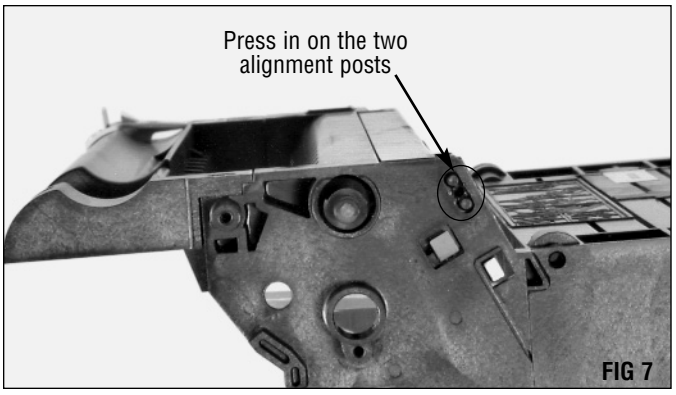


FIG 7

Carefully lift the drive gear side of the corona assembly, making sure the electrical contact on the opposite end has cleared the housing (FIG 8). Remove the assembly and set it aside.

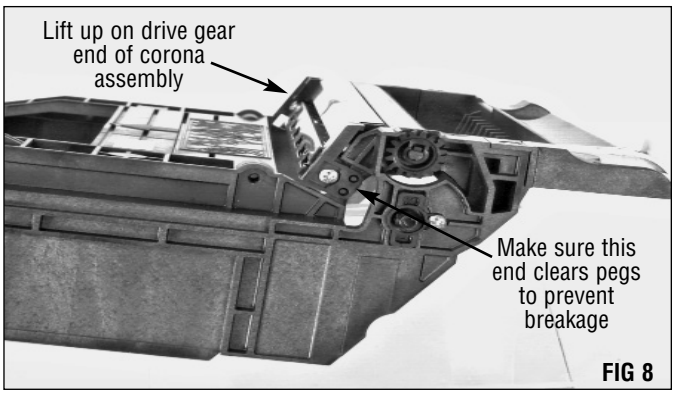


FIG 8

5. Remove the wiper blade

Using a Phillips screwdriver, remove the three wiper blade screws (FIG 9). Lift the wiper blade out of the assembly and set it aside.

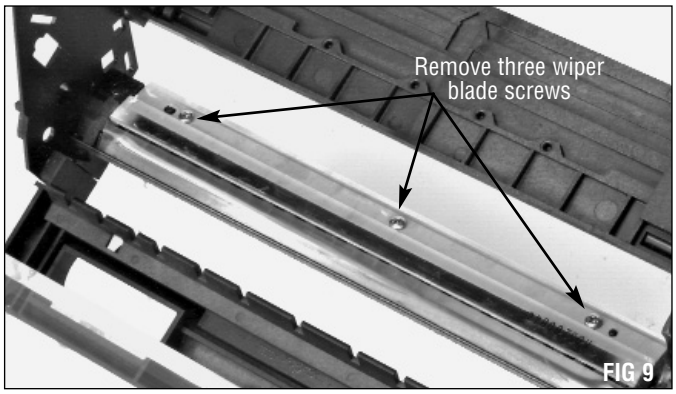


FIG 9

Inspect the waste toner auger, end foams and recovery blade for damage (FIG 10). Clean the area gently with dry, filtered, compressed air.

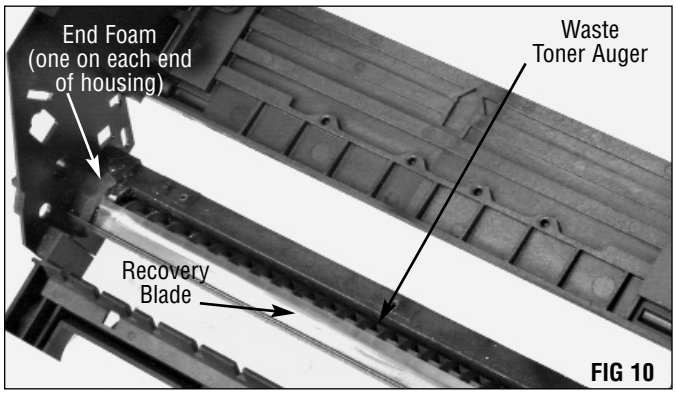


FIG 10

Reassembly of the Drum Unit

1. Clean the wiper blade

Static Control recommends cleaning the wiper blade with dry, filtered, compressed air only. Never use alcohol or other chemicals. For best results replace the wiper blade each time you replace the drum.

NOTE Do not use alcohol or any alcohol-based solvent to clean the polyurethane blade.

2. Lubricate the wiper blade

When applied to the working edge of the blade, a lubricating powder such as Kynar® will help prevent blade "flip overs" during the first drum rotations of the remanufactured cartridge. Static Control recommends padding the wiper blade regardless of whether you are reusing the old blade or are using a new replacement blade.

Before installing the wiper blade, dip the edge of the blade in the lubricating powder. Examine the length of the blade to ensure even coverage and repeat the dipping process one time (FIG 11).

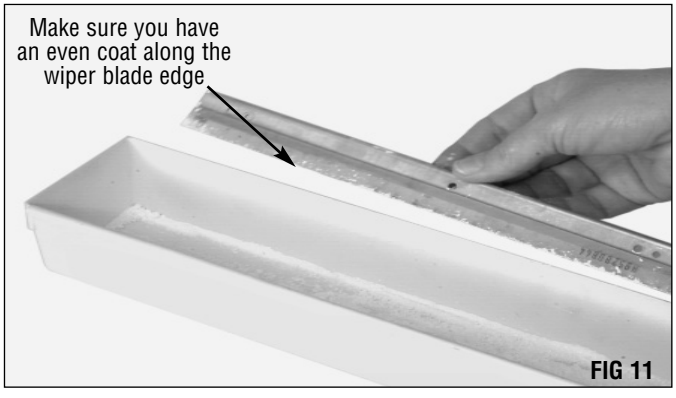


FIG 11

3. Install the wiper blade

Seat the wiper blade base in place over the two positioning pegs. Secure the blade assembly with three short Phillips screws (FIG 12).

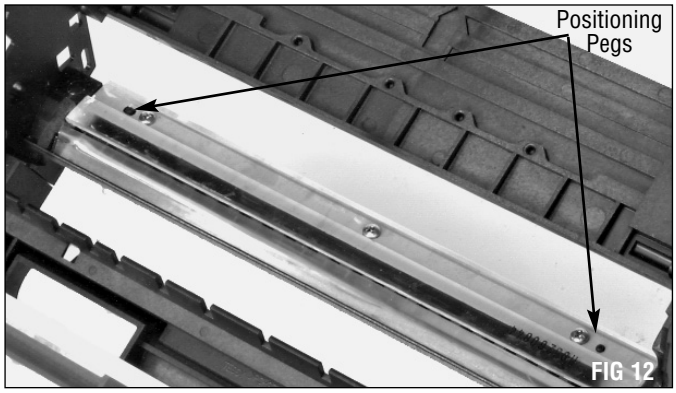


FIG 12

4. Clean and install the corona assembly

NOTE The 212DC/214 utilizes a sawtooth blade instead of a corona wire. The teeth on this blade are extremely sharp and can cause injury. Use caution when working with the corona charge assembly.

Remove the corona charge grid by loosening the screw located on the non-contact side of the assembly (FIG 13). DO NOT remove the screw.

FIG 13

Lift the non-contact end of the grid up and remove it from the plastic hook on the contact end of the assembly (FIG 14). The small tension spring beneath the grid may fall out, so take care not to lose this spring.

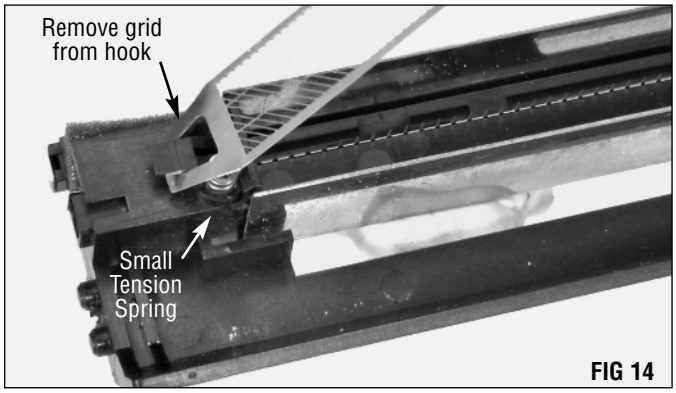


FIG 14

Clean both the grid and the sawtooth blade using a cotton tipped applicator moistened with Isopropyl alcohol (FIG 15). Use caution around the sharp points of the blade, as they may cause injury.

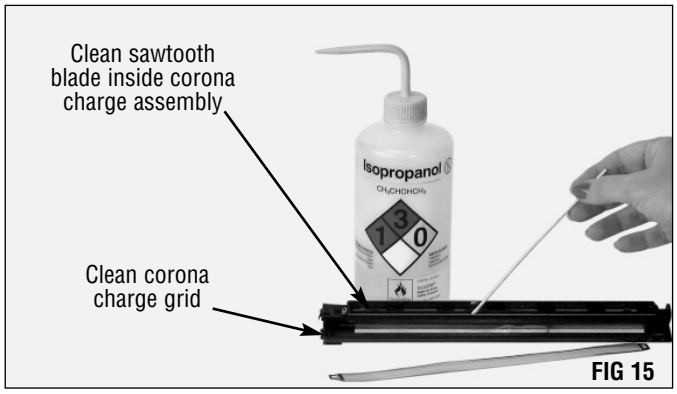


FIG 15

Make sure the tension spring is in place before hooking the corona charge grid over the molded plastic hook on the contact end of the assembly (FIG 16).

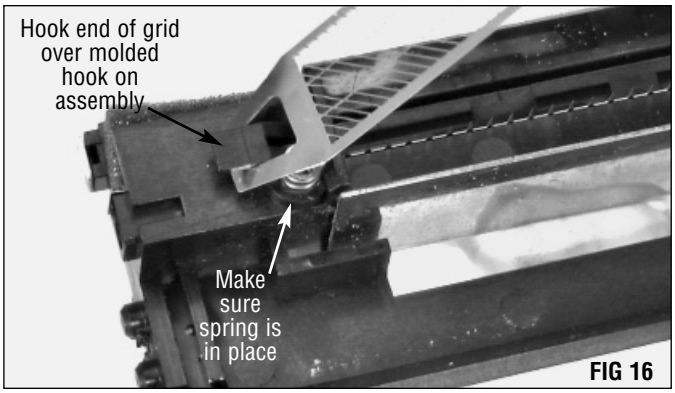


FIG 16

Press the opposite end of the grid over the locking tab (FIG 17).

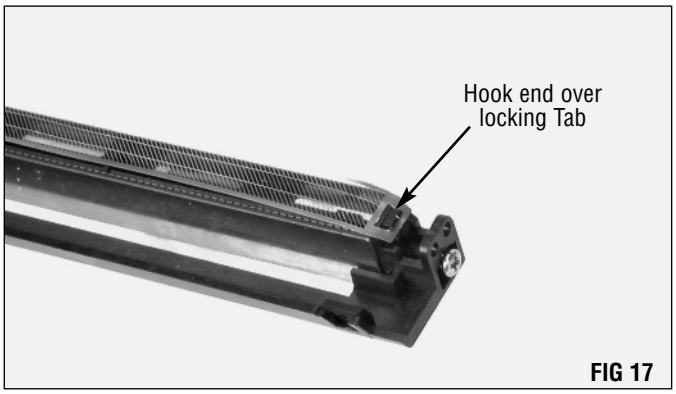


FIG 17

Hold the grid in place as you tighten the screw. Make sure the corona grid fits tightly, but do not over-tighten and possibly strip the screw (FIG 18).

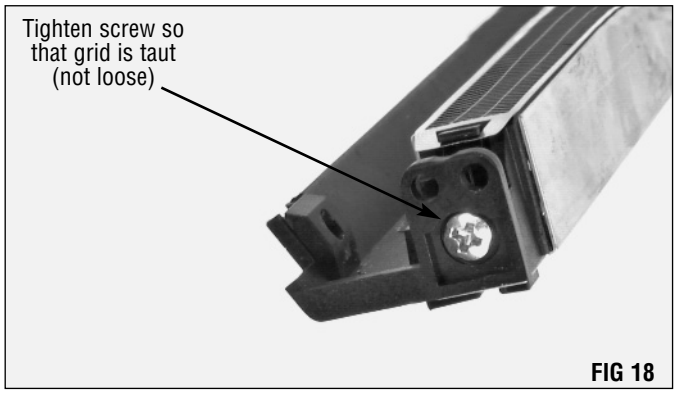


FIG 18

Turn the cartridge housing over. Place the corona assembly in position, contact end first (FIG 19).

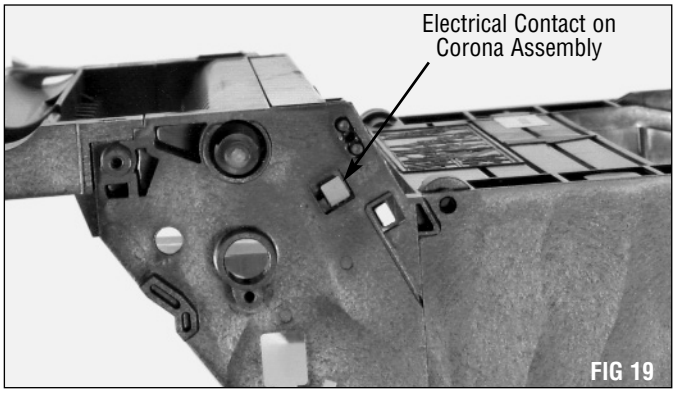


FIG 19

Align the holes on the opposite end of the assembly with the locator pegs on the housing (FIG 20).

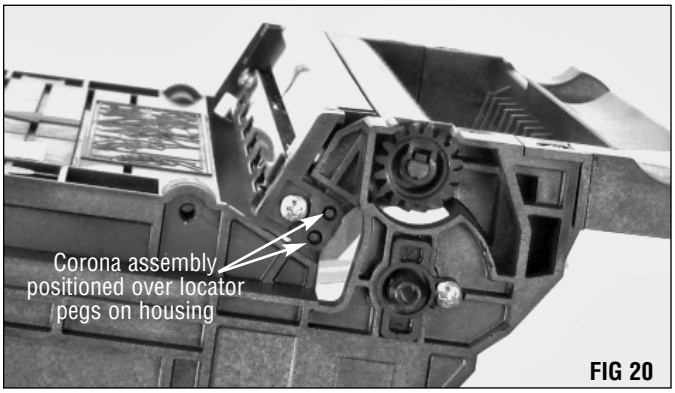


FIG 20

Slide the assembly in the direction of the contact and seat in place. Make sure the contact end positioning pegs are positioned correctly and the contact protrudes out through the cartridge housing (FIG 21).

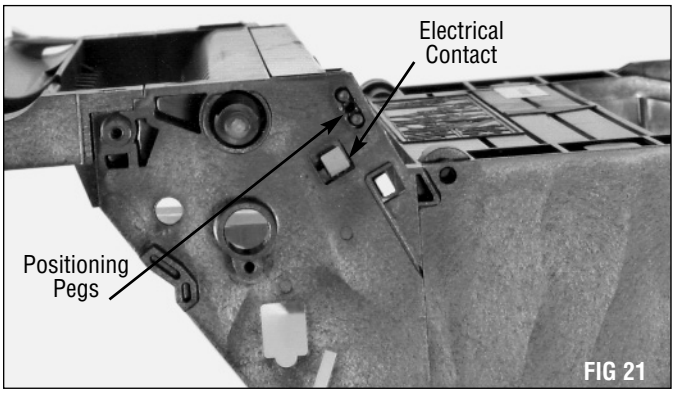


FIG 21

Replace the Phillips screw (FIG 22). Be sure not to over tighten.

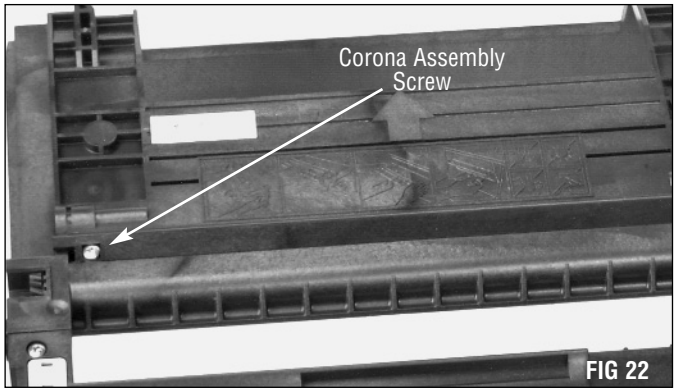


FIG 22

5. Replace the OPC drum

Pad the coated area of the drum with a lubricating powder, being careful to avoid getting powder on the gear (FIG 23).


FIG 23

While wearing gloves or using other protective materials, place the drum into the housing, helical gear-end first. While holding the side of the housing out slightly, ease the gear end over the molded axle pin on the housing (FIG 24) and lower the drum into place.

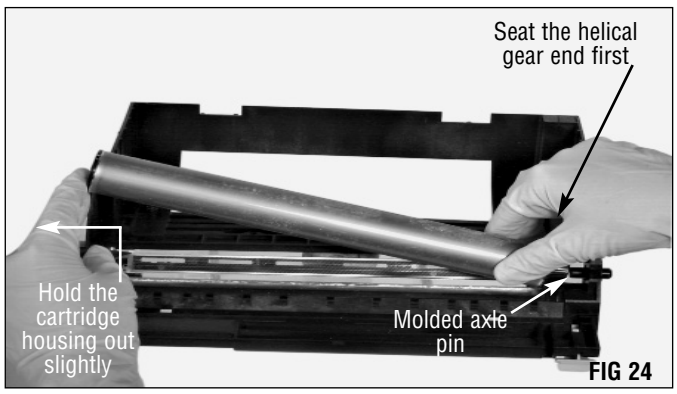


FIG 24

Align the hole in the drum with the corresponding hole in the cartridge housing and replace the drum axle pin. Secure with one of the longer Phillips screws (FIG 25).

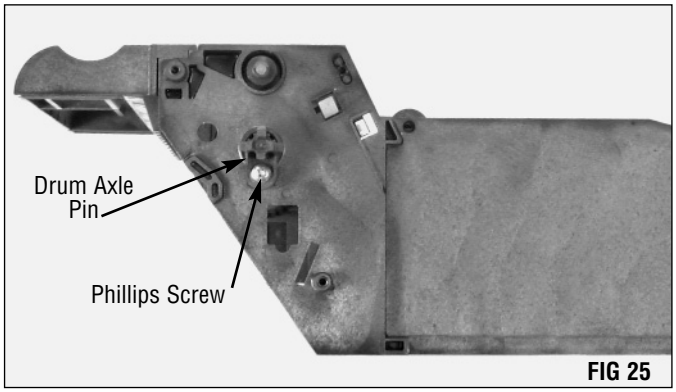


FIG 25

6. Replace the waste bin

Inspect the sealing foam around the toner dispense port (FIG 26). Damage to the foam may allow toner leakage.

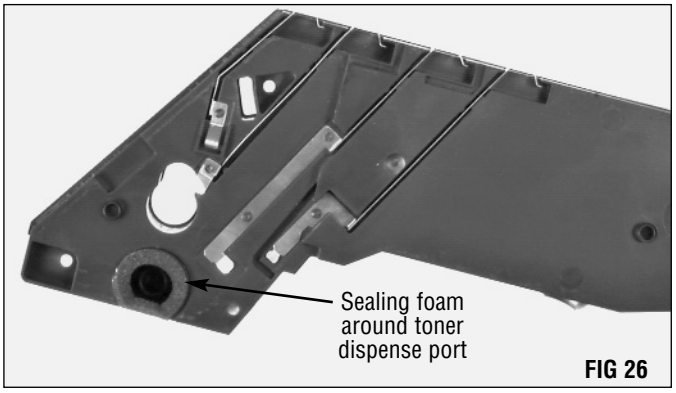


FIG 26

Place the waste bin in position on the end of the cartridge and secure with four of the five remaining short Phillips screws (FIG 27).

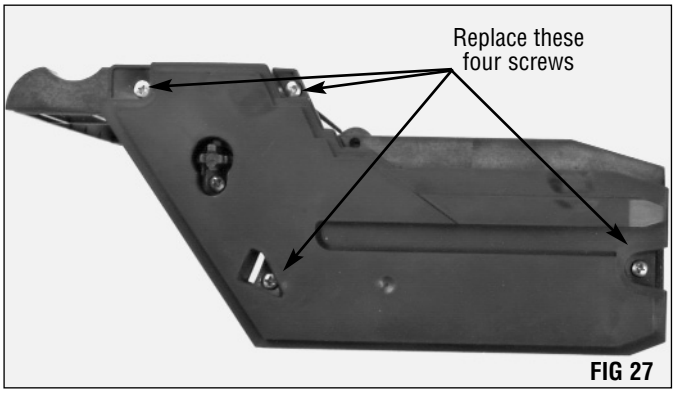


FIG 27

Rotate the drum at least six full rotations to help lubricate the wiper blade and prevent potential blade “flip overs”. The lubricating powder wiped from the drum by the wiper blade will be carried to the waste bin by the waste toner delivery system.

Cover the cartridge to protect the OPC drum from light damage while you proceed with the toner hopper section.

Disassembly of the Toner Unit

NOTE Oils from your skin will adhere to the magnetic developer (mag) roller, causing print defects. If you plan to reuse the roller, be sure to use gloves or other protective materials when working near the developer roller.

1. Remove the magnetic developer (mag) roller

Remove the four screws that secure the mag roller drive gear end plate (FIG 28) and lift off the plate.

There are two gears that will remain on the end plate, three that remain on the cartridge, and one on the mag roller.

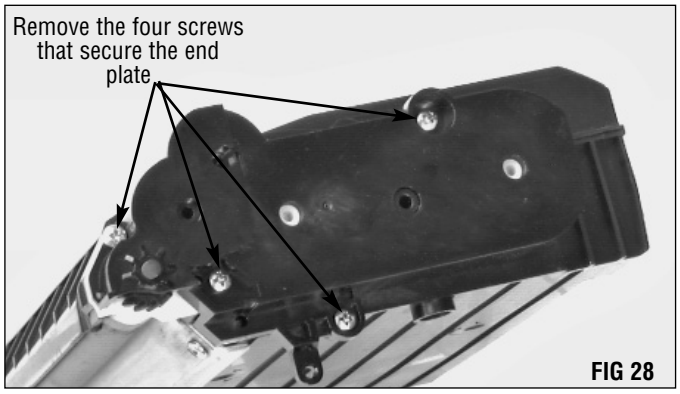


FIG 28

Lift the mag roller drive gear and mag roller stabilizer from the mag roller shaft (FIG 29).

FIG 29

Lift the mag roller up and out of the cartridge housing by the shaft (FIG 30). If you plan to reuse the mag roller, be sure not to touch the surface with your bare fingers.

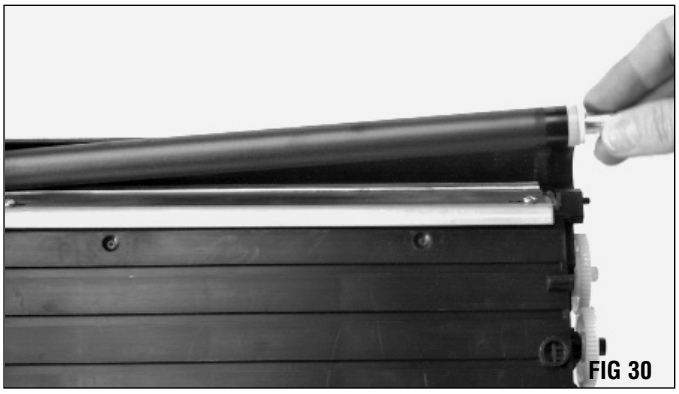


FIG 30

After removing the mag roller bushings from the ends of the mag roller (FIG 31), clean the roller with dry, filtered, compressed air. Set the mag roller aside.

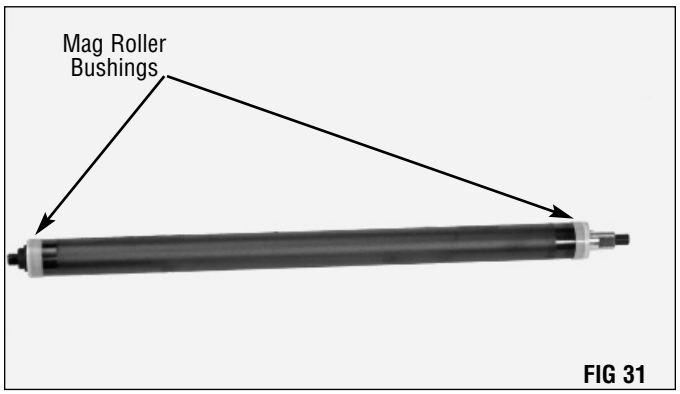


FIG 31

NOTE Do not use alcohol or any any chemical to clean the mag roller.

2. Remove the doctor blade

Using a Phillips screwdriver, remove the two doctor blade screws (FIG 32). Lift off the doctor blade and set it aside.

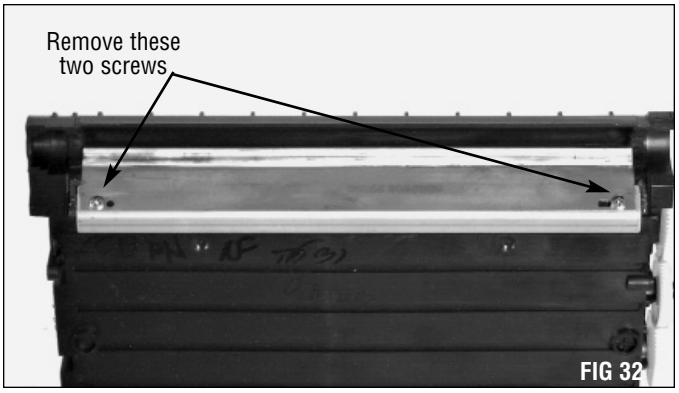


FIG 32

After dumping any residual toner from the hopper, clean the hopper, mag roller sealing felts and doctor blade sealing foams using dry, filtered, compressed air (FIG 34). Inspect all components and replace any that appear damaged.

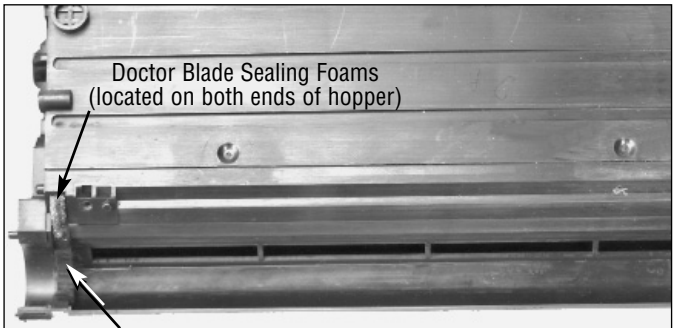


FIG 34

NOTE Although the gears of the drive train fit tightly on the hopper, they may be blown off if the compressed air stream is directed on or around them. Use caution when using compressed air around these gears.

3. Clean the hopper

Using a small flat blade screwdriver, carefully pry up the edges of the toner hopper cap (FIG 33) and remove the cap. Be careful not to damage the hopper cap, as toner leakage may occur.

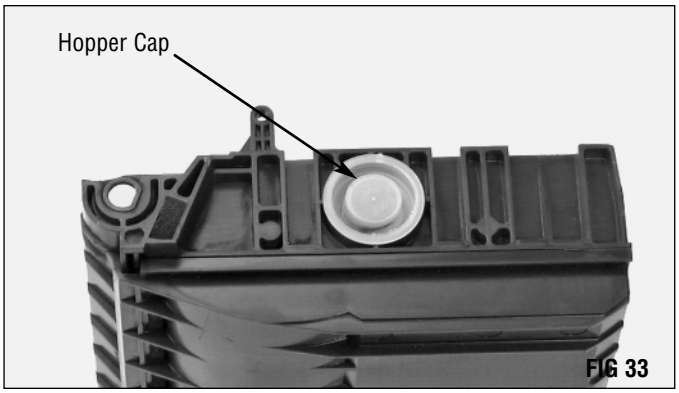


FIG 33

4. Clean the doctor blade

Using a lint-free cleaning cloth or dry, filtered, compressed air remove any toner build-up from doctor blade and stamping (FIG 35). Do not use alcohol or other chemicals.

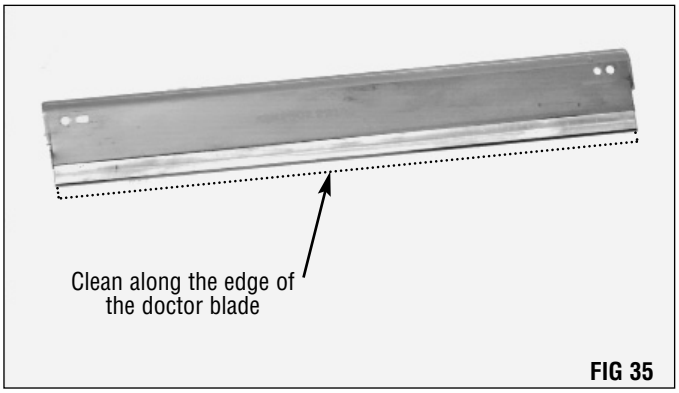


FIG 35

Sealing the Cartridge

A toner hopper seal is necessary to prevent toner leakage during storage and transportation of your Xerox® 212DC/214DCcartridge. Check with your Support Team for the availability of Static Control's Foam Seal Assembly (DC212FTRS-CR) for the Xerox® 212DC/214DC cartridge.

See System Support Series™ 798 for seal instructions.

Assembly of the Hopper Section

1. Install the doctor blade

After sealing the toner hopper, seat the doctor blade over the two alignment pegs (FIG 36) and secure with two short Phillips screws.

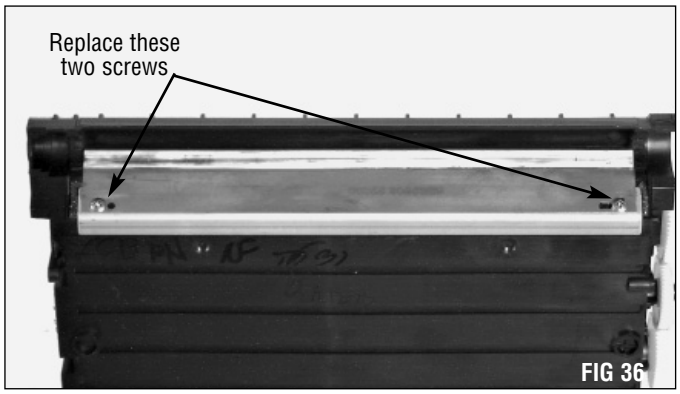


FIG 36

NOTE Remember to use gloves or other protective materials when handling the developer roller. Do not touch the surface with your bare skin.

2. Install the mag roller

Make sure a mag roller bushing is installed at each end of the mag roller axle (FIG 37).

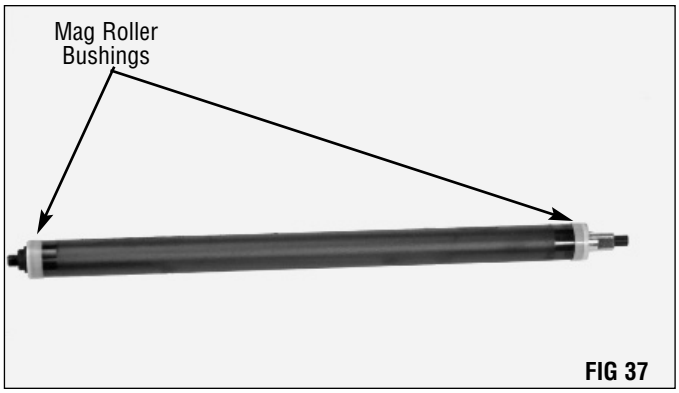


FIG 37

Seat the shorter end of the mag roller shaft in the hopper fill-end of the cartridge housing (FIG 38).

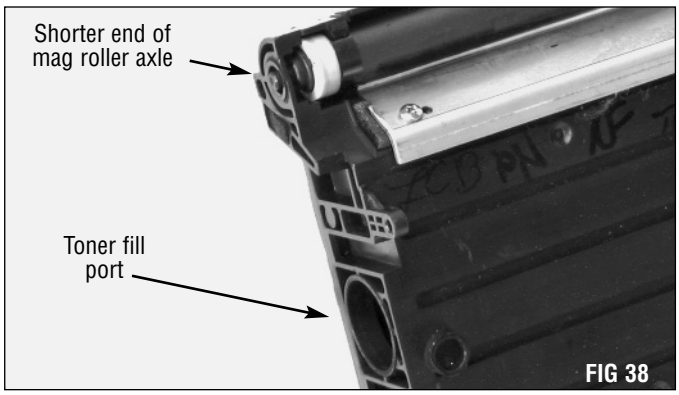


FIG 38

Position the mag roller stabilizer over the alignment pegs and press into place (FIG 39). You may need to push the mag roller toward the back of the cartridge housing for proper alignment.

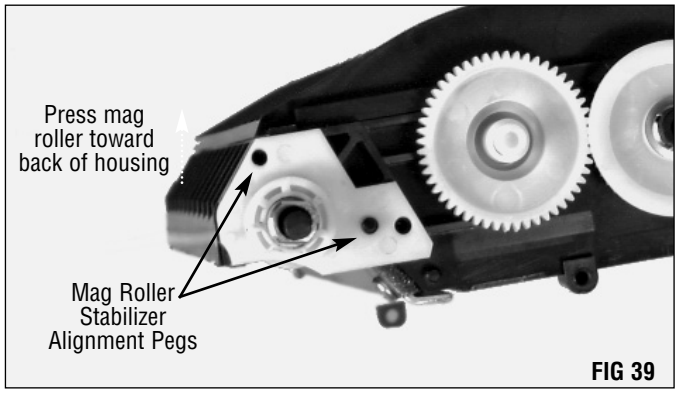


FIG 39

Replace the mag roller drive gear (FIG 40).

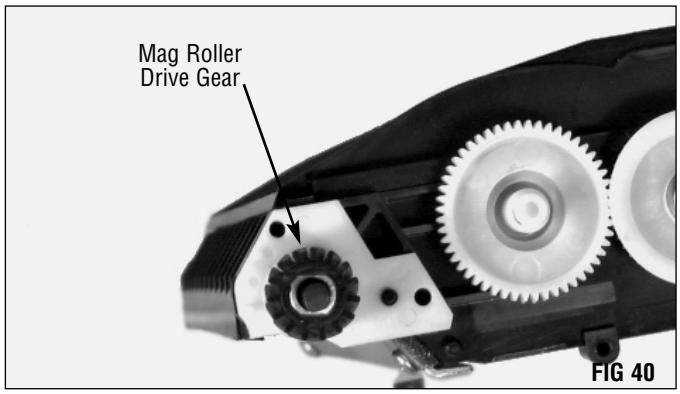


FIG 40

Replace the mag roller end plate and secure with four Phillips screws (FIG 41).

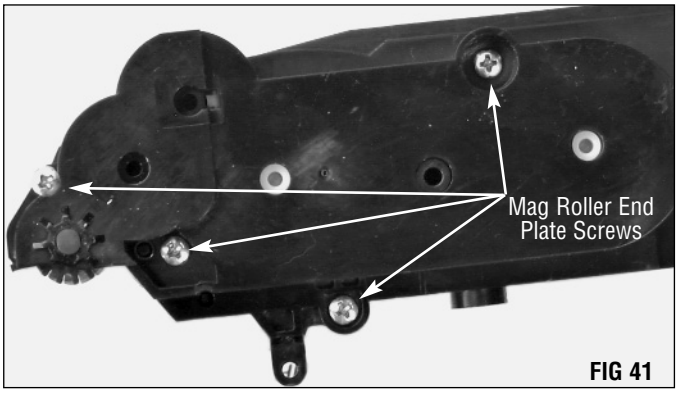


FIG 41

After filling the hopper with toner, firmly seat the hopper cap (FIG 42). Be sure to check for leaks and replace the hopper cap if necessary.

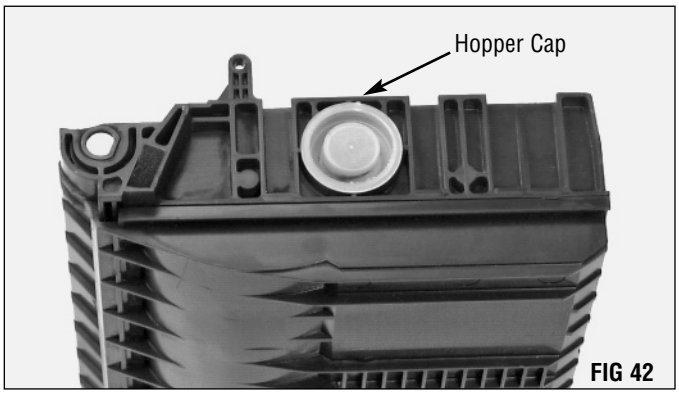


FIG 42

Assembly of the Cartridge

1. Seat the hopper section

Note that there are two springs attached to the drum unit (FIG 43).

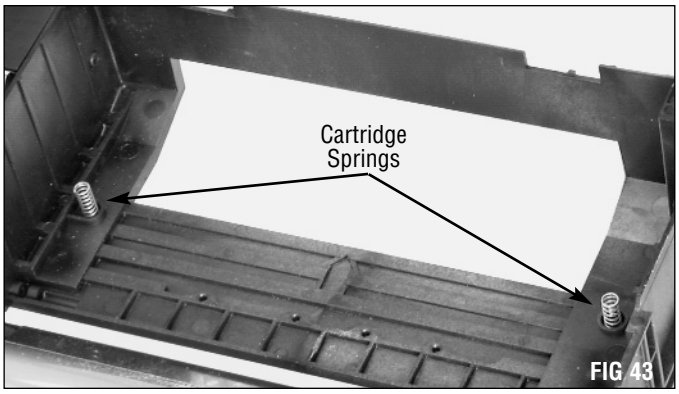


FIG 43

Place the hopper and drum sections together so that these springs rest in the hubs on the hopper section. You can see when these are placed correctly by looking through the laser port (FIG 44).

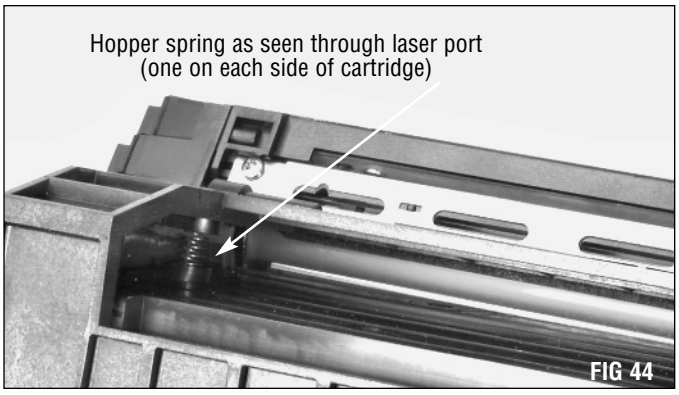


FIG 44

2. Secure the two halves

The hopper section must be seated correctly for the pins to fit properly.

Make sure the tabs on the hopper fit between the hubs before inserting the pins (FIG 45).

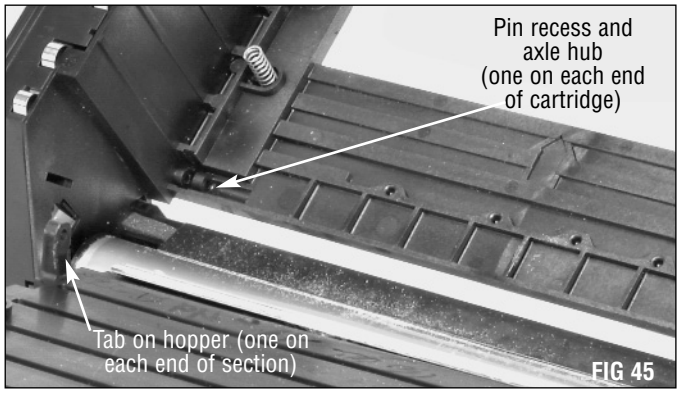


FIG 45

NOTE Pushing the pins into the cartridge too far will cause them to fall into the cartridge.

To do this, seat the hopper back as far as it will go (away from the drum). Press the two sections together firmly to align the holes and insert the pins (FIG 46). Make sure the springs remain in place.

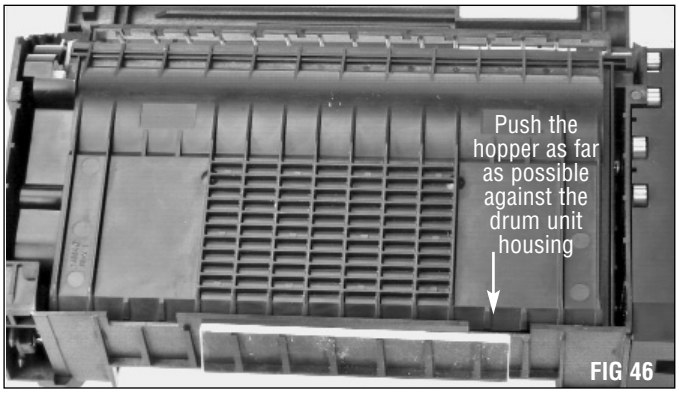


FIG 46

3. Reset the drum count

Once the cartridge sections are joined securely the drum count/machine identifier chip must be replaced. This chip is located on the rear of the cartridge (Fig 47).

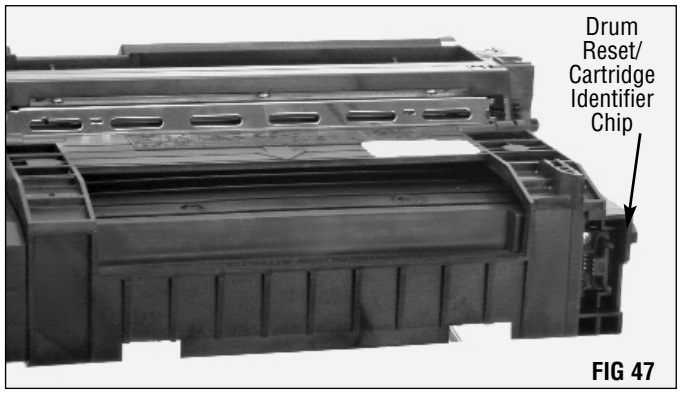


FIG 47

Remove the Phillips screw and lift the chip from the cartridge housing (FIG 48).

FIG 48

Place a new chip in position and secure with one Phillips screw.

IMPORTANT Each Xerox® 212DC/214 copier is pre-programmed to accept one of five types of cartridges. The chip you install not only resets the drum count, but identifies the cartridge type. Simple step-by-step end-user instructions for resetting your customer's machine are included with your Static Control replacement chip, and should be placed in your remanufactured cartridge packaging.

Static Control recommends testing your cartridges in the appropriate equipment after remanufacturing.

Imaging System Technology You Can Count On!

The development of cartridge imaging systems, such as the Xerox® 212DC/214DC Imaging System, is the primary mission of our imaging 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 designed 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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