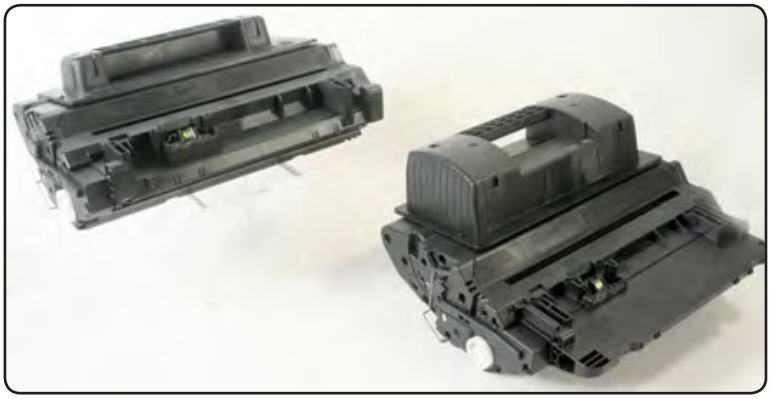
Static Control

www.scc-inc.com

REMANUFACTURING INSTRUCTIONS

HP® LaserJet® P4014/P4015/P4515/M4555 MFP, HP® LaserJet® Enterprise® 600 M601/M602/M603



CC364A/CC364X
CE390A (HP 90A)/CE390X (HP 90X)

SSS™ 1013

Other SSS™ documents available in Adobe® Acrobat® format

V.3.7 - 12.12

- Hook Tool (HTOOL-2)
- Curved Scraper Blade Tool (CSBTOOL)
- Lint-Free Swab (LFSWAB)
- Lint-Free Cleaning Cloth (LFCCLOTH)
- Pry Tool (PRYTOOL-2)
- Flat Blade Scraper Tool (FSTOOL)
- Conductive Lubricant (CONCLUBE)
- Phillips Screwdriver
- Small Slotted Screwdriver
- Needle Nose Pliers
- Dry, Filtered, Compressed Air for Cleaning
- 91-99% Isopropyl Alcohol
- Lubriplate 105™ Cartridge Lubricant (LUBE105)
- Cartridge Cleaning Workstation


Hook Tool (HTOOL-2)


Curved Scraper Tool (CSBTOOL)


Lint-Free Swab (LFSWAB)


Lint-Free Cleaning Cloth (LFCCLOTH)

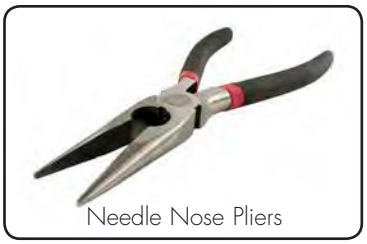

Pry Tool (PRYTOOL-2)


Flat Blade Scraper Tool (FSTOOL)


Conductive Lubricant (CONCLUBE)


Phillips Screwdriver

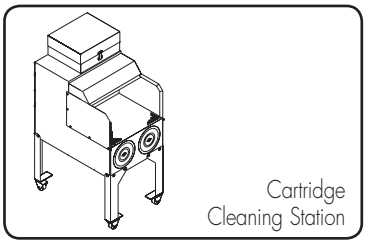

Small Slotted Screwdriver


Needle Nose Pliers

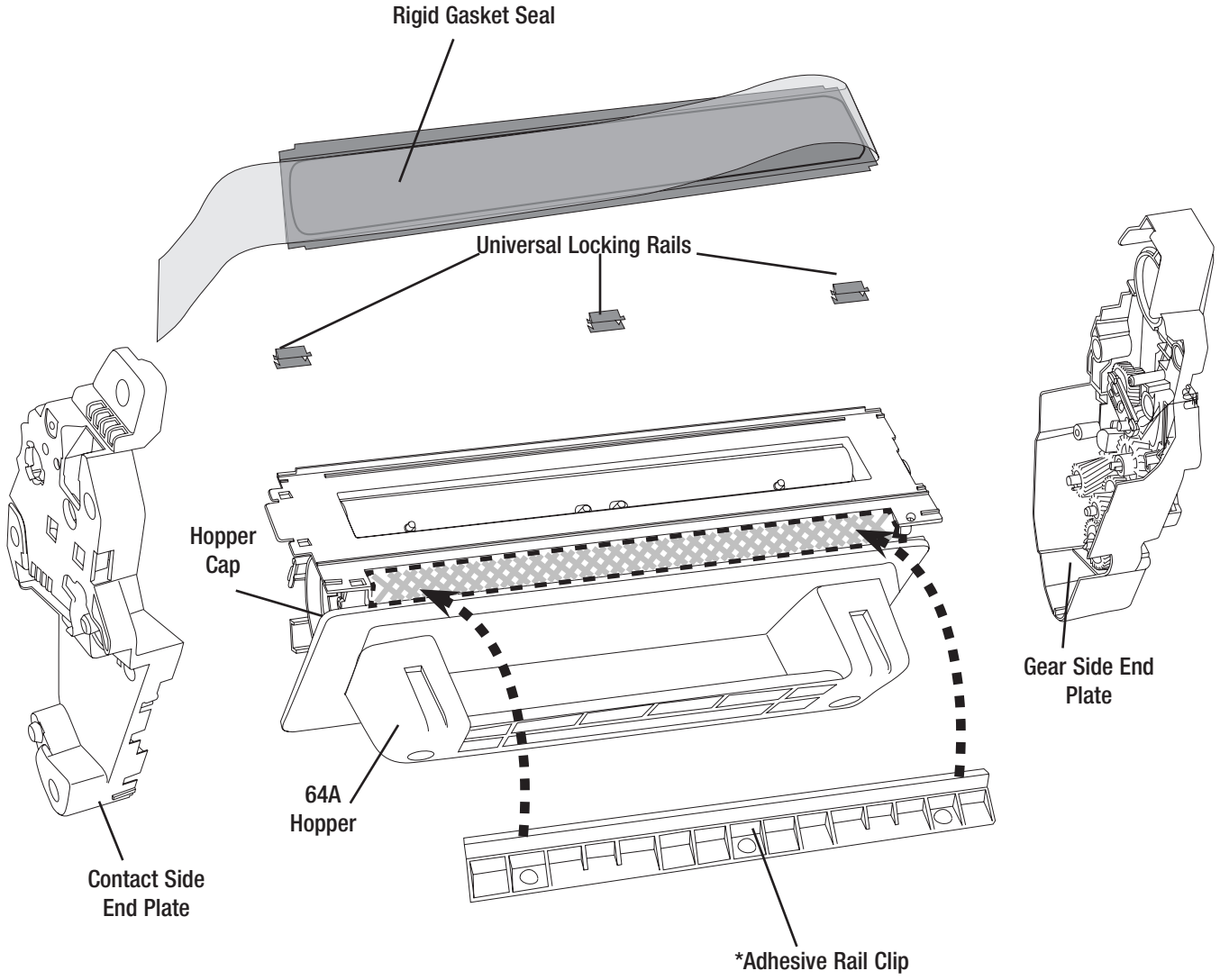

Air Gun


91-99% Isopropyl Alcohol

Lubriplate 105™ Cartridge Lubricant (LUBE105)

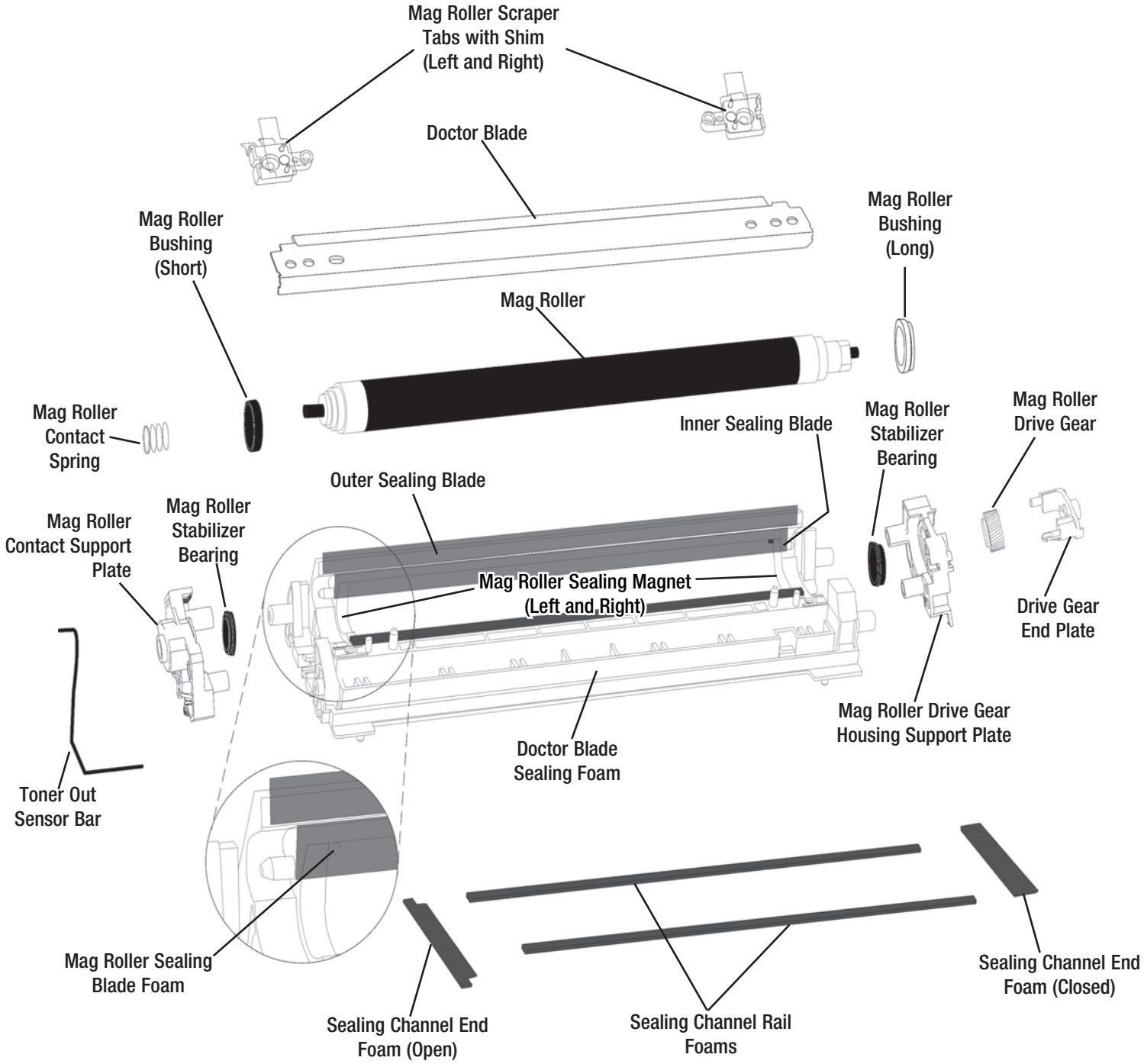

Cartridge Cleaning Station

64A/90A TONER HOPPER

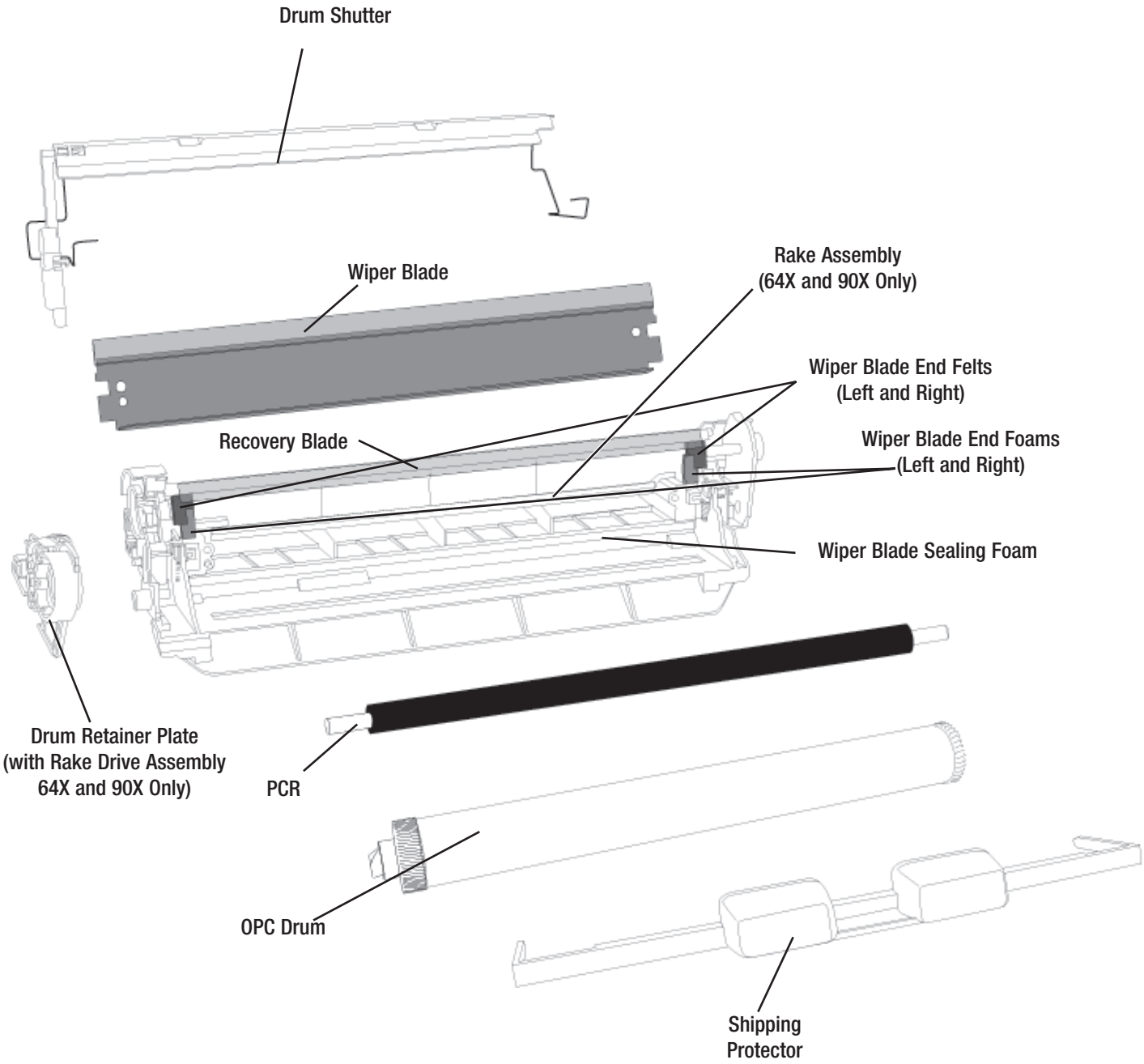


*Arrows show where the adhesive rail clip is positioned

64A/90A AND 64X/90X MAG ROLLER ASSEMBLY

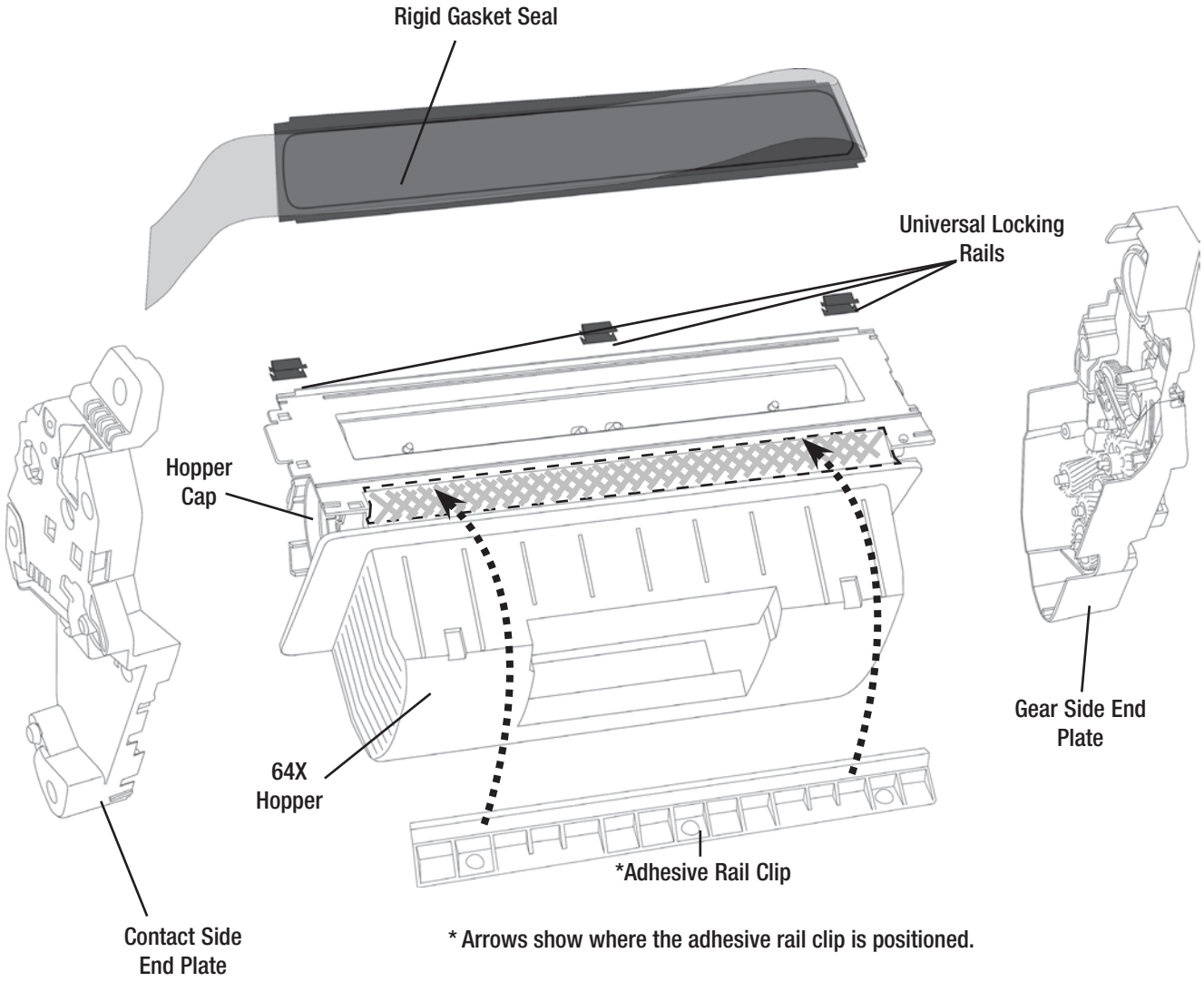


64A/90A AND 64X/90X WASTE BIN ASSEMBLY



Note: There are physical differences between the two waste bins. For illustration purposes on this wireline, the 64X/90X is shown.

64X AND 90X TONER HOPPER



* Arrows show where the adhesive rail clip is positioned.

Separating the Two Sections

There are physical differences between the HP® CC364A/CC364X and the HP® CE390A/CE390X cartridges. For illustration purposes, the HP® CC364X high yield cartridge is used in this instruction.

1. To begin remanufacturing, first turn the cartridge over with drum side up (Figure 1).

Figure 1

2. Push shutter support bar toward waste bin on the drive side to release from cartridge (Figure 2).

Note: Secure shutter support bar behind gear side end plate.

Figure 2

3. Turn the cartridge around to the contact side of the cartridge. Using a Phillips screwdriver, locate and remove the five screws on the end plate. Lift the actuator arm to locate one of the screws as shown in Figure 3.

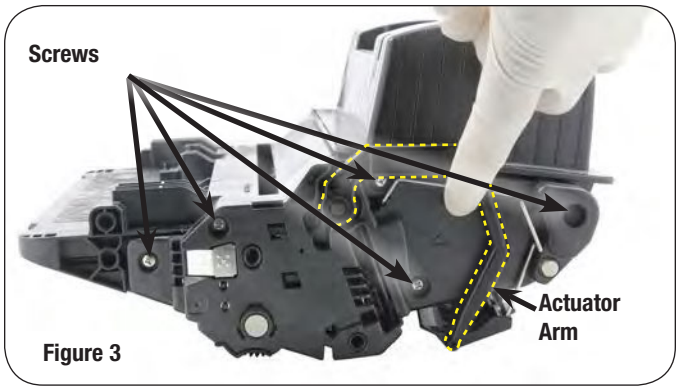


Figure 3

4. Remove contact side end plate with drum shutter attached by sliding it from cartridge as shown in Figure 4.

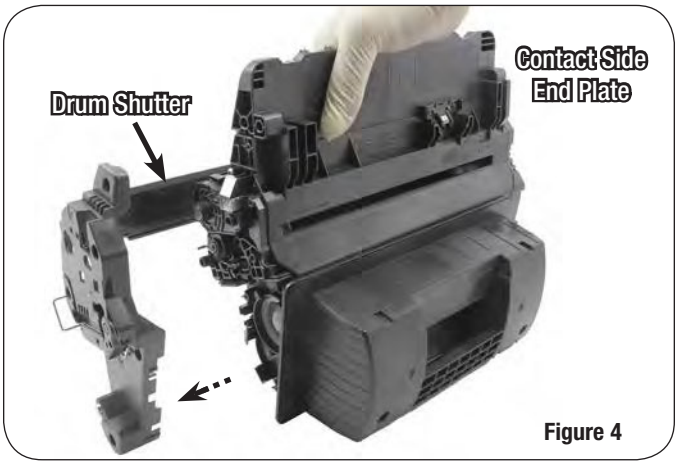


Figure 4

5. Locate and remove the five screws on the gear side end plate as shown using a Phillips screwdriver (Figure 5).

Note: Drum is exposed. Take care to prevent damage.

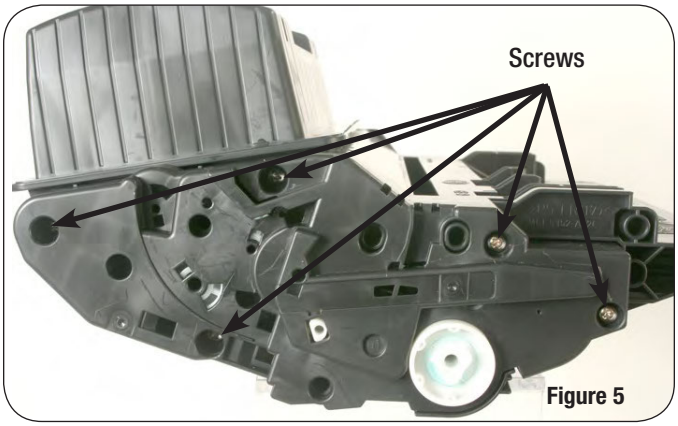


Figure 5

6. While holding the two halves remove the gear side end plate as shown in Figure 6.

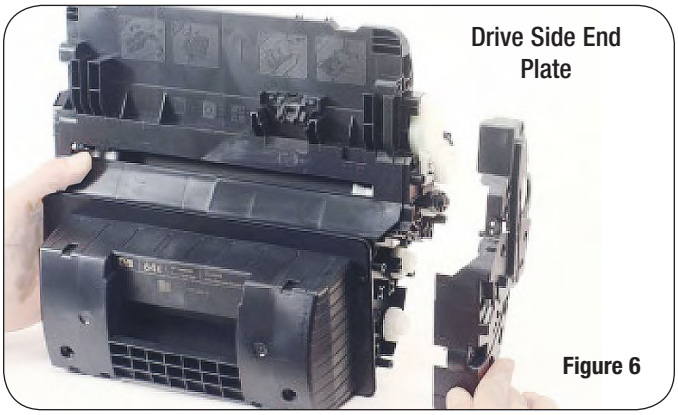


Figure 6

7. Carefully separate the two halves (Figure 7).

Figure 7

Disassembling the Toner Hopper Section

1. Remove drive gear end plate by pulling it straight out as shown in Figure 8.

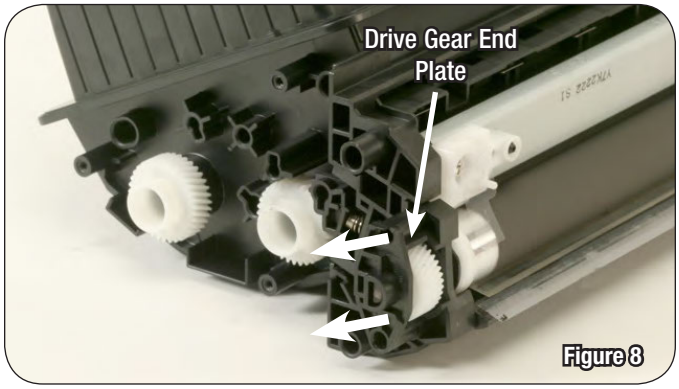


Figure 8

2. Remove mag roller drive gear by sliding it off of the journal (Figure 9).

Figure 9

3. Locate and remove two screws from the mag roller drive gear housing support plate as shown in Figure 10a. To remove the support plate, use a slotted screwdriver to gently pry the mag roller drive gear housing support plate from the mag section, as shown in Figure 10b.

Note: Ensure mag roller stabilizer bearing is still in the housing. If not, remove it from the mag roller and place it back into the mag roller drive gear housing support plate.

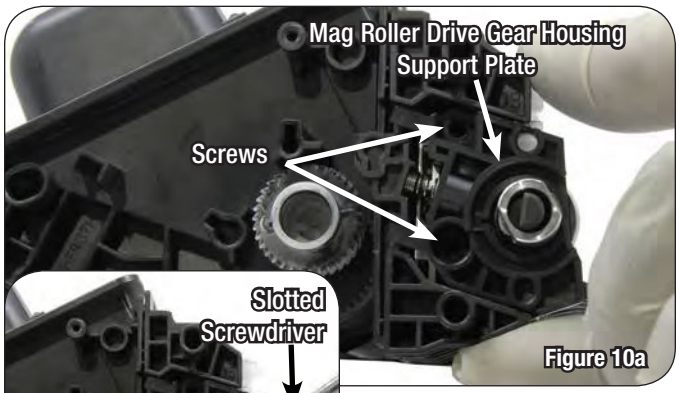


Figure 10a

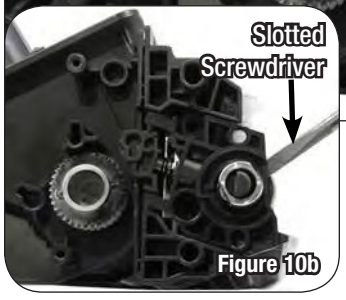


Figure 10b

4. Using needle nose pliers, remove the toner out sensor bar on the contact side as shown in Figure 11.

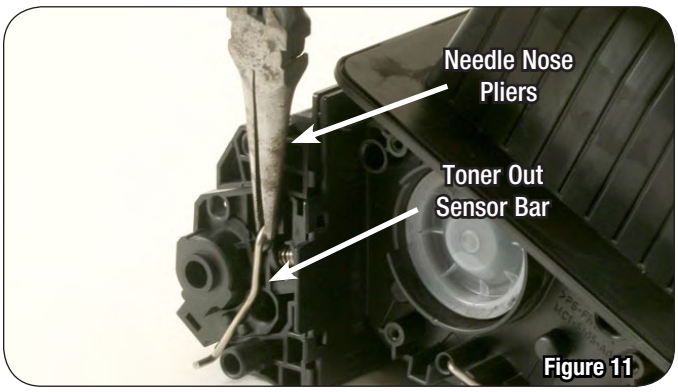


Figure 11

5. Locate and remove one screw from the mag roller contact support plate (Figure 12a). To remove, use a slotted screwdriver to gently pry apart the mag roller contact support plate from the mag section as shown in Figure 12b.

Note: Ensure mag roller stabilizer bearing is still in the housing. If not, remove it from the mag roller and place it back into the mag roller contact gear housing support plate.

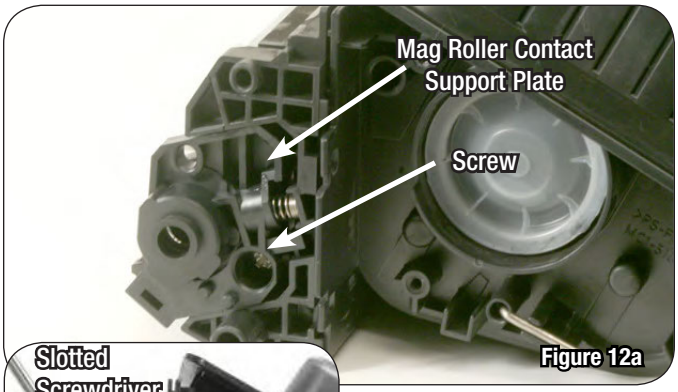


Figure 12a

Figure 12b

6. Lift the mag roller with bushings out of the toner hopper, then remove the two mag roller bushings and set aside (Figure 13).

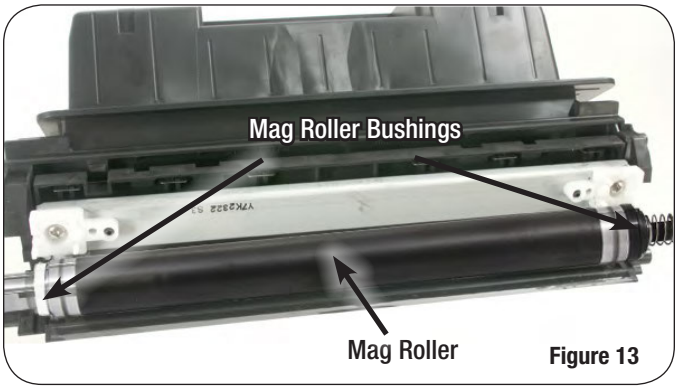


Figure 13

Note: Inspect mag roller for signs of damage. For cleaning instructions, see Appendix C.

7. Carefully lift the scraper tab to expose the screw and remove both screws as shown in Figure 14a. Remove the mag roller scraper tabs and set aside (Figure 14b).

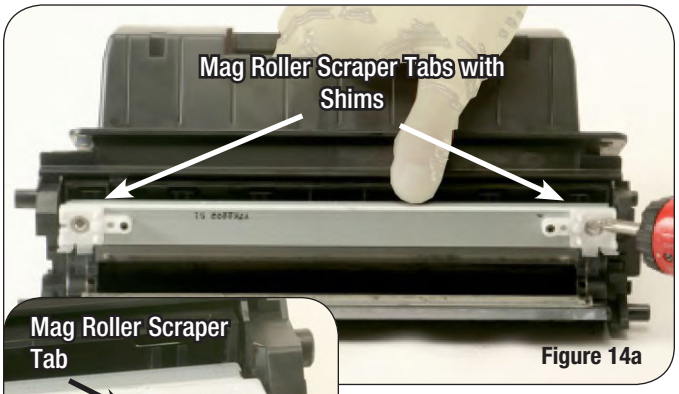


Figure 14a

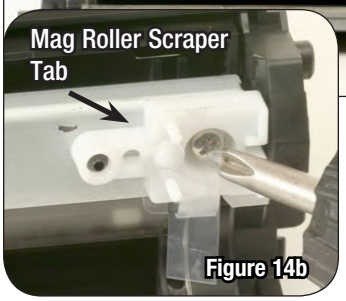


Figure 14b

Note: The screws for the doctor blade are longer than other screws and should be separated for reassembly.

8. Remove doctor blade (Figure 15). Inspect and clean with ionized, dry, filtered, compressed air and a lint-free cloth.

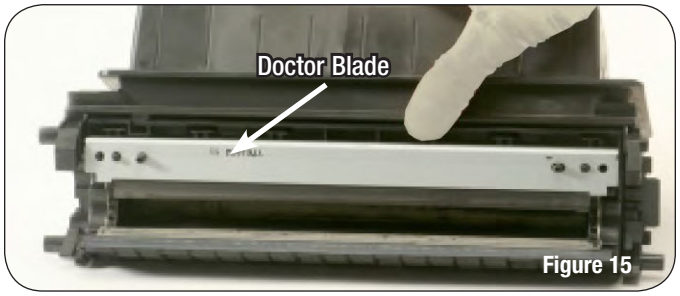


Figure 15

9. For cleaning the doctor blade, see Appendix B.

Splitting the Mag Section

Note: Splitting the mag section is required to seal the cartridge. For detailed instructions on installing the rigid gasket seal, refer to SSS™#1011 - HP P4015/P4014/P4515 Rigid Gasket Seal.

1. Insert pry tool between mag and toner hopper sections on contact end and twist gently to separate weld on each side (Figure 16a and 16b).

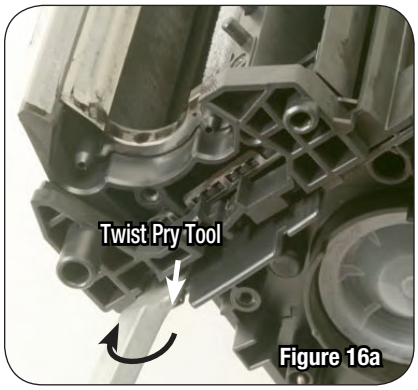


Figure 16a

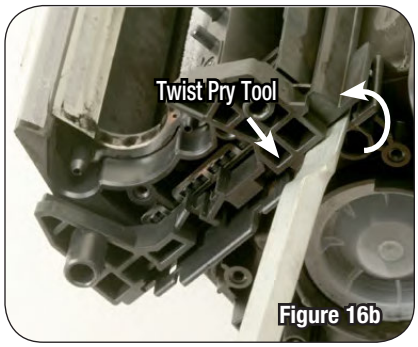


Figure 16b

2. Work tool along weld (Figures 17a and 17b) to gradually separate mag section from toner hopper section without damaging the two piece mag section (Figure 17c).


Figure 17a


Figure 17b

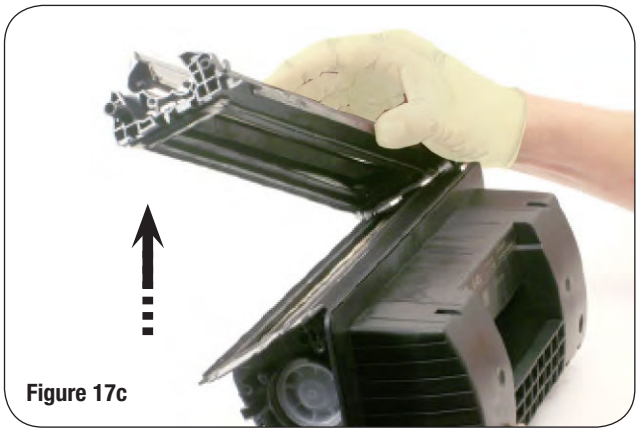


Figure 17c

Caution: DO NOT separate the two piece mag section from each other (Figure 18). Static Control offers a mag section gasket to repair the two piece mag section in the event that they become separated.

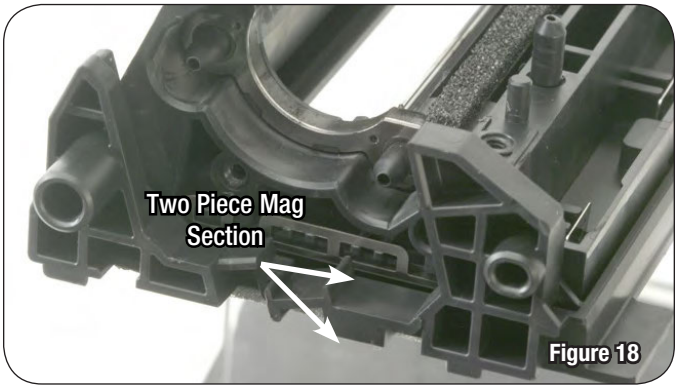


Figure 18

Clean, Seal and Fill the Toner Hopper Assembly

1. Remove toner hopper cap without damaging core. Hopper cap may be pierced and pulled using needle nose pliers (Figure 19).

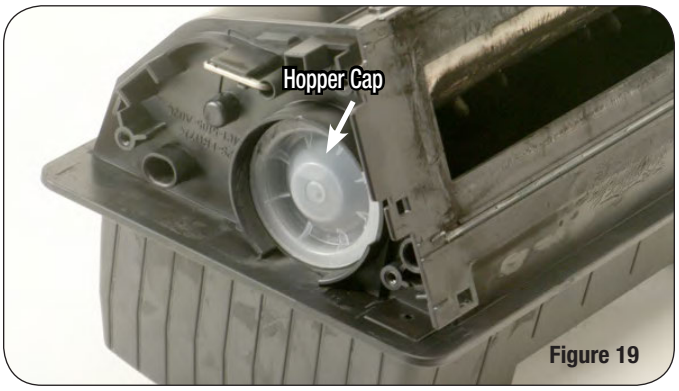


Figure 19

2. Clean the toner hopper using ionized, dry, filtered, compressed air (Figure 20).

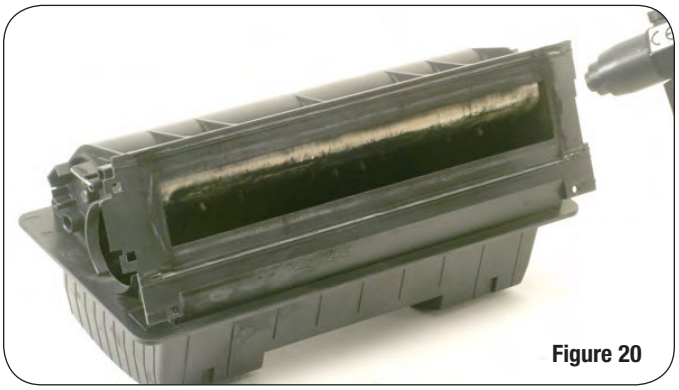


Figure 20

3. Clean area around sealing surface with a lint-free cloth dampened with 91-99% isopropyl alcohol (Figure 21).

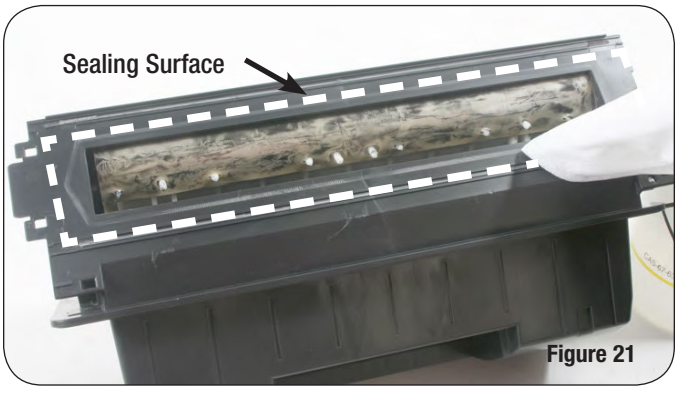


Figure 21

Note: There are alignment features both on the toner hopper and on the end of the rigid seal. It is suggested that you locate these before peeling the backing from the seal.

4. Place the seal so the notched corners of the seal are lined up with the sloped ridges of the toner hopper (Figure 22).

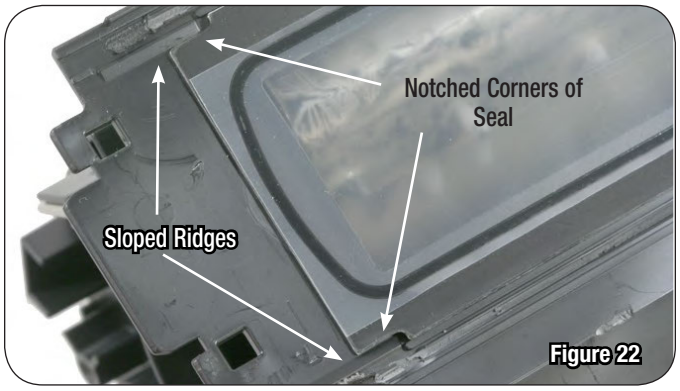


Figure 22

5. Carefully pull the backing away from the seal while smoothing the seal in place (Figure 23). Run your finger around the perimeter of the seal to activate the adhesive.

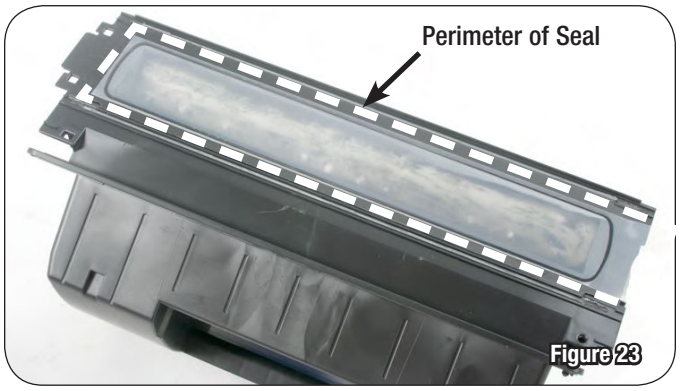


Figure 23

6. Clean the area where the adhesive rail clip is to be attached with a lint-free cloth dampened with 91-99% isopropyl alcohol (Figure 24).

Figure 24

7. Remove the release liner from the adhesive rail clip. Center the adhesive rail clip in position and seat the length of the rail clip against the ledge as shown in Figure 25. Press into place to activate the adhesive.

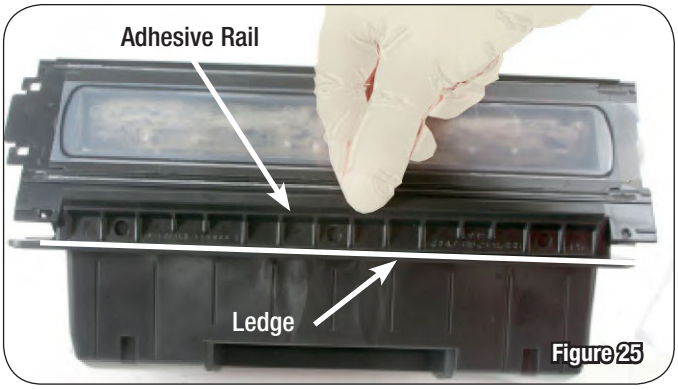


Figure 25

Reassembling the Mag Section

1. Using side cutters, remove the two plastic posts. Be sure to cut them flush with the housing (Figure 26a and 26b).

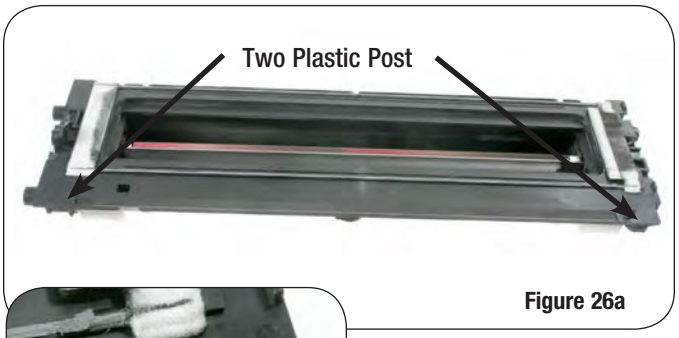


Figure 26a


Figure 26b

2. Remove old open and closed end foams from back of mag section (Figure 27a and 27b).

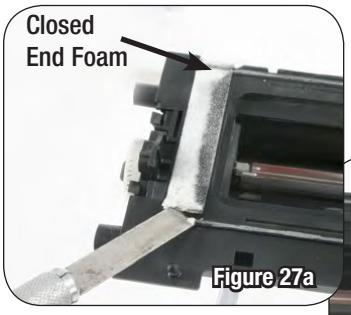


Figure 27a

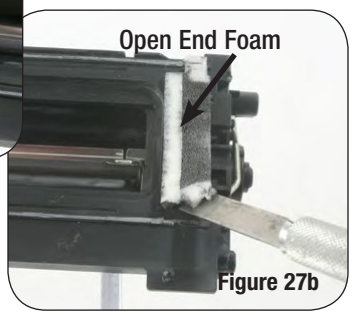


Figure 27b

3. Clean toner hopper port area on the back of the mag section with 91-99% Isopropyl alcohol (Figure 28).


Figure 28

4. Remove the release liner and install the closed end foam onto the back of the mag section. Center the foam over ribs and against alignment marks as shown in Figure 29. Press to activate adhesive.

Note: Edge of foam should be aligned with edge of port opening.

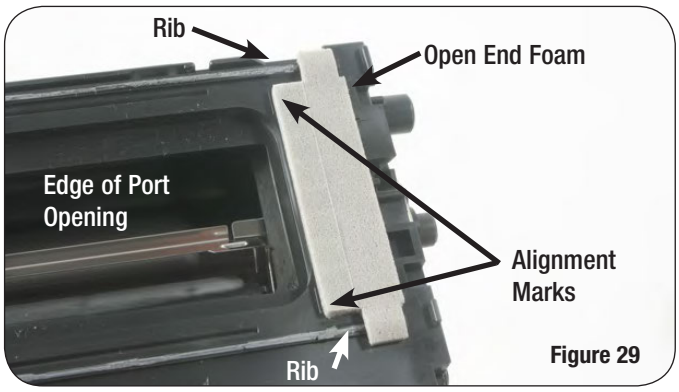


Figure 29

5. Remove the release liner and install the closed end foam onto the back of the mag section. Center the foam over ribs and against alignment marks as shown in Figure 30. Press to activate adhesive.

Note: Edge of foam should be aligned with edge of port opening.

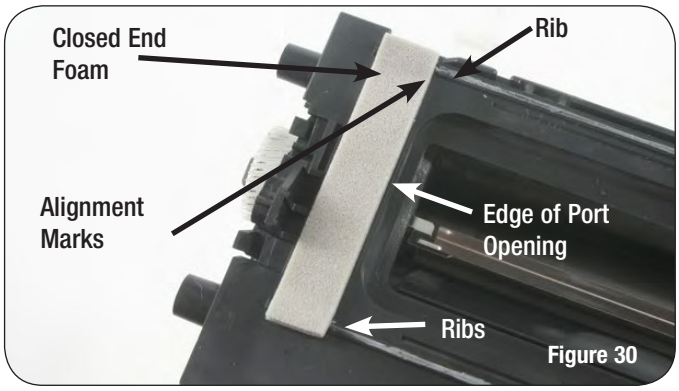


Figure 30

6. Remove the release liner and install the sealing channel rail foams onto the back of the mag section as shown in Figure 31. Overlap both open and closed end foam equally on both sides and install inside the ribs to avoid leakage.

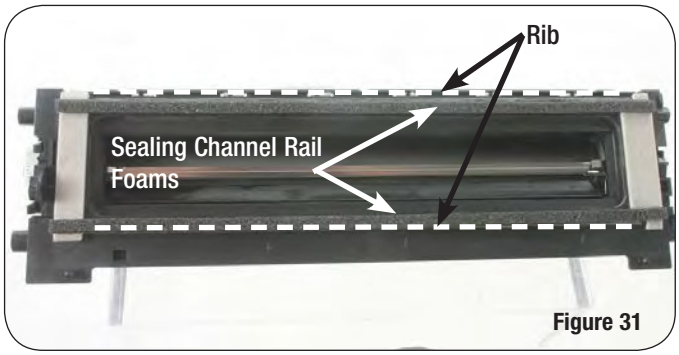


Figure 31

7. Fold the seal pull strip back over the toner hopper. The seal pull strip should extend beyond the contact end of the toner hopper (Figure 32).

Figure 32

8. Holding the mag roller section at a 45 degree angle to the toner hopper, slide the lip of the mag roller section under the ledge of the rail clip (Figure 33).

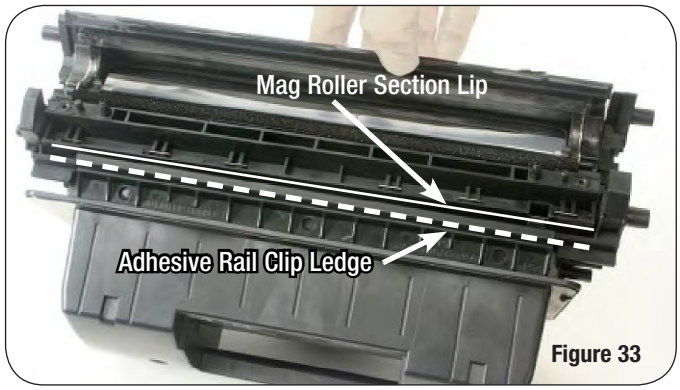


Figure 33

9. Separate the upper and lower mag section slightly and position one locking rail at one end of the toner hopper. With the rail on the top of the toner hopper and lower mag section flange, roll the rail down over the toner hopper flange and press into place (Figure 34). The upper mag section flange will fit over the rail.

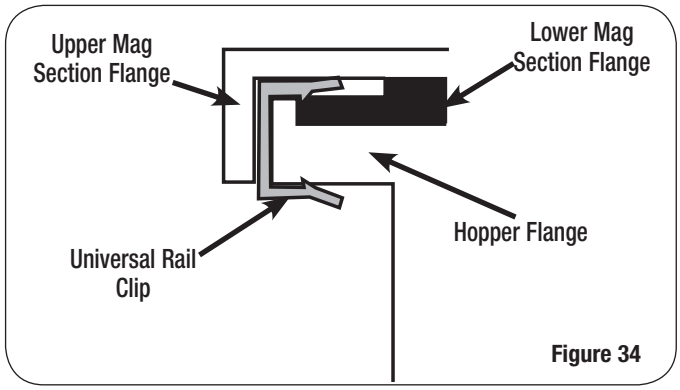


Figure 34

10. Install a second rail on the opposite end (Figure 35a), and a third in the center as shown in Figure 35b. Inspect the toner hopper after installing the rails to ensure that no bowing has occurred.

Note: The mag section consists of two sections that float independently from each other. Ensure that clips are on the inner most section and the outer mag section is still free to move.

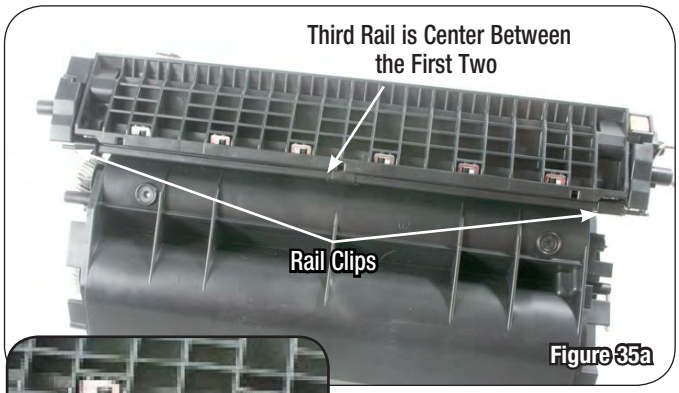


Figure 35a

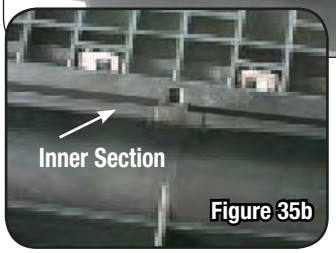


Figure 35b

11. Fill the toner hopper with the approved toner and clean the area around the toner hopper port with 91-99% Isopropyl alcohol.

12. Install new hopper cap into toner hopper port (Figure 36c).

Figure 36c

Reassembling the Toner Hopper Section

Note: Inspect the foams and replace if needed. If replacement is needed for the mag roller sealing blade end foams, the inner mag roller sealing blade must also be replaced.

1. Remove the inner mag roller sealing blade. Remove any residual toner from the installation area as shown in Figure 37. Then clean the area with 91-99% isopropyl alcohol.

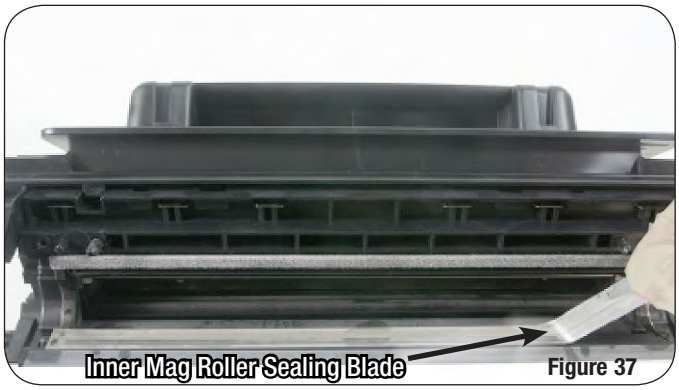


Figure 37

2. Remove the mag roller sealing blade end foams with a curved scraper blade tool (Figures 38a and 38b). Remove any residual toner from the installation area then clean the area with 91-99% isopropyl alcohol.

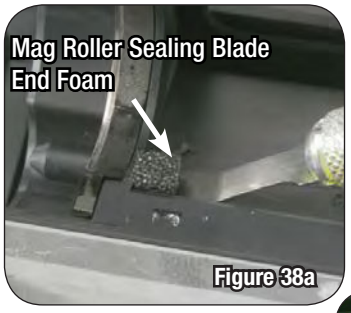


Figure 38a

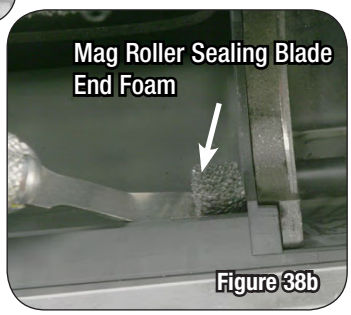


Figure 38b

3. Remove the release liner from the end foams. Using the curved scraper blade tool, place in the corner of the toner hopper as shown in Figures 39a and 39b. Press down on foam to activate the adhesive.

Figure 39a

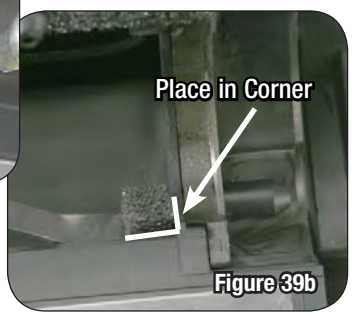


Figure 39b

4. Remove the release liner from the mag roller inner sealing blade and align with the alignment mark located beyond the outside edge of the magnet as shown in Figure 40.

Note: Press along the entire length of the blade to activate the adhesive and remove any air pockets.

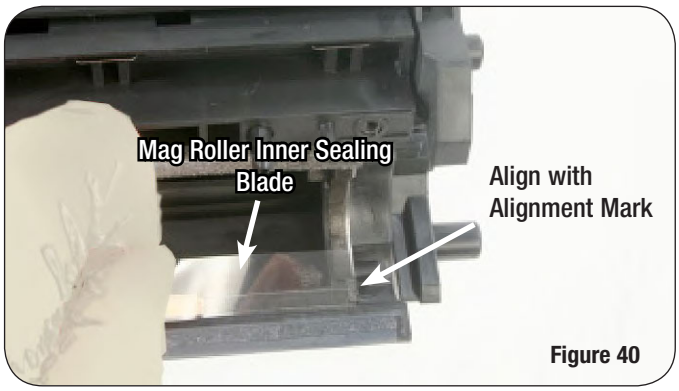


Figure 40

5. If replacement is needed for the outer mag roller sealing blade, remove the outer mag roller sealing blade (Figure 41). Clean any residual toner or adhesive from the installation area with 91-99% isopropyl alcohol.

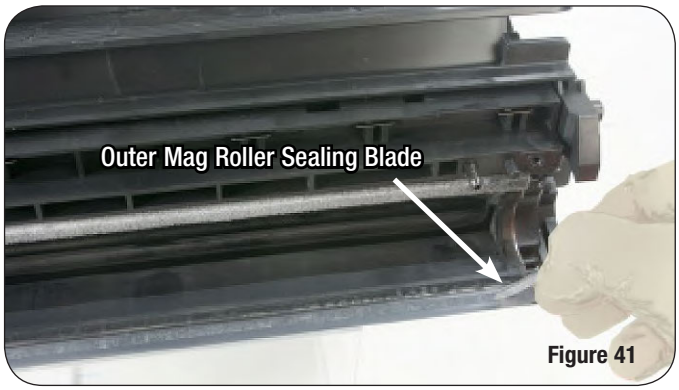


Figure 41

6. Remove the adhesive release liner from the outer sealing blade and align the end of the blade with the alignment marks located beyond the outside edge. Align the length of the blade against the ridge between the inner and outer mag roller sealing blade as shown in Figure 42.

Note: Press along the entire length of the blade to activate the adhesive and remove any air pockets.

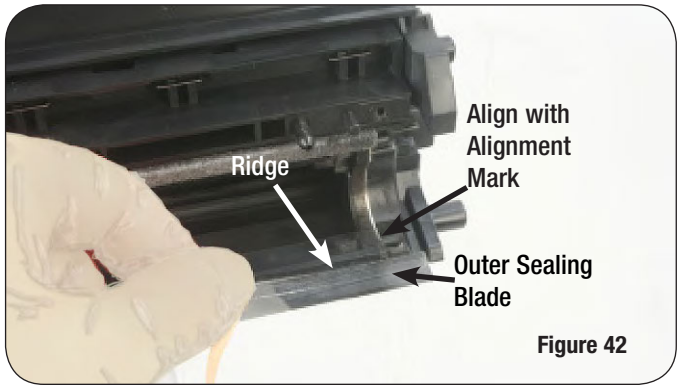


Figure 42

Note: Static Control offers a single blade replacement for both inner and outer sealing blades.

7. If replacement is needed for the doctor blade sealing foam, remove the doctor blade sealing foam and any residual adhesive. Clean the installation area with a lint-free swab and 91-99% isopropyl alcohol (Figure 43).

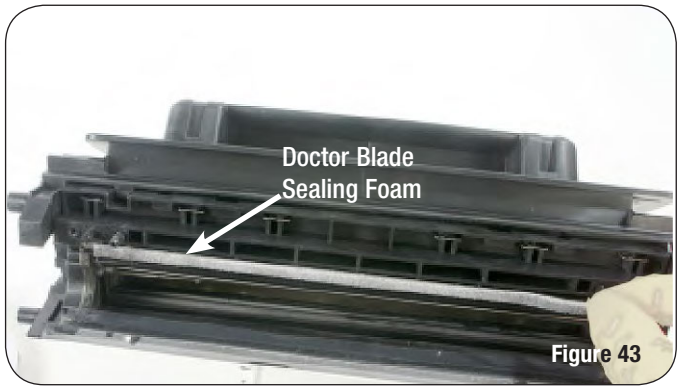


Figure 43

8. Remove the adhesive release liner from the foam and align with the outer edge of the sealing surface as shown in Figure 44.

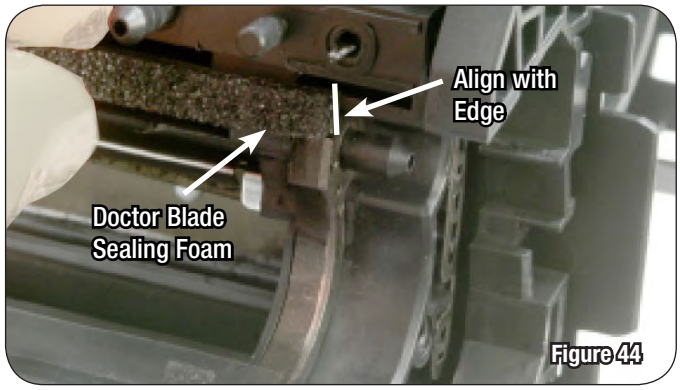


Figure 44

9. Press along the length of the foam to activate the adhesive (Figure 45).

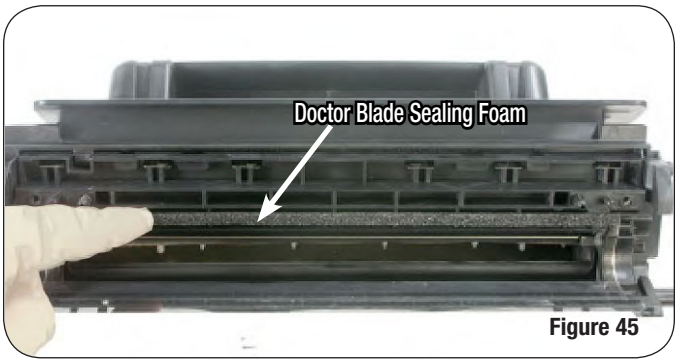


Figure 45

10. Place cleaned or replacement doctor blade onto the alignment posts in the toner hopper as shown in Figure 46.

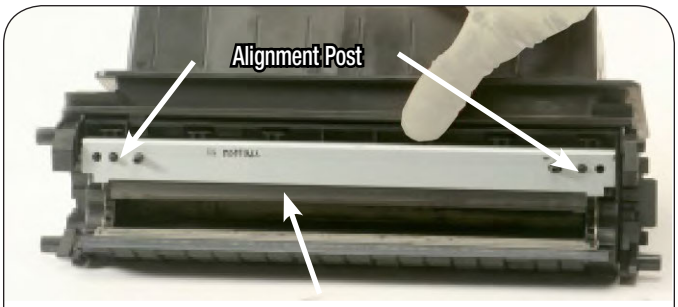


Figure 46

11. Install mag roller scraper tabs at each end. Carefully lift the scraper tab shim and secure with a screw at each end (Figure 47).

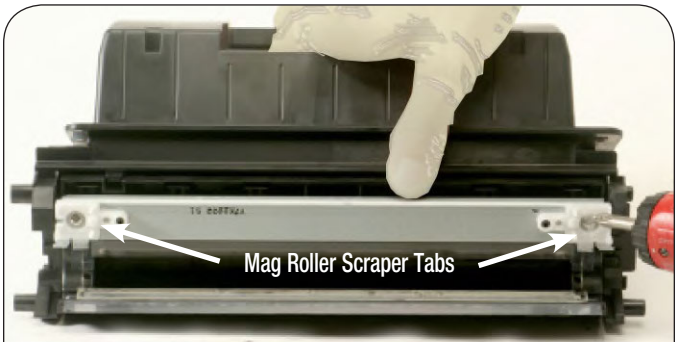


Figure 47

12. Install mag bushings onto new mag roller. The black bushing should be on the contact end, the white bushing on the drive end (Figure 48).

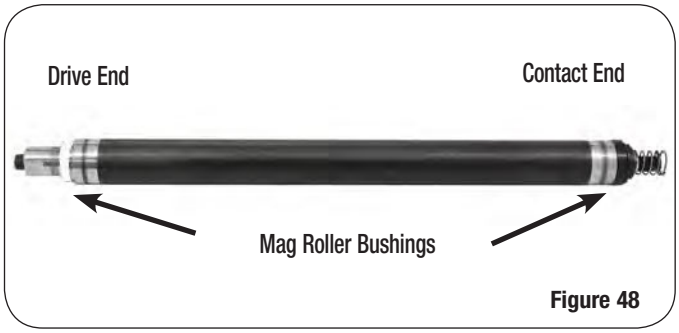


Figure 48

13. Align mag roller and place into the toner hopper (Figure 49a).


Figure 49a

14. Clean the mag roller contact using a lint-free swab, saturated with 91-99% isopropyl alcohol. Using the wooden end of the swab, apply a small amount of conductive grease to the contact on the contact support plate as shown in Figure 49b.

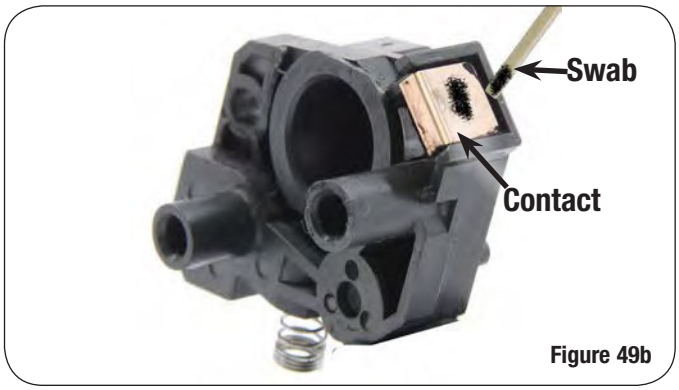


Figure 49b

Note: Inspect mag roller for signs of damage such as scratches and cracks. For cleaning instructions, see Appendix C.

15. Ensure that the scraper tab shim on the mag roller scraper tabs are on top of the mag roller (Figures 50a and 50b).

Figure 50a

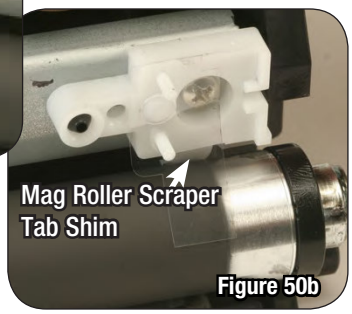


Figure 50b

16. Ensure correct stabilizer bearing placement in mag roller contact support plate drive gear housing as shown in Figure 51.

Figure 51

17. Install mag roller contact support plate and secure with one screw (Figure 52). Ensure the spring is seated properly.

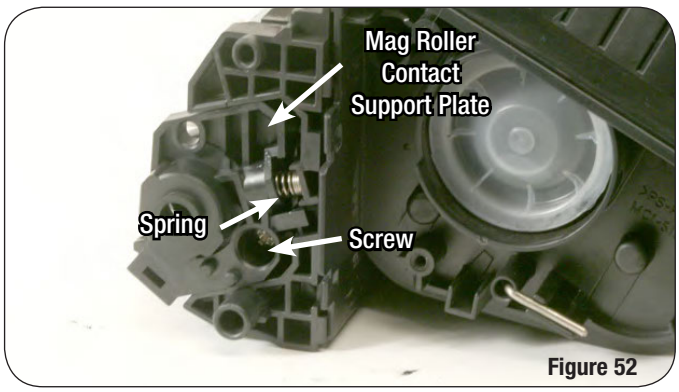


Figure 52

18. Install toner out sensor bar between locator posts (Figure 53).

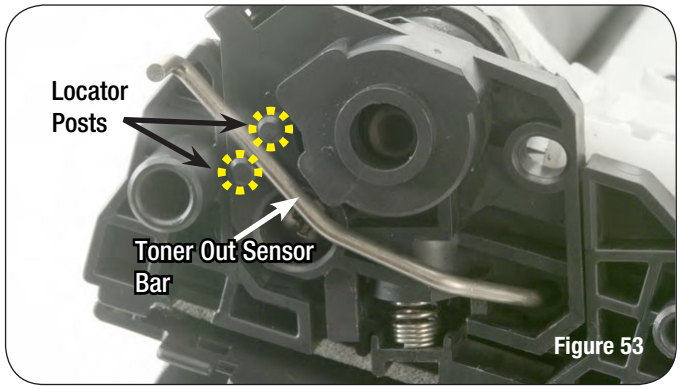


Figure 53

19. Ensure correct stabilizer bearing placement in mag roller drive gear housing support plate (Figure 54).

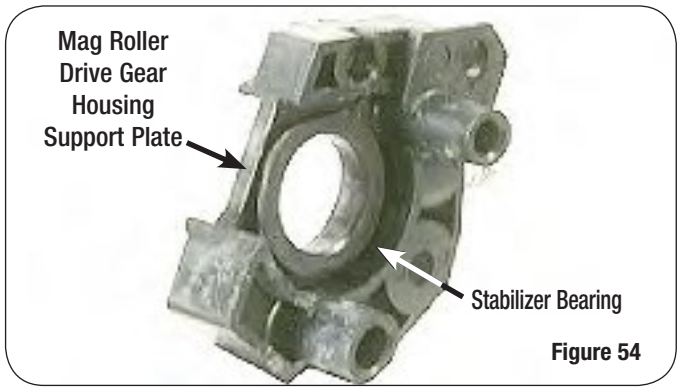


Figure 54

20. Install mag roller drive gear housing support plate and secure using two screws (Figure 55). Ensure the spring is seated properly.

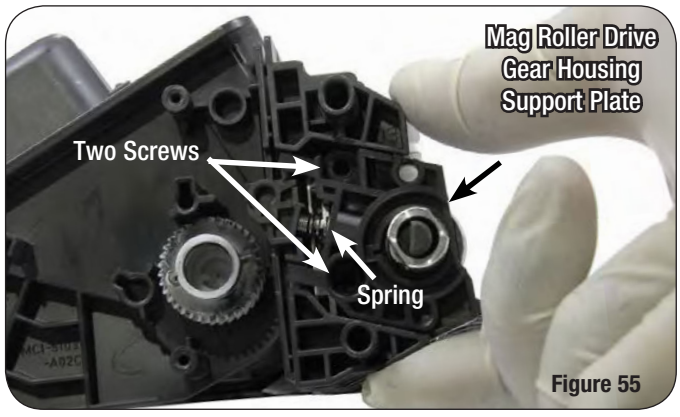


Figure 55

21. Install the mag roller drive gear onto the mag roller journal as shown in Figures 56a and 56b.

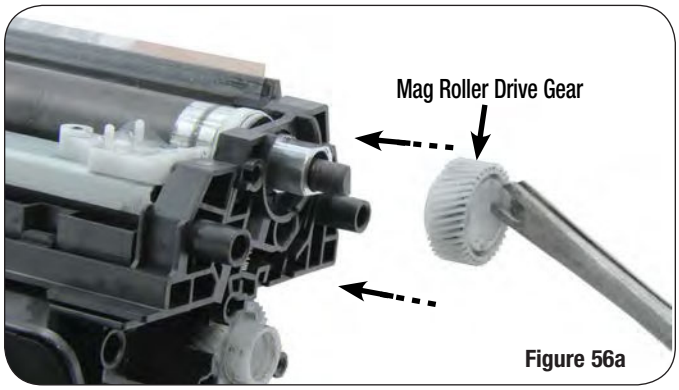


Figure 56a

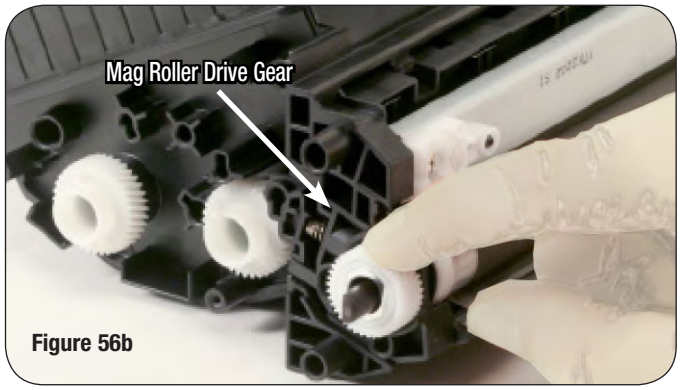


Figure 56b

22. Install the drive gear end plate. Position the flat of the magnet shaft towards the toner hopper to ensure correct fit as shown in Figure 57.

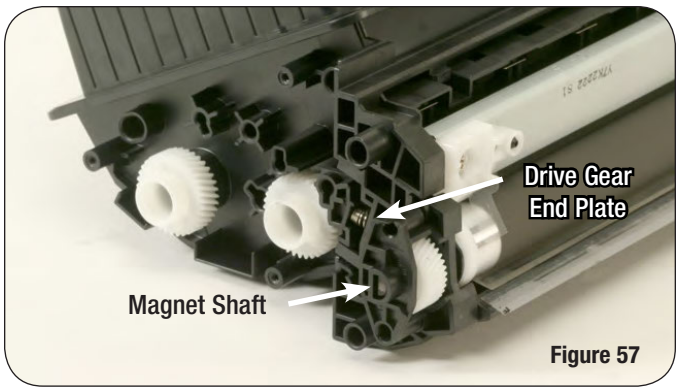


Figure 57

Disassembling the Waste Bin

1. Locate and remove the screw in the drum retaining plate. See Figure 58.

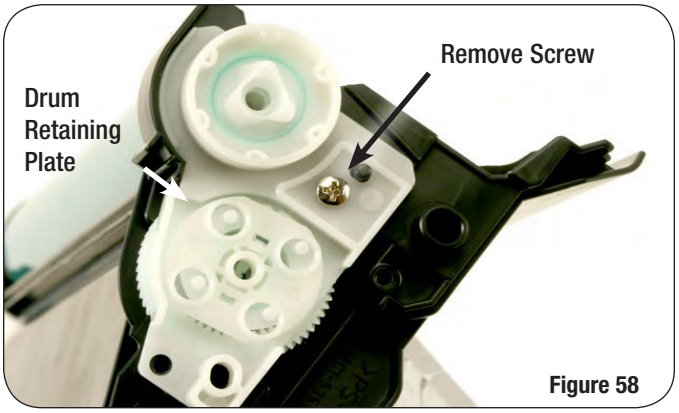


Figure 58

2. Remove drum retaining plate (Figure 59).

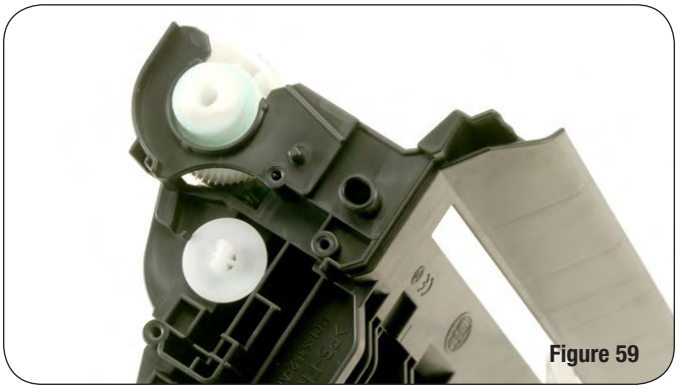


Figure 59

3. Holding the drum by the gear/hub (Figure 60), remove drum by lifting up and carefully sliding the drum off of the pin in the other end.

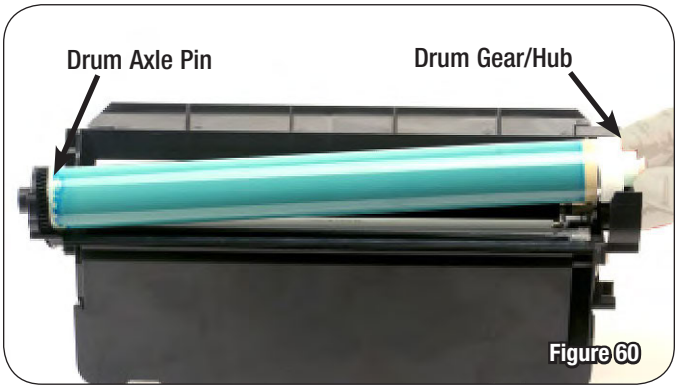


Figure 60

4. Remove PCR by grasping the axle on the drive side end and pull it from the saddles (Figure 61).

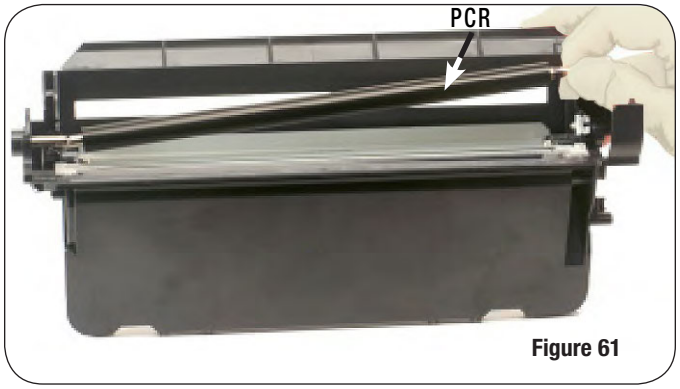


Figure 61

Note: Inspect PCR and replace as needed. For cleaning instructions, see Appendix A.

5. Locate and remove the two screws securing the wiper blade as shown in Figure 62.

Figure 62

6. Using needle nose pliers, lift the wiper blade from the gear end of the waste bin and remove (Figure 63).

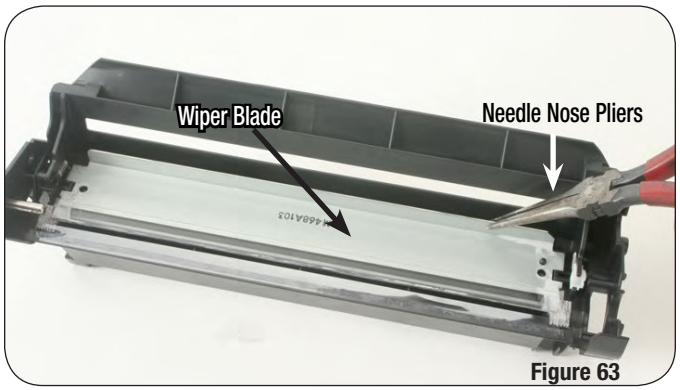


Figure 63

7. Dump waste toner into cartridge cleaning workstation. Blow clean with ionized, dry, filtered, compressed air (Figure 64).

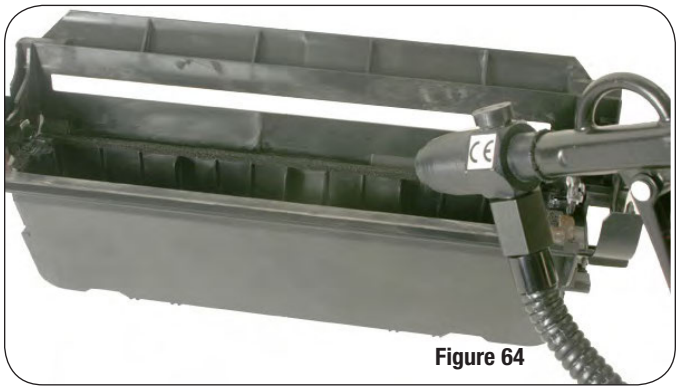


Figure 64

Note: Inspect all the felts and foams and replace if needed.

Reassembling the Waste Bin

1. If replacement is needed for the wiper blade sealing foam, remove the wiper blade sealing foam and any residual adhesive (Figure 65). Clean the installation area with swab and 91-99% isopropyl alcohol.

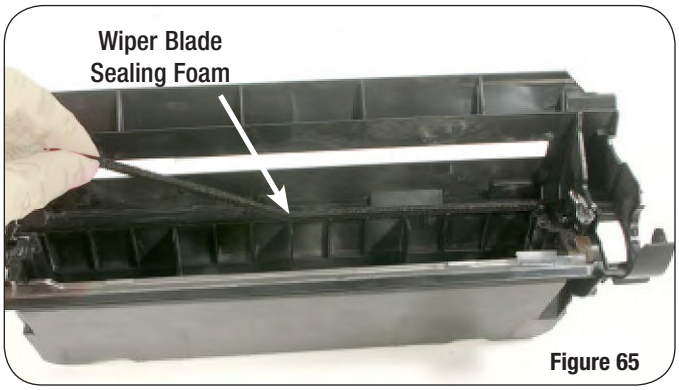


Figure 65

2. Remove the release liner from the foam and install into the waste bin. Align foam to alignment marks at each end of the waste bin. Press along the length of the foam to activate the adhesive (Figure 66).

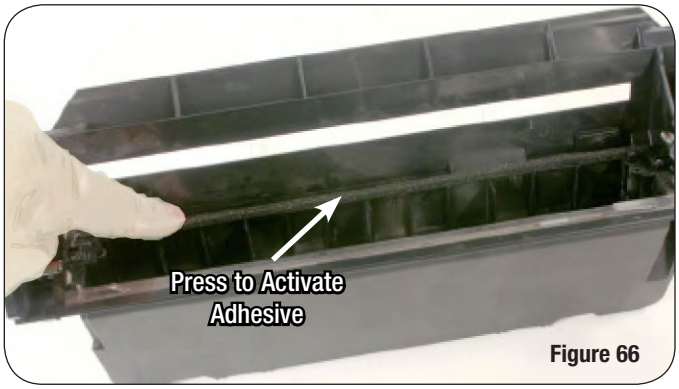


Figure 66

Note: If replacement is needed for either the wiper blade end foam or wiper blade end felt, the recovery blade must also be replaced.

3. Remove the recovery blade (Figure 67a), the wiper blade end felt and the wiper blade end foam on both ends of cartridge (Figure 67b). Remove any residual adhesive from the installation area and clean the installation area with 91-99% isopropyl alcohol.

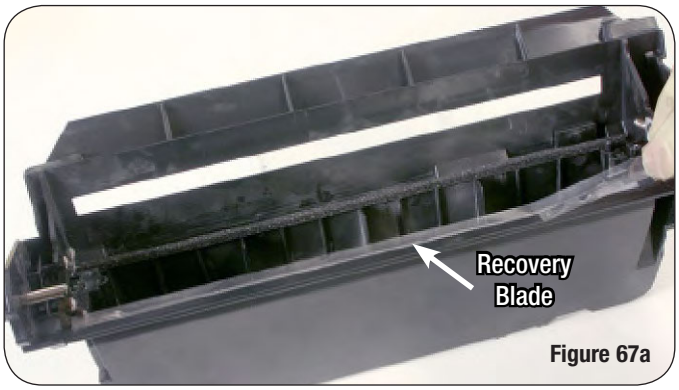


Figure 67a

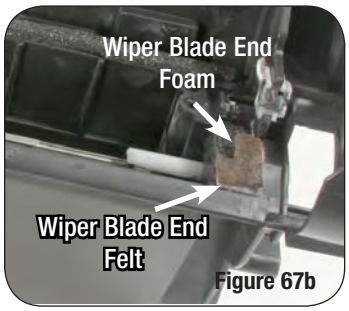


Figure 67b

4. Remove the release liner from the wiper blade end foam and install on each side of waste bin. Align the foam with the vertical and horizontal edges as shown in Figure 68. Press against the foam to activate the adhesive.

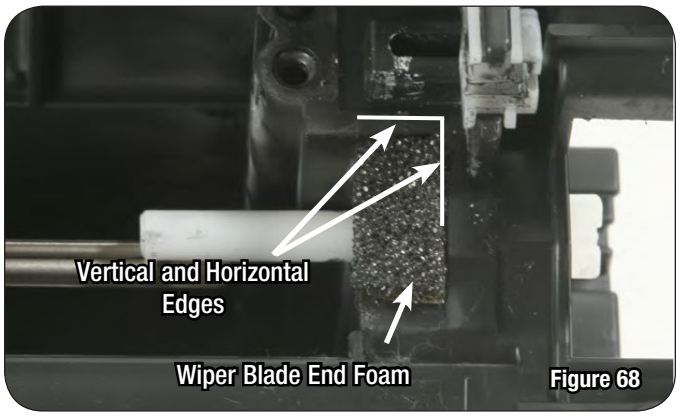


Figure 68

5. Remove the release liner from the appropriate (left or right) wiper blade end felt and install into the waste bin. Align the felt with the alignment edge as shown in Figure 69. Press against the felt to activate the adhesive.

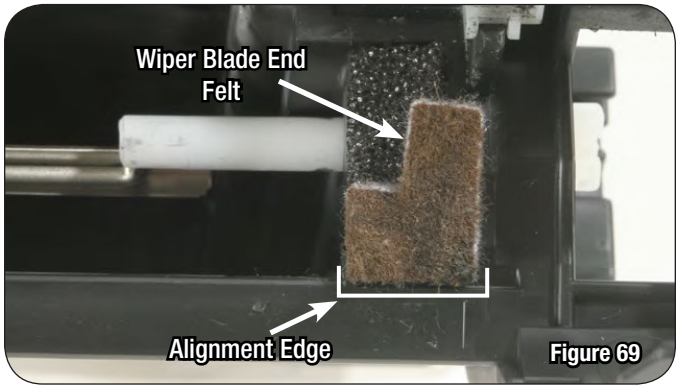


Figure 69

6. Remove the release liner from the recovery blade and install into the waste bin (Figure 70). Center blade between the alignment marks and along the outside edge of the waste bin. Ensure blade is straight and without ripples along the entire length.

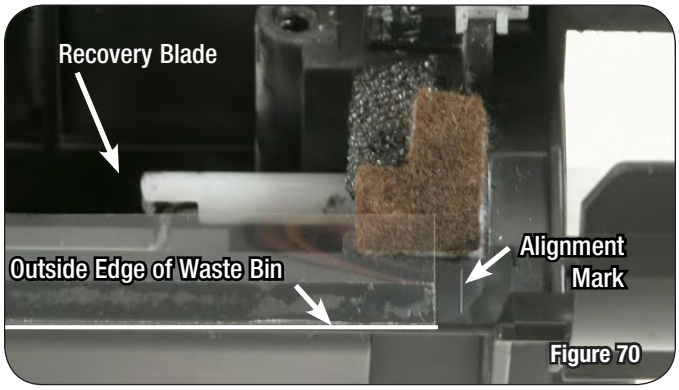


Figure 70

7. To prepare the wiper blade for installation, dip it into a tray of approved toner and lightly blow off any excess. Install contact end into position first. Place the wiper blade over the alignment posts and secure using two screws. See Figure 71.

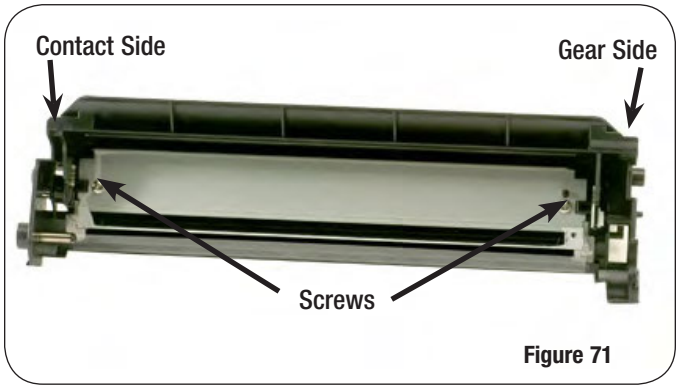


Figure 71

8. Make sure the corners of the wiper blade are seated in the notches of the wiper blade end felts as shown in Figure 72.

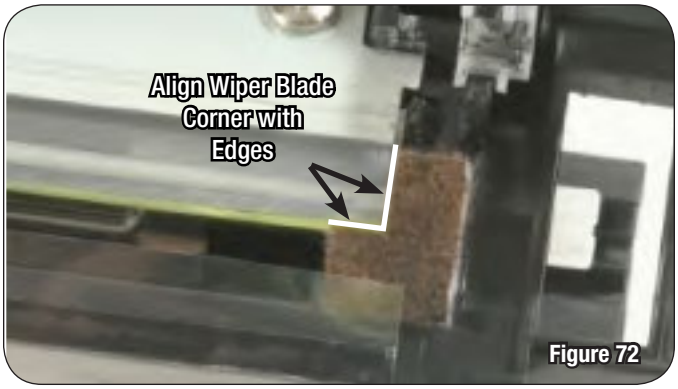


Figure 72

9. Clean the PCR saddles and drum axle pin (Figure 73a and 73b) with a cotton swab saturated with 91-99% isopropyl alcohol. Using the wooden end of a swab, apply a small amount of conductive lubricant to the black saddle of the PCR and drum axle pin.

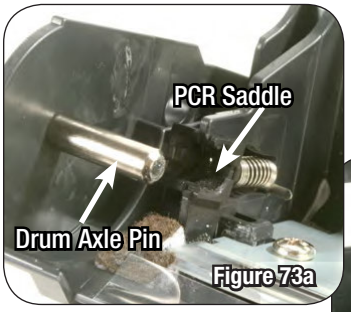


Figure 73a

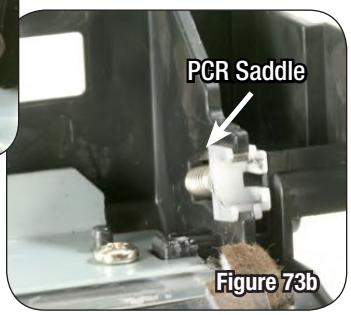


Figure 73b

10. Install the PCR into the saddles (Figure 74).

Figure 74

11. Apply a drop of conductive lubricant on the tip of the drum axle pin using the wooden end of a swab, as shown in Figure 75.

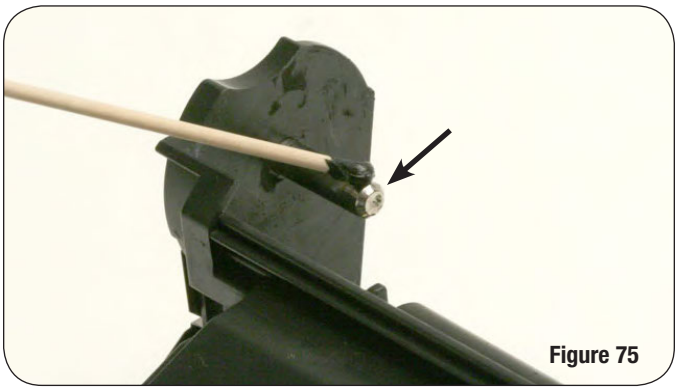


Figure 75

12. Prior to installation of the drum, apply a fine layer of approved toner along the surface of the drum. Lightly blow off excessive toner. Install the drum by sliding onto the drum axle pin at contact side of waste bin (Figure 76).

Note: Lubricate the drum axle hub in the retaining plate with Lubriplate 105 ™ cartridge lubricant.

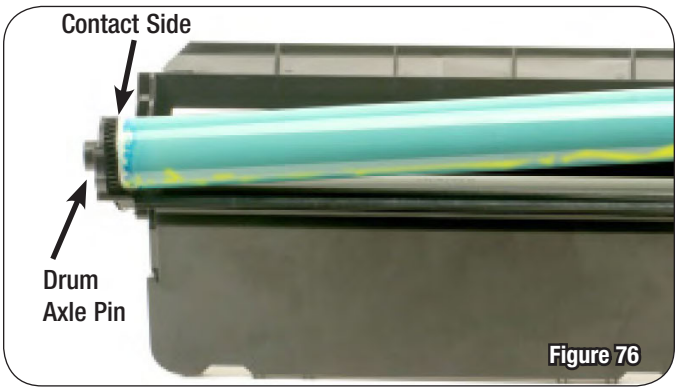


Figure 76

13. Install drum retaining plate and secure with one Phillips screw at the hole closest to the locator post (Figure 77).

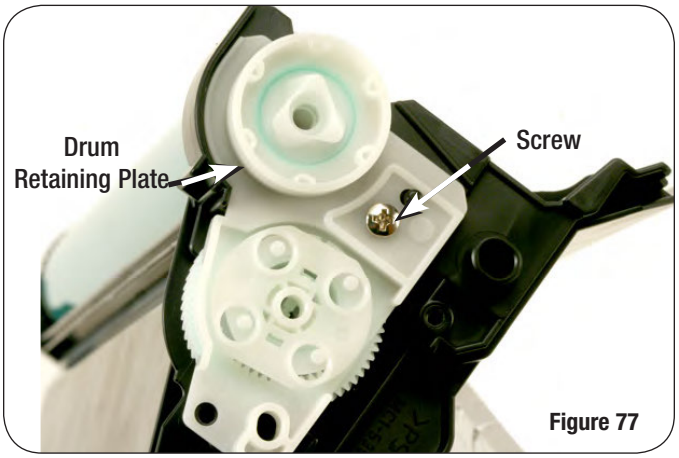


Figure 77

14. Rotate drum in the direction shown in Figure 80. Wipe the PCR with lint-free cloth only if excess toner is visible on the PCR (Figure 78).

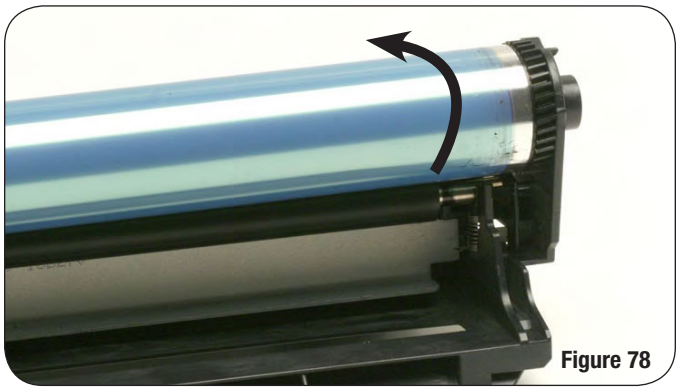


Figure 78

Reassembling the Two Sections

1. Position the two halves together as shown in Figure 79.

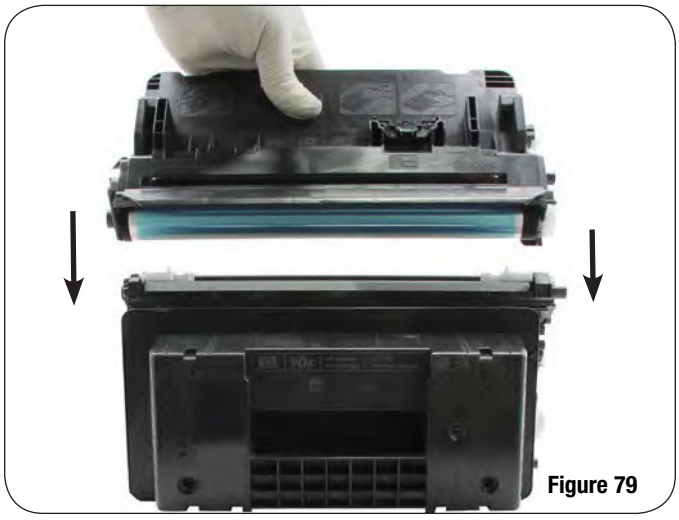


Figure 79

2. While holding the two halves of the cartridge together, install contact side end plate (Figure 80a) and secure with five screws (Figure 80b).

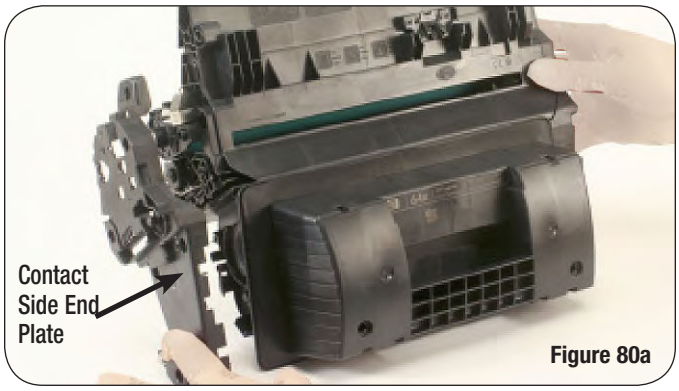


Figure 80a

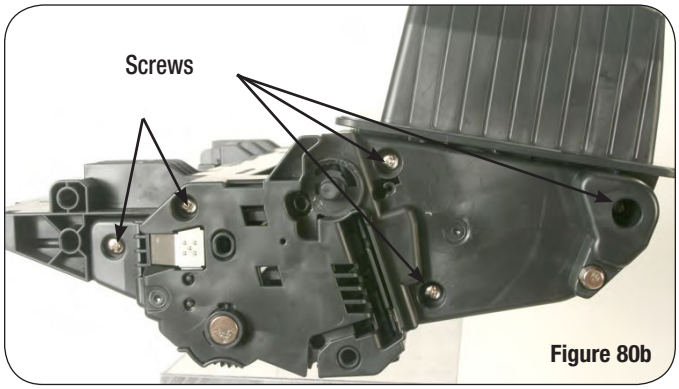


Figure 80b

3. Install gear side end plate (Figure 81a) and secure with five screws (Figure 81b).

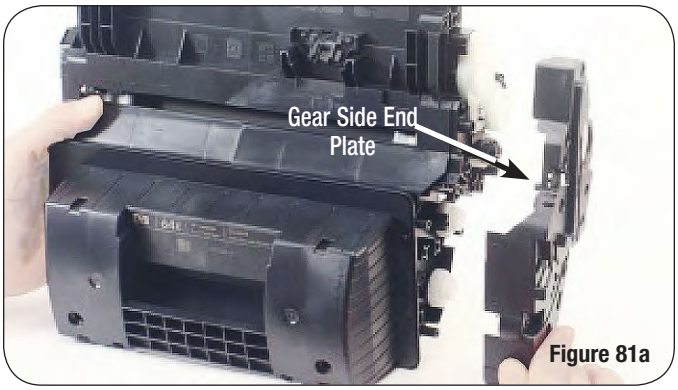


Figure 81a

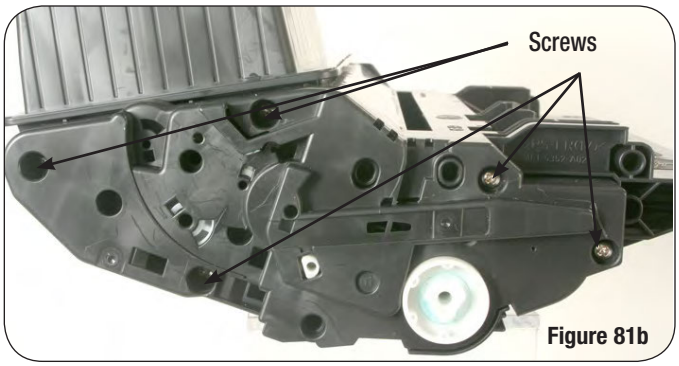


Figure 81b

Note: Drum is exposed, take care to prevent damage. Install drum shutter onto cartridge.

4. Install shutter support bar into place on each side of the waste bin (Figure 82) and snap into place.

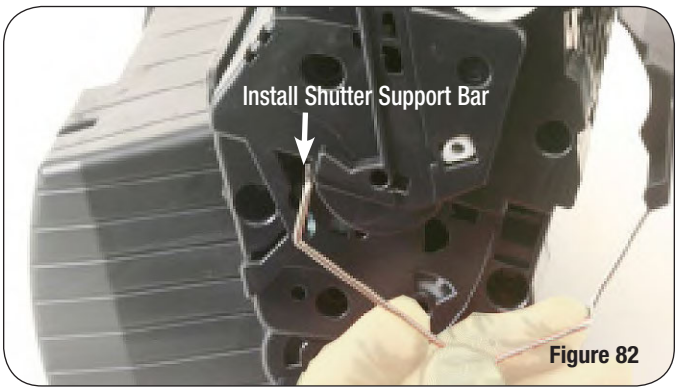


Figure 82

Note: For chip installation, refer to SSS# 1017.

Cleaning Instructions - Appendix A

This section provides the information needed to clean the OEM mag roller, doctor blade and PCR. Before attempting to perform the following procedures, read the entire section carefully. Ensure all necessary safety precautions are followed.

Static Control provides components that have been electrophotographically matched as a system as well as remanufacturing procedures that have been carefully researched. If you use our Static Control components and follow our step-by-step instructions, you will be able to produce a remanufactured cartridge that produces prints virtually indistinguishable from the OEM. To guarantee this level of quality, we recommend that you change the critical components each time and carefully follow these remanufacturing procedures.
We realize that on occasion you may decide that you need to reuse OEM component parts rather than new Static Control products. For this reason we have provided an appendix which includes our recommendations with how to safely and most effectively clean used OEM components. Reusing cleaned OEM components from virgin cartridges, used only once in the OEM cycle, carries some risks to overall print quality. Carefully consider this risk before using a "clean and reuse" policy in your remanufacturing facility.

PCR Cleaning

1. Using dry, filtered compressed air, clean any loose toner from the PCR (Figure 83).

Figure 83

2. Once the PCR is clean, use a lint-free cloth dampened with 91-99% isopropyl alcohol to wipe down the entire surface of the PCR. Inspect for damage and replace as needed (Figure 84).

Figure 84

Doctor Blade Cleaning

1. Using dry, filtered compressed air, clean any loose toner from the doctor blade (Figure 85).

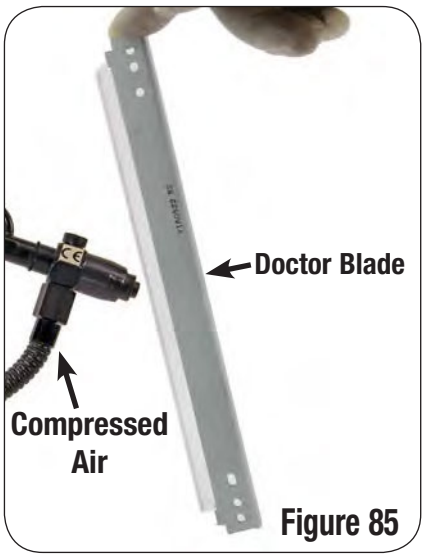


Figure 85

Note: If further cleaning is required, wipe with a lint-free cloth dampened with 91-99% isopropyl alcohol. Wipe from the center to the ends to remove any cleaning residue.

Note: The blade is very fragile and should be handled with care.

2. Once the doctor blade is clean, use a lint-free cloth dampened with deionized water to wipe down the entire surface of the doctor blade. Blow off any water left on the doctor blade with dry, filtered, compressed air (Figure 86).

Figure 86

Mag Roller Cleaning

1. Grasp the mag roller by the metal shaft at either end. Using dry, filtered, compressed air, remove any loose toner (Figure 87).

Figure 87

2. Inspect the mag roller for signs of damage, such as cuts, nicks, dents or fraying.

Note: If there are signs of damage, discard the mag roller and replace it with a new one.
If there are no signs of damage, continue with this procedure.

3. Once all of the toner has been removed, use a lint-free cloth dampened with 91-99% isopropyl alcohol (Figure 88).

Figure 88

Notes

Notes

DEDICATION TO TRAINING

In order to produce consistent high quality prints that are virtually indistinguishable from the OEM, it is essential to follow Static Control's remanufacturing instructions exactly as directed. Static Control is dedicated to informing customers of the latest innovations in training and knowledge. Access to these instructions, our technical support staff and View on Demand Webinars is available to all customers in good standing.

ELECTROPHOTOGRAPHICALLY MATCHED COMPONENTS

We provide these critical components that have been electrophotographically matched for use in remanufactured toner cartridges. It is vital that the critical components be replaced as a system to ensure consistent high quality performance. We provide additional components such as felts, foams and recovery blades, should you decide they are necessary. Using Static Control's system of components allows you to use less expensive non-virgin cartridges and create remanufactured cartridges that provide high quality prints virtually indistinguishable from the OEM.

INDUSTRY LEADER

Static Control is the global leader in aftermarket imaging and remanufacturing technology. Offices are located worldwide and all research, development, manufacturing and engineering takes place at their Sanford, North Carolina, USA world headquarters. Currently, Static Control manufactures in-house over 8,000 imaging products and supplies over 15,000 imaging products to the aftermarket industry.

Static Control Components, Inc.

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