TECHNICAL DOCUMENT

Disassembly Instructions

Panafax UF-890 (actually revisiting the Panafax UF-550) Toner Cartridges

These instructions cover the Panafax UF-885 (UG-5520) and UF-550 (UG-3313) cartridges. The supplies used in both cartridges are identical. The cartridges however are not interchangeable. There are recessed panels on the bottom of the cartridges that are located in different locations. These recessed panels either allow or block cartridge insertion into the machine. See Figure's 1 & 2. Although these cartridges have been around for quite a while, with the release of the new versions, we have been getting quite a few questions on them.

The Panafax UF-550 was first introduced in July 1996. There are quite a few machines based on this engine. The basic engine is rated at 400dpi, 10ppm. The UG-3313 cartridge is rated for 10,000 pages. Pitney Bowes also released machines based on this engine, with a unique twist. The large OPC drum helical drive gears are at an opposite angle from the Panafax gears. The two cartridges will fit into each others machine, but if the wrong cartridge (drum) is used, the paper will jam right at the drum every time. See Figure's 3 & 4 for the drum gears. The UG-3313 cartridge contains 340g toner and is rated for 10,000 pages.

The Panafax UF-890 is the new re-incarnation of the UF-550 cartridge. The difference is in the recessed panel on the bottom of the cartridge. The UG-3313 is in one location, the UG-5520 is in another. Because of this, the cartridges are not interchangeable. The Panafax UF-890 was first introduced in November 2001, followed by the UF-990 in February 2002. These machines are both 600 dpi, 10ppm with transmit speeds of 33.6 Kbps. The UG-5520 cartridge contains 360g toner and is rated for 12,000 pages. Figure 5 shows the UG-5520 cartridge label stating that the cartridges are NOT interchangeable with the UG-3313. So far Pitney Bowes has not released their version of these machines.

Both cartridges can hold the higher 360g load with no problems. The UG-3313 has a list price of $295.00, and the UG-5520 lists at $200. They are both easy and profitable cartridges to do.

The following chart includes all the machine based on the UF-550 engine with their corresponding cartridge part numbers.

We will cover some basic troubleshooting, and how to print test prints/cleaning pages at the end of this instruction.

Panasonic	UF-550	UG-3313
Panasonic	UF-560	UG-3313
Panasonic	UF-770	UG-3313
Panasonic	UF-880	UG-3313
Panasonic	UF-885	UG-3313
Panasonic	UF-895	UG-3313
Panasonic	DX-1000	UG-3313
Panasonic	DX-2000	UG-3313
Panasonic	DF-1100	UG-3313
Panasonic	UF-890	UG-5520
Panasonic	UF-990	UG-5520
Pitney Bowes	2030	815-7
Pitney Bowes	2050	815-7
Pitney Bowes	9900	815-7
Pitney Bowes	9910	815-7
Pitney Bowes	9920	815-7
Pitney Bowes	9930	815-7

Panafax UF-890 Cartridge   (Continued)

Required Tools

Toner approved vacuum.

A small Common screw driver

A Phillips head screwdriver

Needle nose pliers

Spring Hook

Required Supplies

340g dedicated UF-550/890 toner (360G for the UF-890)

New replacement drum (The UG-3313 and UG-5520 use the same drum, the Pitney Bowes cartridges use different gears)

UF-550 Sealing strip

UF-550 Wiper blade

UF-550 Doctor Blade

UF-550 Replacement Magnetic Roller Sleeve

High quality silicon tube. (Non drying type)

Panasonic UG-3313
(UG-3313)

Figure 1

Panasonic UG-5520
(UG-5520)

Figure 2

NOTE DIRECTION OF THREADS ON DRUM GEAR PANASONIC UG-3313

Figure 3

NOTE DIRECTION OF THREADS ON GEAR PITNEY BOWES 9900 SERIES (815-7)
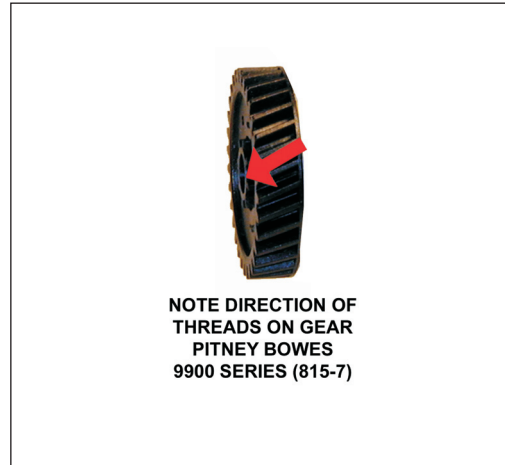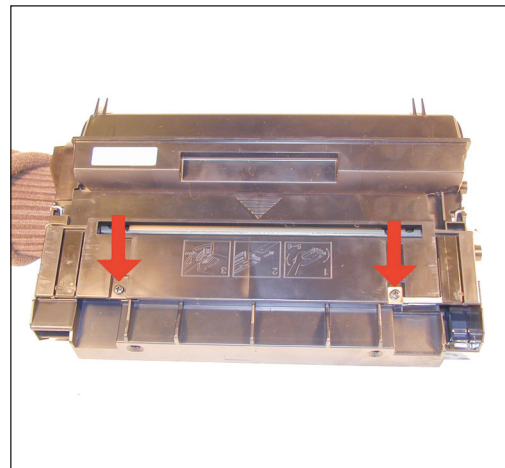
Figure 4

Figure 5

Figure 6

1) Remove the top two screws. See Figure 6

Panafax UF-890 Cartridge   (Continued)
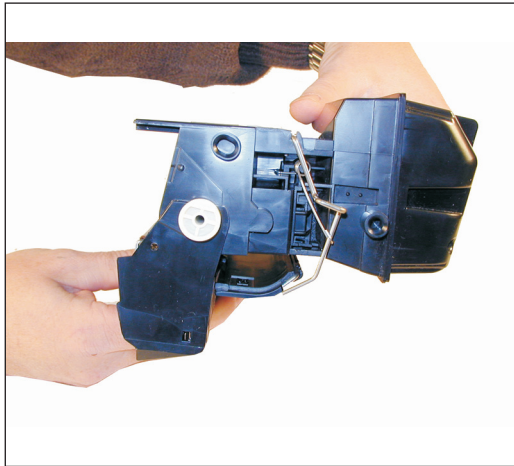
Figure 7
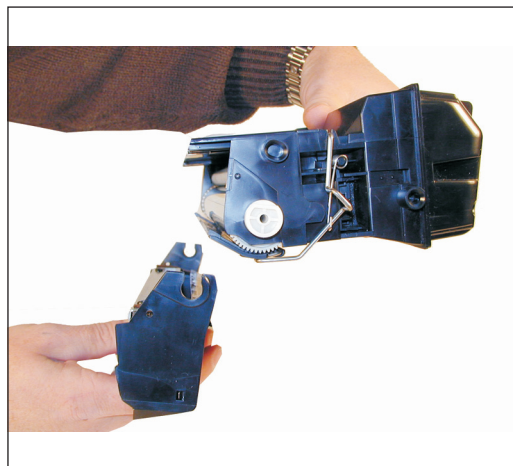
Figure 8

2) Turn the waste chamber down at a 90 degree angle to release the waste chamber from the rest of the cartridge. See Figure's 7 & 8

NOTE: The waste chamber has a large gap, and if you are not careful, toner will dump out.
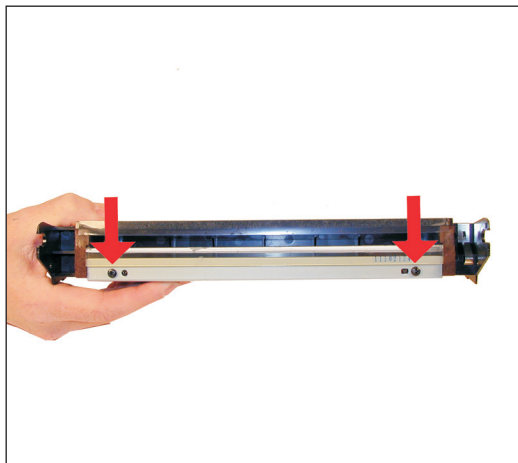
Figure 9
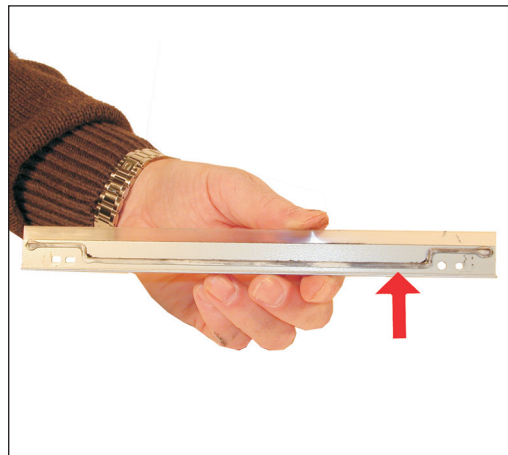
Figure 10

3) Remove the two screws and wiper blade from the waste chamber. See Figure 9

4) Clean out all the waste toner from the chamber.

NOTE: Be very careful not to damage or distort the thin Mylar Recovery Blade next to the wiper blade. If this blade is bent or damaged in any way, it should be replaced

5) Coat the NEW wiper blade with your preferred lubricant, install the blade and two screws. If this is a multiple use cartridge, we have found that toner will tend to migrate from under the silicon seal on the back edge of the wiper blade. Seal behind this strip with a high quality silicon. (Use the type that never dries, the not paintable kind) See Figure 10
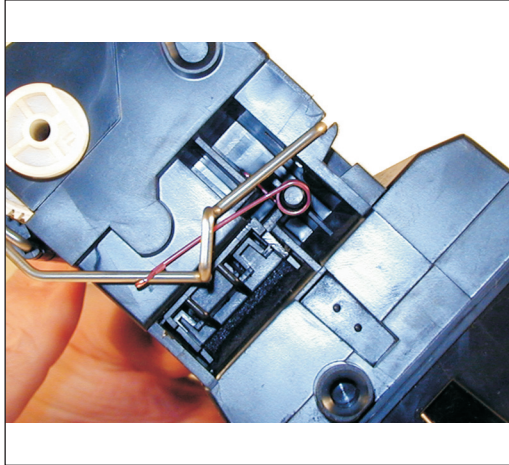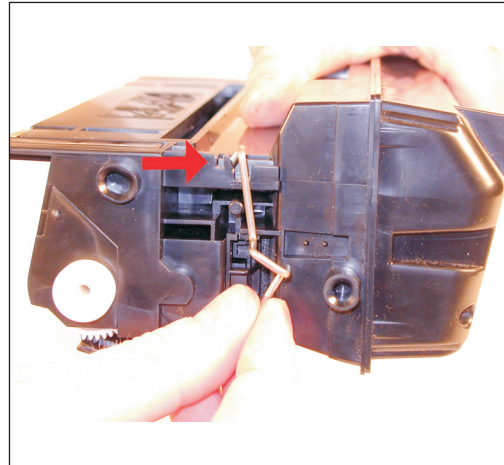
Figure 11

Figure 12

6) Release and remove the spring on the drum cover bar. The spring has been colorized for easy identification. See Figure 11

7) Pry up the bar of the drum cover on both sides of the cartridge. Remove the drum cover. See Figure 12

Figure 13

Figure 14

8) Remove both the right and left white plastic drum axle pins. Note that the contact axle is on the gear side of the cartridge. See Figures 13 & 14.

Panafax UF-890 Cartridge   (Continued)

Figure 15

Figure 16

9) Remove the drum from the hopper. If re-using, place in a dark, safe place. See Figure 15

10) Remove the PCR from the toner hopper. This cartridge is a little different in that the PCR and drum are in the supply section, not the waste. See Figure 16

Figure 17
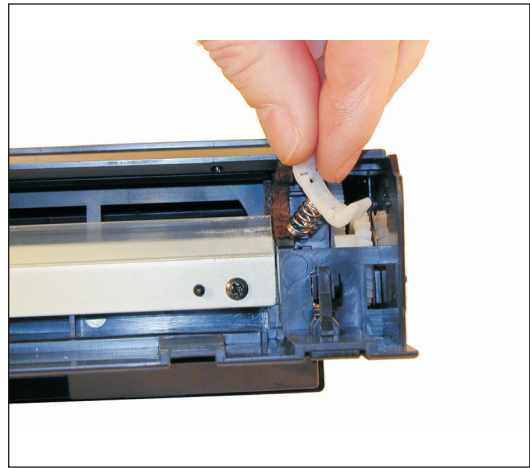
Figure 18

WARNING: Do not clean the OEM PCR with alcohol as this will remove the conductive coating on the roller. We recommended it be cleaned with your standard PCR cleaner

11) With the spring hook, lift out the non gear side of the magnetic roller assembly. The gear side of the roller has a shaft that fits through the outer wall of the cartridge. Lift up from the non gear side until free. See Figure 17

12) To keep them from being lost, remove the two white plastic mag. Roller holders, and the electrical contact from the hopper. See Figure's 18 & 19 (see FIG 19 on next page)
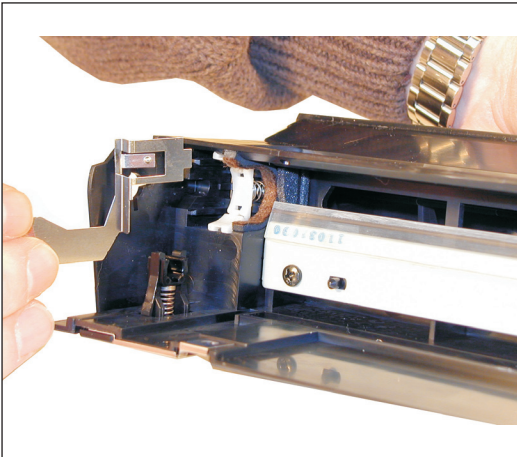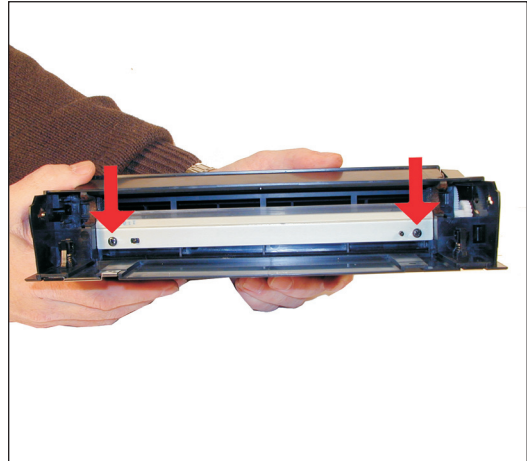
Figure 19

Figure 20

13) Remove the two screws and doctor blade from the hopper. See Figure 20
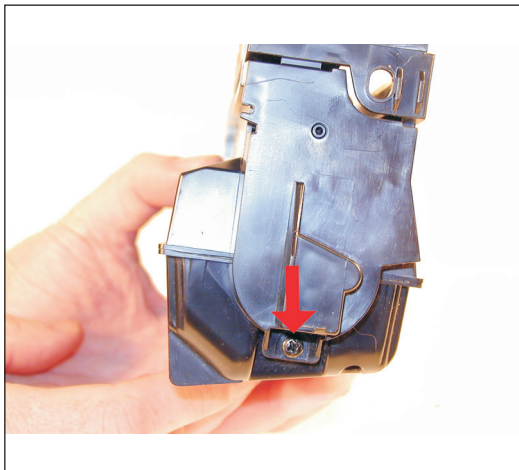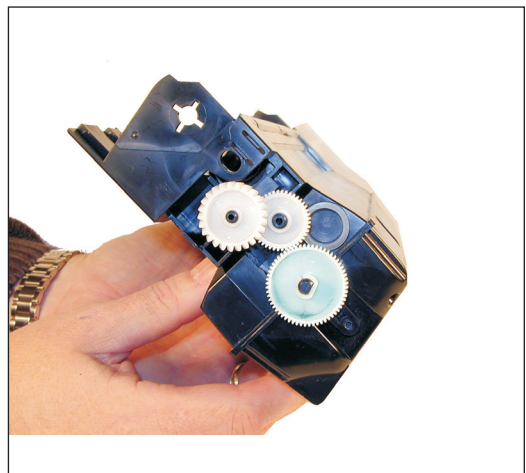
14) Clean out the entire hopper.

Figure 21

Figure 22

15) Remove the side gear cover and screw. See Figure 21

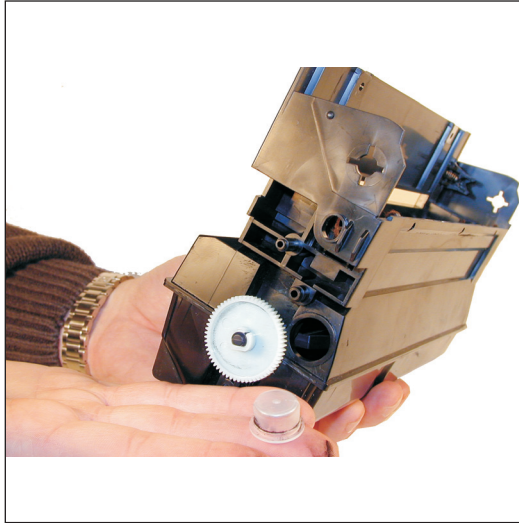**16) Remove the two white gears, the blue gear can stay. (The blue gear has a locking tab that keeps it in place. See Figure 22**
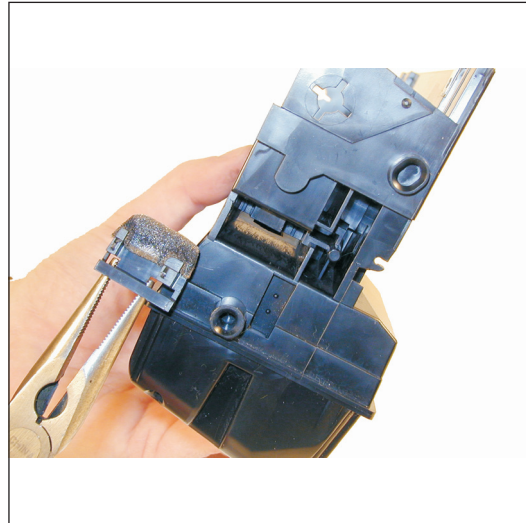
Figure 23

Figure 24

17) Remove the fill plug. See Figure 23

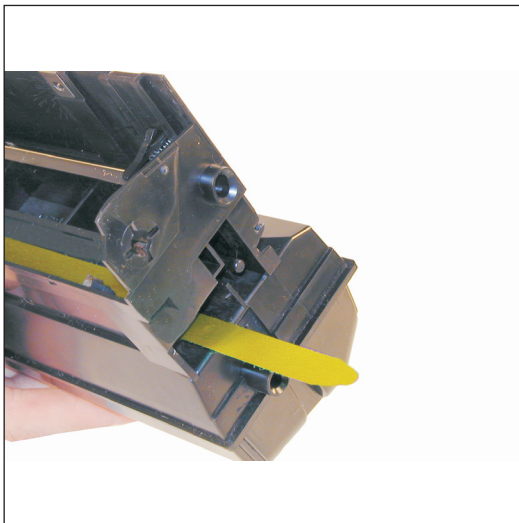**18) Remove the seal foam plug with needle nose pliers. This plug has a tight fit. See Figure 24**
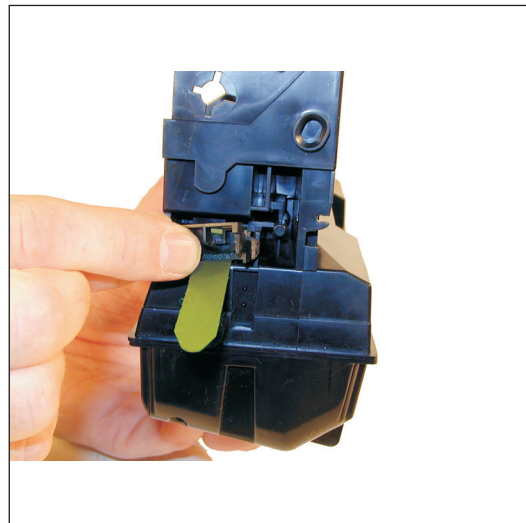

Figure 25

Figure 26

19) Install the seal across the framework, and slide the pull tab out through the slot left by the seal plug. See Figure 25

20) Install the seal plug, make sure it locks in place, and that the pull tab on the seal is not pinched. See Figure 26
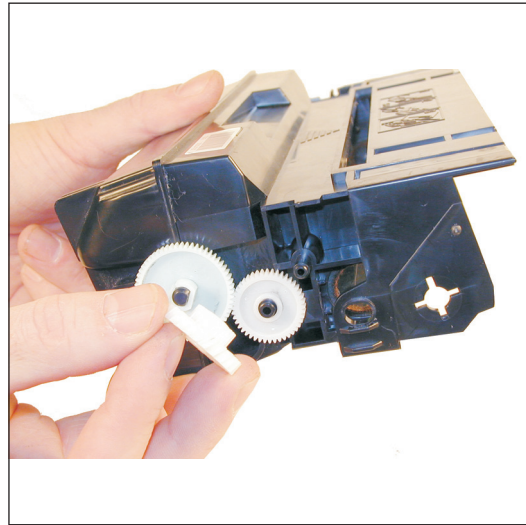
Figure 27

Figure 28

21) Fill with 340g 550 toner (360g for the 890), and re-install the fill plug. This is a small hole, most standard toner funnels, will not fit. If that is the case, make a funnel out of clean paper. Check for leaks. See Figure 27

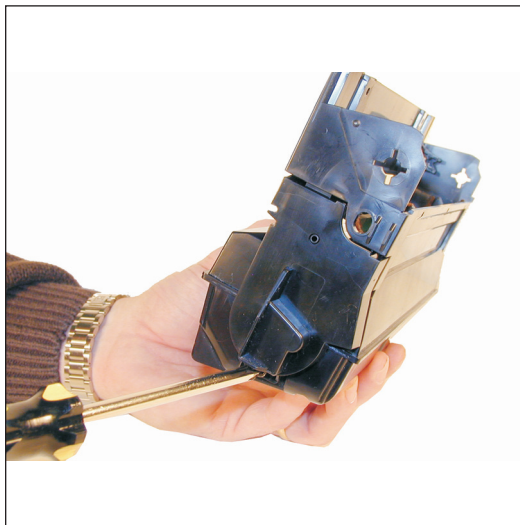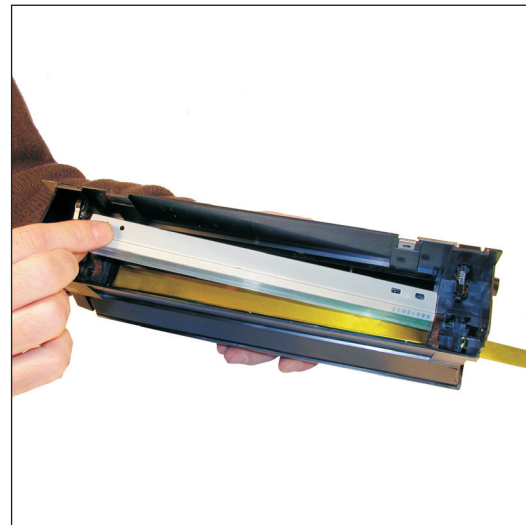**22) Install the two white gears. (They only fit one way) See Figure 28**

Figure 29

Figure 30

23) Install the side gear cover, and screw. See Figure 29

24) Re-install the Dr. Blade, and two screws. See Figure 30

25) Clean the magnetic roller sleeve with a dedicated magnetic roller sleeve. If the roller looks worn, replace it with a new roller, at this point a new doctor blade should be installed also.
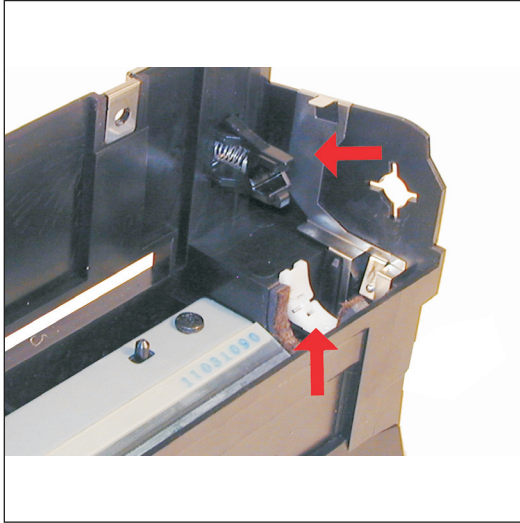
Figure 31

Figure 32

26) Install both the white magnetic roller holders into place and the electrical contact back on the side wall of the hopper. See Figure 31

27) Install the Magnetic roller assembly into the hopper. Insert the gear side first, making sure that the shaft fits into the hole in the side wall. The non gear side of the shaft is keyed. Make sure the flat side is vertical so that the roller seats properly. See Figure 32
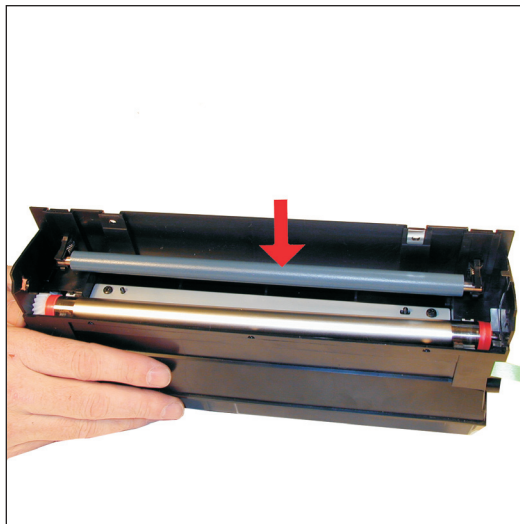

Figure 33

Figure 34

28) Install the cleaned PCR. See Figure 33

29) Install the new/cleaned OPC drum. The drum fits loosely in place, be careful not to damage it, or to tip the hopper. See Figure 34
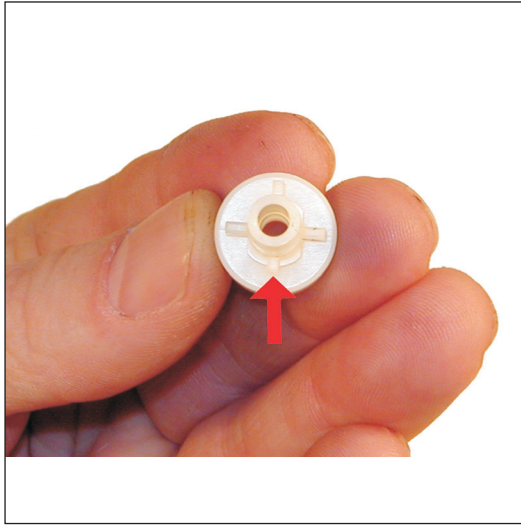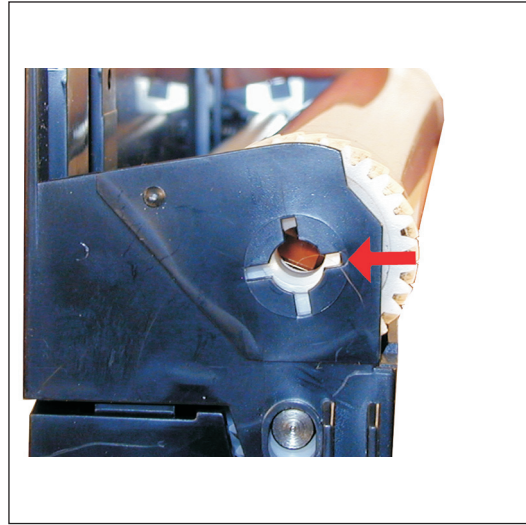
Figure 35

Figure 36

30) Install the two drum axle pins. Make sure that the contact pin is on the gear side of the cartridge. Also note that there are four cross bars on each pin, and that one of the bars is smaller than the others. There is also a smaller slot in the cartridge chassis that corresponds with the cross bar. Insert the pins, do not force them! They both do NOT fit flush with the wall of the cartridge. The extra space is where the waste chamber hooks into. See Figure's 35, 36, & 37
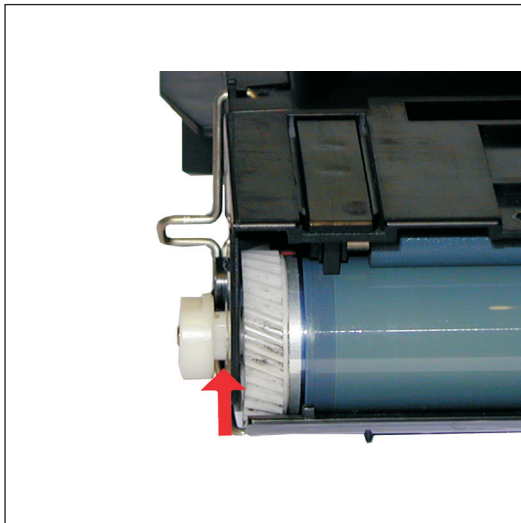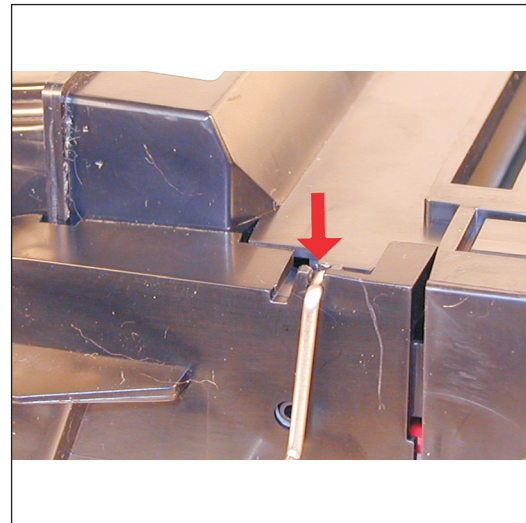

Figure 37

Figure 38

31) Install the two drum cover bars. Snap them in place. See Figure 38
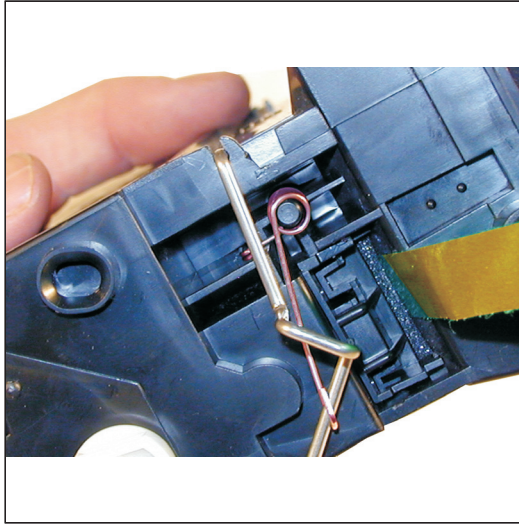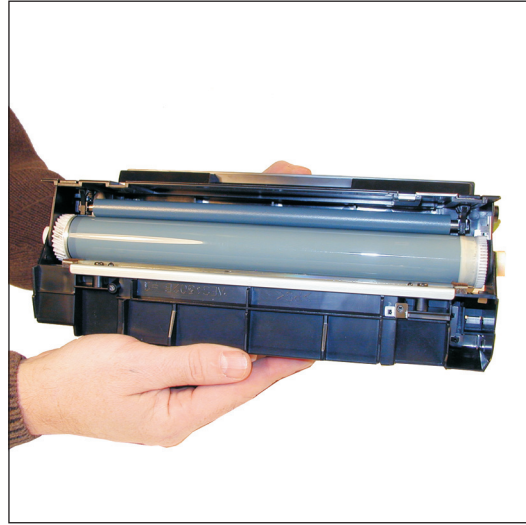
Figure 39

Figure 40

32) On the small gear (non- helical) side, install the drum cover spring as shown. (The spring has been colorized to show its position more clearly. See Figure 39

33) Hold the waste chamber at 90 degrees to the supply hopper. Hook both sides to the drum axle pins. Rotate the waste chamber up until it is flush with the top of the supply. See Figure 40
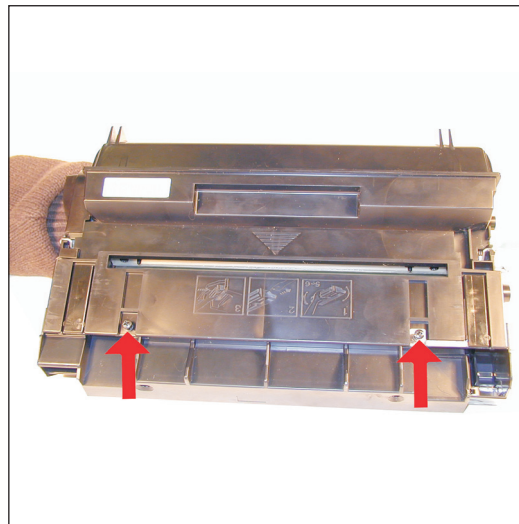

Figure 41

34) Install the two screws into the top of the hopper. See Figure 41

Common Cartridge Problems

Loose toner dropping onto the pages; This normally happens in multiple use cartridges. Toner can migrate from under the wiper blade, and drop onto the drum, paper. Seal the back edge of the wiper blade with a high quality silicon to fix. (This can also be caused by a bent recovery blade)

A Dirty or Bad Primary Charge Roller (PCR); located Inside the cartridge, this will show on the test print as vertical gray streaks down the page, as a gray background throughout the page, or as ghosting where part of a previously printed area is repeated.

Dirty PCR Connection; This will show as horizontal dark black bars across the page, or as shading throughout the page.

Scratched Drum; this is shown by a very thin, perfectly straight line that runs from the top to the bottom of the test page.

Chipped Drum; This will show as a dot or series of dots that repeat 3 times per page. Any drum defects will repeat 3 times per page.

Light Damaged Drum; This will show up as a shaded area on the test print that should be white. Again this will repeat 3 times per page.

Bad Wiper Blade; This will show as either a gray line approximately 1/8" thick, or as shading across the entire page. In either case there will be a film of toner on the drum surface.

Light Print: This is usually caused by either a dirty connection to the Magnetic roller, or by a worn magnetic roller sleeve. Replacement sleeves are not yet available, but they should last for 1-2 cycles.

Machine Use

Making Copies: This is a very simple process. Place the document face down, press COPY, enter the number copies desired, and press START.

Running the Cleaning Page:

Press the FUNCTION, 7, 6, SET buttons, "CLEANING CHARTS 1:PRINT 2:CLEAN will show on the display

Press 1. Three cleaning pages similar to the LX will print out.

Load the cleaning pages into the cassette face down.

Press the FUNCTION, 7, 6, SET buttons, "CLEANING CHARTS 1:PRINT 2:CLEAN will show on the display

Press 2. The machine will run all three pages to clean the rollers.

Panafax UF-890 Cartridge (Continued)

Common Troubleshooting Codes

001 Paper jam, 1st Cassette

002 Paper jam, 2nd Cassette

007 Paper did not fully exit machine. The cartridge should be removed before removing the paper.

010 No paper

041 Toner Out

043 Toner Low

045 No cartridge

060 Printer cover open

061 ADF Door open

Machine Maintenance

When faxes that are being sent arrive with streaks, the odds are that the scanner is dirty. To clean it, open the ADF door (lift it up). The scanner bar is now fully visible, clean it with a soft clean cloth and alcohol. Be careful not to scratch the scanner as it scratches easily.