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Cartridge Refill Instructions

HP #21, #22, #27, #28, #56, #57, #60, #61, #74, #75, #92, #93, #94, #95, #96, #97, #98, #701, #901

Revision 2011-1.0

Technical Support Notes

Resetting Ink Monitor

The following protocol may be used to reset the ink monitor system on certain printers when re-installing a refilled cartridge. The protocol has been confirmed to work with printers using #21, #22, #27, #28, #56, #57 cartridges, we have not confirmed this process with newer printers.

1. Turn off the printer and unplug power cable from the rear.
2. Press and hold "ON" and "Cancel" buttons – plug in printer.
3. Release both buttons ***only*** after any led lights stop blinking.
4. Printer will do full reset, and inkjet printer cartridge level is 100%.

Poor Test Prints Up Re-installation

The most common cause of poor test prints after refilling the cartridge can be two fold:

1. **Over-filling the cartridge.** The sponge reservoirs are designed to hold a specific maximum amount of ink, any extra ink will bleed out of the printhead, creating over-pressure in the firing chamber. This over-pressure will prevent droplet formation during the firing process and lead to banding or blanked out areas of print. The excess ink should be removed using the EZ-Prime tool (sold separately).
2. **Incomplete Printhead Prime.** If the cartridge has been emptied of ink, the printhead must be re-primed prior to installation, as the cleaning process for these primers use a passive method which depends on the presence of ink in the firing chamber to be effective. For best results we recommend using the EZ-Prime tool (sold separately), to prime the printhead prior to installing the cartridge.



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Overview

Use in a wide variety of DeskJet and OfficeJet models, this family of integrated printhead thermal drop-on-demand printer cartridges.

The following specializations are noted:

- The cartridges come in two versions, a monochrome aqueous pigment black ink cartridges and a tri-color aqueous dye cartridge.
- In addition to the integrated circuitry which delimits the cartridges to specific printers, the cartridges come in various ink volumes, from as little as 2 mL capacity (in certain tri-color models) to a high of about 20 mL. Please note that these capacities are estimates, since HP does not publish physical capacities on most cartridges.
- Implementation of UPC 2D barcode on cartridges to force expiration of cartridge on certain printer models, as an anti-refilling measure. If these barcodes are missing or damaged, the cartridges may not work with 2D enabled printers.
- Sponge volume in related cartridges, such are physically smaller than the total cartridge internal volume so as to prevent converting low capacity cartridges into high capacity. When refilling, special attention must be paid to place the ink into the sponge and not into the dead space around the sponge.



Examples of standard capacity cartridges.



Above pictures show different internal sponge designs used to force limited ink capacity in #60 black, #93 color, #92 black cartridges. Pictures below show large capacity sponge structure.





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Refilling Black Cartridges;

1. Poke hole in the label over the corresponding fill hole shown for the figure at right. DO NOT remove label as the 2D barcode on the label is required for proper operation on some printers. Note that on HP #60 cartridges the center line hole noted at right will be located more towards the center of the label.
2. A 5cc syringe has been supplied with your kit. Attach the fill needle and fill the syringe with 5 cc of ink. Insert the fill needle into the fill hole, penetrating the sponge to about 3/4 of the sponge height. DO NOT push the needle all the way into the sponge as you could pierce the intake port filter damaging it.
3. Slowly inject the 5cc of ink into the sponge. Repeat step 2 for #27, #74, #94 and #98 cartridges. Repeat step 2 again for #56, #60XL, #94XL, #96, #701XL and #901XL cartridges
4. Repeat step 2 a fourth time with only 4 cc of ink for #56, #60XL, #94XL, #96, #701XL and #901XL cartridges.
5. Should ink bubble out of the fill hole, stop adding ink as the cartridge is overfilled. Empty out the syringe of any extra ink. Re-insert the syringe needle into the fill hole about 1/4 inserted and remove the extra ink from the cartridge, returning the extra ink to the fill bottle.
6. Wipe off any excess ink from the cartridge with a paper towel.
7. If you have a EZ-Prime Tool, insert cartridge into tool and follow EZ-Prime directions to prime the printhead. If you do not have an EZ-Prime tool shake cartridge gently for about 1-2 minutes to agitate fresh ink into the printhead.
8. Cartridge is now ready to use.



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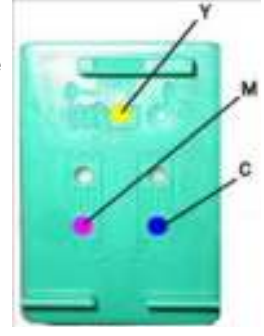
HP #21, #22, #27, #28, #56, #57, #60, #61, #74, #75, #92, #93, #94, #95, #96, #97, #98, #701, #901

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Refilling Color Cartridges:

1. Poke hole in the label over the corresponding fill hole shown for the figure at right. DO NOT remove label as the 2D barcode on the label is required for proper operation on some printers. If designated Cyan fill hole is within the 2D barcode area, use the sharp needle to poke the hole to minimize damage to barcode.
2. A 5cc syringe has been supplied with your kit. Attach the fill needle and fill the syringe with 5 cc of yellow ink. Insert the fill needle into the fill hole, penetrating the sponge to about 3/4 of the sponge height. DO NOT push the needle all the way into the sponge as you could pierce the intake port filter damaging it.
3. Slowly inject the 2cc of ink into the sponge for the low capacity cartridges, as noted below, up to 5 cc for the high capacity noted below.
4. Should ink bubble out of the fill hole, stop adding ink as the cartridge is overfilled. Empty out the syringe of any extra ink. Re-insert the syringe needle into the fill hole about 1/4 inserted and remove the extra ink from the cartridge, returning the extra ink to the fill bottle.
5. Wipe off any excess ink from the cartridge with a paper towel.
6. Repeat steps 2-5 for the magenta, then repeat steps 2-5 for the cyan.
7. If you have a EZ-Prime Tool, insert cartridge into tool and follow EZ-Prime directions to prime the printhead. If you do not have an EZ-Prime tool shake cartridge gently for about 1-2 minutes to agitate fresh ink into the printhead.
8. Cartridge is now ready to use.



Cartridge	Fill Capacity Per Color
#56, #60XL, #61XL, #74XL, #96, #701, #901XL	~19 cc or ~19 mL
#27, #74, #94, #98	~10 cc or ~10 mL
#21, #60, #92, #701, #901	~5 cc or ~5 mL
Fill volumes provided assume that about 10% of original fill volume remains as residue in the cartridge. Your actual fill volume may vary.	

Cartridge	Fill Capacity Per Color
#57, #60XL, #61XL, #75XL, #95, #97, #701XL, #901XL	5 cc or 5 mL per color
#22, #28, #60, #61, #75, #93, #701, #901	2 cc or 2 mL per color
Fill volumes provided assume that about 10% of original fill volume remains as residue in the cartridge. Your actual fill volume may vary.	