

HP CP1215/CP1515n/CM1312

Toner refill instructions

Freemium Release Information

These "freemium" instructions, made available free of charge at www.urefilltoner.co.uk are based on those included with our HP CP1215 Starter Kits, also available in the UK and Europe at www.urefilltoner.co.uk

A Starter Kit is our "zero to hero" kick-start. It's got all the materials and know-how you need to refill your empty cartridge. And get it right. **First time.**

These instructions show you **how we did it**, not how we imagine it could be done. In the case of the HP CP1215, before releasing our Starter Kit in September 2008, we'd successfully done this refill 19 times and reached a page count of 19,006 on the printer. Most of these prints were sent out to customers in the form of instruction booklets.



As you'll see, this document avoids refill disaster through detailed guidance on **critical issues which would only be known to people who have actually worked with the machine.** Most importantly, how to manage refilling the introductory cartridges that arrive with a new machine and how to force "true fade-out" – thereby ensuring you get maximum value from all your toner while avoiding overfill and "fill-on-top" pitfalls.

In addition, as with most of our refills for HP, we consciously developed (and extensively tested) a refill approach that avoids the expense of needing compatible microchips.

You'll see there's other useful information about something that's inevitable if you use laser printers for long enough: print defects. Many of our customers have saved hundreds of pounds and hours

of stress by using our tips to come to terms with otherwise baffling print defects.

We've left in all substantial information needed for a successful refill assuming you're taking advantage of www.urefilltoner.co.uk products. Obviously, we can't guarantee the efficacy of a refill if you're not actually using our stuff.

Only more specific information about the tools and equipment included in our Starter Kit has been removed because it isn't relevant if you haven't actually got the Starter Kit in your hands. No substantial information about the refill technique that worked in our test lab – for 19,006 prints – has been removed.

The majority of our instruction booklets are only available included in their respective Starter Kit. Those that, like this one, are available for free, are only released after we've been selling the commercial product for a reasonable amount of time. That's because, although this document is free, we're a business and we can't do everything free all the time.

Apart from that, in this Copyleft, you have to put up with extensive water-marking over the photography. We apologise for that, but we're forced to do it because of intellectual property theft by our "competitors". Well, actually, we're at peace with the fact they copy our inventions and most of our ideas: the watermarking only stops the very worst cases of wholesale commercial rape.

If you **are** a competitor and you're reading this: don't sell a refill to your customers if you can't be bothered to try it yourself first. You'll end up with a lot more satisfied customers. Customers who'll remember you the next time the dreaded "toner low" message appears. If you haven't got the extensive test lab and man-power resources available to www.urefilltoner.co.uk, then feel free to get in touch about using our instructions under license through our web-based contact form. That's not free, by the way. But then neither is developing any product that works properly.

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“Introductory cartridges” can be refilled, but beware

The new machine arrives with a set of so-called “introductory cartridges”. They have both smaller toner compartments and smaller waste sections than the cartridges you buy subsequently.

This kit and our refill bottles are directed towards the ongoing cartridges that you can buy, not the introductory cartridges. If you want to refill an introductory cartridge, be aware that the refill toner - especially black - might not all go in at once and so there’s more scope for mess and spill.

The introductory cartridges have a smaller waste section. The issues of waste overflow will come into play sooner, so pay special attention to the “Empty the waste” section on page 5.

Put machine into override mode and refill at fade out

As you use your printer, there’ll come a point where it won’t let you print anymore. You get all the following symptoms together:

Message: **REPLACE BLACK TONER** (or cyan, magenta or yellow)
Flashing lights
You can’t print

Now put the machine into override as follows.

CP15xx, CM13xx or any version having LCD panel with LEFT ◀ ▶ RIGHT scroll buttons:

Press **OK**

◀ ▶ to System setup

Press **OK**

◀ ▶ to Print quality

Press **OK**

◀ ▶ to Replace supplies

Press **OK**

◀ ▶ to Override out”

Press **OK**

CP12xx or any version lacking LCD panel with scroll buttons:

Toolbox > System setup > Cartridge out override > Choose ON > Choose USE OVERRIDE > Apply

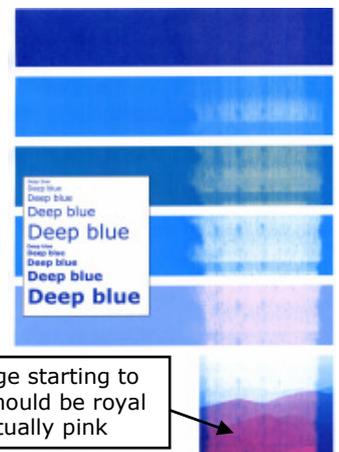
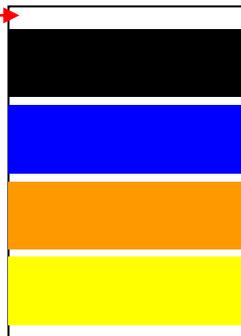
Now carry on printing until one of your cartridges fades out due to lack of toner. If your printing profile stays about the same, it’ll be the cartridge you first had the REPLACE message about.

Knowing which cartridge is fading

Swatch method

Once override is enabled you don’t get any warnings about toners being empty. You’ll see from your prints that something’s fading, but depending on what you’re printing, it’s not always obvious which colour is the culprit. The mainly blue image right shows the kind of counter-intuitive effect you can get.

It’s crucial to know which of the four cartridges to refill, so if you’re not sure, print this 4 colour swatch



You can download it from:

<http://www.urefilltoner.co.uk/downloads/toner-refill-fade-out-swatch.pdf>

Colours affected on swatch	Cartridge fading
Black only	Black
Blue only	Cyan
Blue and orange	Magenta
Yellow and orange	Yellow

Having identified the fading cartridge, just refill it according to method starting on page 4.

Important: don't refill a cartridge until it shows signs of fading

Don't refill a cartridge until it has shown at least the first signs of fade out. Don't "top up" all the cartridges while you're doing one. The laundry list of things that can go wrong with this approach is as long and dreary as the websites that promote it. Make up your mind right now to just refill each individual cartridge as and when it fades out.

Protect blue OPC drum while handling, keep from direct sunlight

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.co.uk

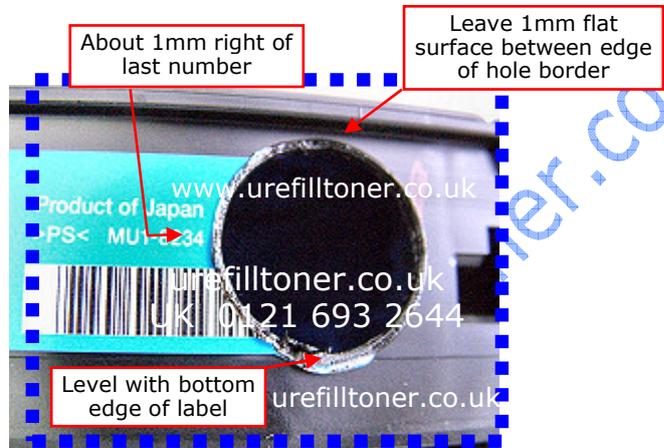


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How to refill

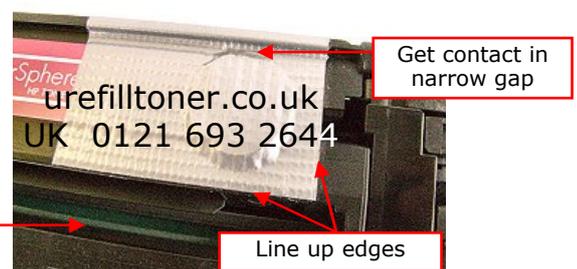
1. **Important. Have you put machine into override and printed until the first signs of fade out?** If not, do so before going any further. See page 2 for details.
2. Turn on melting tool and wait 5 minutes to reach operating
3. If refilling black for 2nd time or a colour for the 4th time, empty waste now: see page 5 for method.
If refilling black for 1st time or a colour for the 1st, 2nd or 3rd time, do not empty waste.
4. Find position for refill hole as shown.



5. Melt your hole. Press lightly. If tool is hot and hole is just in right position, hole will be made easily. If meeting undue resistance, change entry position slightly to avoid bulk-heads of chamber. Immediately after melting hole, disconnect the melting tool, move away from your work area and leave to cool naturally.
6. Before opening toner bottle, shake vigorously for 5 seconds.
7. Open toner bottle and screw on spout.
8. To avoid leakage of microfine toner, wrap any kind of tape around join between spout and bottle: selotape, brown parcel tape, gaffa tape etc.
9. Hold cartridge upright with one hand. Use other hand for bottle.



10. Jam spout into vertical cartridge and, keeping spout jammed in with distinct pressure, lean cartridge back to 45 degrees.
11. Wait for a count of 10 for toner to flow in.
12. Return cartridge to vertical and, keeping spout in hole, rotate bottle down to below horizontal.
If refilling black, hold cartridge nearly vertical and wait 2 minutes for toner to compress. The black refill will only just fit in cartridge. For colours, no need to wait.
13. Repeat steps 10-12 two more times. Check all toner is in by holding finger over end of spout and shaking to see if you can feel toner inside bottle. Repeat pouring if necessary.
14. Use alcohol swab to completely clean and prepare flat surfaces around hole. Wait for alcohol to evaporate.
15. Peel gaffa tape patch off backing and apply as shown right.
Note: two gaffa tape patches are supplied with this starter kit for completeness. One is a spare. For your future refills, just seal with any kind of tape that's wide enough. The important points are to clean stray toner from the area before sealing and **don't leave tape flapping** that could block gap where your image passes through to the drum.
16. End.



Empty waste at end of 2nd refill (normally) Or wait for streaks, then empty straight away

As these machines print, they produce waste toner. It's sneakily stored inside an empty chamber inside the toner cartridge. If the waste fills up completely, you'll start to get "waste streaks" like this cyan one vertically down the page (could also be black, pink or yellow of course, according to the colour of the cartridge).

For the CP1215 family, this is highly likely to happen **during the running of the 3rd refill**. So the preventative route, if you want to empty the waste, is to do it at the **end of the second refill**.

There's an outside chance of waste streaks coming into play during the second refill – especially if you print production runs of the same print job. So be prepared for that.

If you like to wing it, it **is** viable to deliberately wait for the first signs of waste streaks and empty the waste at that point. Don't delay though. Very soon after the appearance of waste streaks, the compacted waste scratches the OPC drum and the cartridge is rendered useless - whether you then empty the waste or not.

We say "if" you want to empty the waste, because it's your call. Emptying the waste is a bit messier than just refilling.

If you're up for it, though, here's how it's done:

1. Melt hole in place shown.



2. Shake waste toner straight into an outside bin.
3. Wipe stray toner from cartridge surface with absorbent paper.
4. Outside of cartridge can optionally be cleaned with vacuum cleaner fitted with the "hairy" attachment. However, take great care not to scratch the very delicate blue OPC drum surface and only perform surface cleaning: do not penetrate into crevices.

5. Prepare sticking surface with alcohol swab.
6. Wait for alcohol to dry.
7. Cover hole with a wide tape like parcel tape or duct tape (illustrated, also known as Gaffa tape). Press firmly down to flat surfaces to ensure no leaks.



N.B. If you're emptying the waste on an "introductory cartridge", you'll see that it isn't quite the same as the photo. There's less space to put your hole. One of the reasons why, if you remember, we were guarded on page 2 about refilling these. Get the hole as central as you can and seal it as best you can. Check the effectiveness of your seal after a couple of hundred copies.

"Age intensity loss" likely in 4th refill and beyond

Our experience of 32 refills of these cartridges so far suggests that into the 4th refill and beyond, you can expect a gradual and general loss in the image intensity that a cartridge can produce. Let's call this "age intensity loss". You'll have to decide with your own eyes exactly when age intensity loss has gone too far for the quality you need, at which point there's no remedy but to replace the offending cartridge with a new one.

Don't confuse age intensity loss, which happens equally on all parts of a page, with the "fade out" talked about on page 2, which always begins in streaks and then widens as you print more. Fade out proper is due to actual lack of toner in the cartridge. But a cartridge suffering from age intensity loss could be full to the gills with toner and nevertheless print too light.



Please, tell three people what you've done



OK, we admit it. This is our begging act. Have you saved money by using our DIY kit? Did you feel a touch of pride as your cartridge *did* print again? Maybe you found some environmental satisfaction? Or perhaps you feel it should be refilled "because it's there".

We sincerely hope we've helped float your boat in some way. And if so, then please help our voice in the wilderness and tell at least three people about what you did with your empty cartridge. Why not send a link to urefilltoner.co.uk to some friends you know have printers?

The phrase "carbon footprint" hadn't been coined in 1992 when we started selling our trend-bucking "guerrilla re-cycling" products. Making **just** toner produces less CO2 than making the toner plus the whole structure of a cartridge to put it in.



We're asking for your support to create a kind of benign chain-reaction effect. Yes, we stand to make money from that, but we believe that the battle to reduce CO2 output does have to be commercialised. That's to say, when the capacity of individuals to make voluntary self-sacrifice reaches a limit, what will take up the slack? In the same way that carbon big-foot companies need money to keep doing what they do, so does a carbon twinkle-toes.

Environmental organisations make us aware of a pyramid of priorities. **Re-use**, in the sense of directly using a resource again, is more beneficial than re-cycling (normally taken to imply an industrial process such as re-pulping paper fibre).

So, one last time for the planet, please advocate urefilltoner.co.uk if you feel our existence is preferable to our non-existence. Keep refilling in the free world.



Don't forget

Enjoy more "re-use" success with both mono and colour laser printers by OKI, Hewlett Packard, HP, Canon, Epson, Konica Minolta, Samsung and many others. See urefilltoner.co.uk for details.



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