OKI C5650n / C5750n / C575dn
Toner refill instructions
Freemium Release Information

These "freemium" instructions, made available free of charge at www.refilltoner.com, are based on those included with our OKI C5650 Starter Kits, available in the UK and Europe at this URL:
http://www.refilltoner.com/machineProducts.asp?id=OKC5650&manu=Oki&mach=C5650n+%2F+C5750dn

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 the right way. **First time**.

These instructions show you **how we did it**, not how we imagine it could be done. In the case of the OKI C5650, we've successfully done this refill 11 times and printed 10,365 actual pages, most of which were sent out to real 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, the issue of the toner level in the dev chamber, unique to the refilling of this series of machines.**

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 overcome otherwise baffling print defects.

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

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 10,365 prints - has been removed.

Some of the information about drum kit longevity is based on our even more extensive work with the previous machine, the C5600, which is in essence the same engine as the C5650, but with enough booby-traps added to make a different refill product necessary.

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.refilltoner.com, 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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Don't try and refill starter cartridges

The new machine arrives with a set of so-called "starter cartridges" – which differ in important ways from the cartridges you buy. Much as it would be great to be able to refill them, it doesn't work. The machine has been hard-wired to reject them after they're empty.

Starter cartridges look like this.

Don't be tempted to try and refill starter cartridges by the melt & pour method explained below. Simply getting more toner into the cartridge isn't the issue.

Unplug bought cartridge if possible, otherwise melt & pour it

Whereas you can easily unplug older bought cartridges as on page 3, from February 2009, OKI produced a new cartridge that cannot be unplugged. It looks like this, and must be "melt & poured" as on page 4.

Refill and change chip only at the "REPLACE TONER ..." message

As far as refilling goes, we're only interested in the set of symptoms in the table below. When you get all of the symptoms in the table below **together**, **refill and change the chip**.

LCD display message	**REPLACE TONER** **413: K TONER EMPTY** (or 412: C | 411: M | 410: Y)
Ready light	Off
Attention light	Flashing
Behaviour	Will not print

Machine kills chip if not enough toner powder in dev unit

Unclip any of the toner cartridges from the machine by turning the blue lever. Below you'll see a slit with some toner in. This is called the dev section and it's where the toner is held just before being used by the next process.

If the dev section looks like this (smooth and full), then there's still toner in your toner cartridge that lives above it.

You'll find that when you get the dreaded REPLACE TONER message, the corresponding dev section looks like this, (below level of slit, bar showing).

Your machine is now expecting both some more toner and a new chip. It won't play ball again until it gets both.

Although the toner in the half full dev section can print hundreds of pages, if you just change the chip without putting 50g of toner in, the machine won't co-operate.

To add insult to injury, if the machine gets a new chip without the toner it's expecting, it kills the chip, which becomes useless.

How to refill unplugable type

1. Unplug by pushing on plug's lug as shown.
   Note black cartridge's plug is black rather than as photo.

2. Screw spout onto bottle and wrap tape around neck to avoid all leakage of toner (parcel tape works best).

3. Hold cartridge at 45 degree angle with one hand. Use other hand for bottle.

4. Hold finger firmly over end of spout, shake bottle for 10 seconds, approach spout to hole and up-end bottle into hole. Slowly bring cartridge and bottle to vertical position.

5. Wait 1 minute.
6. Keeping spout in and over hole, rotate bottle down to below horizontal.
7. Repeat shake/pour/wait until you can feel there's no toner in bottle when shaken.
8. Put plug back in.
9. Wipe any stray toner from around the plug with the swab.
10. Now change chip as in next section.

How to change the chip

1. Prise off chip cover at end of cartridge with colour indicator sticker.

2. Once one popper is free, slide blade under one that's still gripping to remove without breaking.
3. With cover off, shake original chip out. It will drop out.
4. Insert new chip with circuit boards facing out as shown.
   Note: exact appearance of chip may vary, but as long as you get the "nobbly" diode side up and flat side down, you can't go wrong.

5. Replace cover. Note: if pop-fixers on cover are damaged, cover can be taped over to hold it in place.

How to refill a bought cartridge that can't be unplugged

1) Turn on melting tool and leave for 5 minutes to reach operating temperature
2) Melt your hole as shown.

3) With cap still on bottle. Shake toner bottle vigorously 10 times.
4) Remove cap, screw on spout and wrap any kind of tape around neck of spout to avoid spillage of micro fine toner.
5) With cartridge at 45 degree angle and bottle below horizontal, marry spout into hole and up-end bottle to almost vertical while leaning cartridge back even further.

6) Wait for a count of 10 for toner to flow in.
7) Bring bottle back down to horizontal and disengage.
8) Hold finger firmly over end of spout and shake bottle. Repeat 5-7 until you can feel no toner is left in bottle.

9) Clean flat areas around hole with swab and allow alcohol to evaporate.
10) Patch as shown.
11) Now change chip as on page 3.

Empty waste at end of 4th black refill, 8th CM or Y refill

As these machines print, they produce waste toner. The waste toner is sneakily stored inside an empty chamber inside the toner cartridge. After about 4 refills of the black cartridge, the waste chamber will fill up and you'll have to do something about it. So we recommend *you take pre-emptive action on waste at the end of the fourth black refill*. The colour cartridges can take many more refills before the waste will fill up.

If the waste does fill up completely, you can expect (bizarrely) the "Toner sensor error" message.

You can either empty the waste or start again with a brand new cartridge.

If you want to empty the waste, the next section tells you how.

1. Melt hole in place shown. You're taking out the letter "K".

2. Shake waste toner straight into an outside bin.
3. Wipe stray toner from cartridge surface with absorbent paper.
4. Prepare sticking surface with alcohol swab.
5. Wait for alcohol to dry.
6. 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.

Other consumables used by the C5650/C5750

Besides the four toner cartridges, these machines also use 4 drum kits, a transfer belt and a fuser unit. All are considered by OKI to be consumable and user-serviceable items. All of them will cause print problems if they malfunction.

These "other" consumables have their own service schedule, which is not affected by whether or not you refill the toner cartridges. See your PDF manual for more details.

Print defect? Do this first ....

If you've got a print defect, first try cleaning all 4 LED heads as (almost!) described on page 89 of the PDF User Guide for your printer. If it's not on page 89, search "LED Head" in your version. Hint: to search any PDF document, hit CTRL + f

Don't forget to clean **all four** LED heads, which hang underneath the top lid of the machine, as the picture in our manual implies you only need to clean the first one. Clean all four!

This is by far the most common cause of non-wear related print defects in the C5650 Series. It's also the cheapest and quickest to put right.

Drums take a beating

Although the 4 drum units are quoted at 20K copies each, we've experienced drum problems at around the 15K mark: usually magenta (based on observations with the C5600, which uses same drum kit to all intents and purposes).
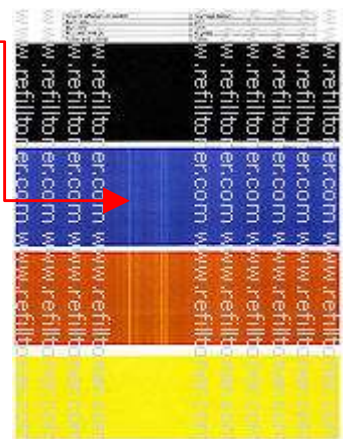
This defect, which we've christened "striations" results in sharp, narrow lines ...

Note! It's an **absence** of toner where you'd like it to be (not a presence of toner where you don't want it to be).

We know this is the magenta drum because it affects both blue and orange.

If in doubt about which drum could be causing the problem:

1. Look into the dev sections (see page 2) to make sure it's not lack of toner causing the problem. Refill if necessary.
2. Download our PDF test swatch here ....
    http://www.refilltoner.com/downloads/cmykVerticalTest.pdf
3. Print the swatch a few times. Identify the fading cartridge using following table.

Colours affected on swatch	Drum malfunctioning
Black only	Black
Blue only	Cyan
Blue and orange	Magenta
Yellow and orange	Yellow

We know what causes striations and we can even fix it – in the comfort of our test lab, armed with a battery of dust extraction technology, compressed air, special tools etc. But it's beyond the scope of a DIY approach, so when striations get too bad, you'll have to get a new drum. But at least now you'll get the right one.

Assumption of risk notice

We ourselves have no hesitation in researching and refilling cartridges using the melting technique in a well-ventilated room. However, the company gives no warranties, neither explicit nor implicit, as to the safety of melting holes in toner cartridges or the use of the melting tool. Any activity or process has an element of risk. The onus is on you, the purchaser, to assess any possible risk, including the inaccuracy or incompleteness of currently available information.

All information offered is believed to be true and is offered for consideration in good faith. However, we give no warranties, neither explicit nor implicit as to the completeness or accuracy of any information offered nor the ultimate safety of refilling toner cartridges in any manner described or suggested nor the ultimate safety or hazardousness of products supplied by us.

The onus is on the reader to evaluate all possible risk, including the possible incompleteness or inaccuracy of currently available information, and by proceeding to act upon information found herein, the reader thereby assumes all risk of peril or injury howsoever arising.

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