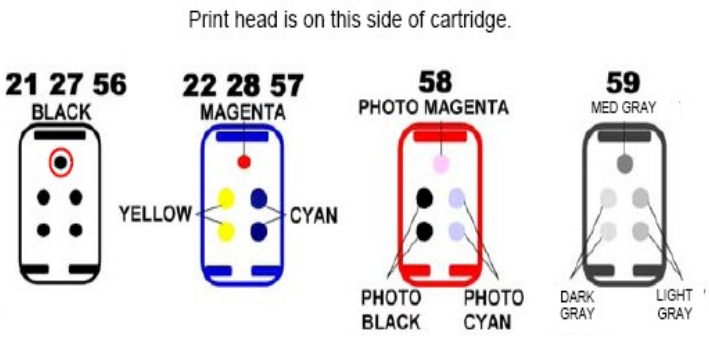
BLACK INSTRUCTIONS FOR HP C6656, C8727 & C9351
COLOR INSTRUCTIONS HP C6656, C6657, C6658, C8728, C9352 & C9359

CARTRIDGES SHOULD BE REFILLED PRIOR TO RUNNING OUT OF INK

Damage to the print heads could result from running a dry cartridge.

Prepare:
Before you get started here are some suggestions for getting the most from the refilling process while maintaining a clean, usable work area.
1. Work close to or over a sink.
2. Place an adequate amount of newspaper over your work area.
3. Have prepared for use a cup of water and several paper towels

FILL LOCATIONS
ACCESSING THE INTERNAL SPONGE:
There are two methods used to access the internal sponge of these cartridges. The first method is to peel the label off entirely. This is preferred for the first couple of times you refill as it allows you to see the vent holes that lead into the fill holes.
Once you have become accustomed to refilling these cartridges you can access the fill holes simply
by using a push pin or supplied needles to puncture the top label to access the sponge. When using this method make sure the hole is larger than the needle so air can escape while you are injecting ink into the cartridge.



SUGGESTIONS:
Holding cartridges at an angle as shown to the right provides a more even flow of ink.

REFILLING HP #21 & #22.
The physical cartridge & ink for the 21 & 22 cartridges are the same as the other cartridges listed in these instructions. The difference is how much ink you get from HP and the sponge material used in the cartridges. The sponge material in the #21 & #22 cartridges does not allow the cartridge to hold very much ink. When refilling the #21 black do not attempt to inject more than 5ml and only use the top most center hole for refilling (see picture on far left—red circle). When refilling the #22 do not use more than 2cc per color. Injecting too much ink can result in cartridge bleeding.

THE REFILL PROCESS

BLACK CARTRIDGES: C6656, C8727 & C9351 (See Refilling #21 & #22 in upper right corner for details)
1. Remove cartridge from printer & place into cartridge clip if you still have it. Insert print head first onto sponge material and slide cartridge top into clip.
2. This cartridge uses a sponge material to retain ink. To get to the sponge remove the label at the top of the cartridge.
3. Once you have removed the label fill your injector with 10 cc's of ink (10ml)
4. Insert the injector into top cartridge chamber as show on the image above. Insert the injector as far as you can go and then draw back about 1/16th to 1/8th of an inch. (When first injecting ink into cartridge use the fill hole farthest away from you when holding cartridge as shown above left)
5. Begin to inject ink into the cartridge very slowly. Remember: you are injecting into a sponge—GO SLOW. Slide the injector outward at small increments as you inject the ink. This will allow more of the sponge to quickly become saturated.
6. When you see ink begin to bubble at the top of the vent hole stop injecting ink. Wait a few seconds and slowly remove the injector. Return any unused ink to its bottle. Sealing the top of the cartridge can be accomplished by reusing original label or by use of tape (scotch tape as an example).
7. If cartridge accepts a complete refill then repeat using an additional 5cc. (When refilling additional ink use one of the fill holes closest to you when holding cartridge as shown above left.)
8. To clean the injector draw water in and out repeatedly. A good 8-10 times will do an effective job. For more thorough cleaning remove tip and run both under a faucet.
9. When finished, allow cartridge to sit in cartridge clip for several minutes before removing. This will allow ink to be absorb into the sponge.

COLOR CARTRIDGES C6657, C6658, C8728, C9352 & C9359 (See Refilling #21 & #22 in upper right corner for details)
1. Remove cartridge from printer & place into cartridge clip. Insert print head first onto sponge material and slide cartridge top into clip.
2. This cartridge uses a sponge material to retain ink. To get to the fill location you must first remove the label at the top of the cartridge.
3. Use the cartridge diagrams above to determine which color you wish to refill first.
MAKE SURE YOU USE THE CORRECT COLOR CODES FOR YOUR CARTRIDGE.
4. Tape over holes that you are not going to refill.
5. Once you are ready to refill, fill injector to 5cc
6. Insert the injector into cartridge chamber. Insert the injector as far as you can go and then draw back about 1/16th to 1/8th of an inch.
7. Begin to inject ink into the cartridge very slowly. Remember: you are injecting into a sponge—GO SLOW. Slide the injector outward at small increments as you inject the ink. This will allow more of the sponge to quickly become saturated.
8. When you see ink begin to bubble at the top of the vent hole stop injecting ink. Wait a few seconds and slowly remove the injector. Return any unused ink to its bottle. Sealing the top of the cartridge can be accomplished by reusing original label or by use of tape (scotch tape as an example).
9. To clean the injector draw water in and out repeatedly. A good 8-10 times will do an effective job. For more thorough cleaning remove tip and run both under a faucet.
10. REPEAT process with remaining colors.
11. When finished, allow cartridge to sit in cartridge clip for several minutes before removing. This will allow ink to be absorb into the sponge.

AFTER

1. Initially the cartridges may release ink. This is not uncommon when ink has been quickly injected into sponge or if too much ink for the sponge to retain has been injected. Blot cartridge on paper towel several times to reduce the amount of ink weeping from the cartridge. This will prevent cross contamination.
2. DO NOT install your cartridge until the cartridge has ceased releasing ink.
3. Test your printer by printing a nozzle check. This is accomplished through the “Services” tab and printing a diagnostic page. If you see lines in your print or incomplete print then perform your printers routine head cleaning. This can be accomplished through the printers “Services” tab. If lines are persistent perform an intermediate cleaning and then a prime if required.

TROUBLE SHOOTING

CLOGGED JETS (from cartridge sitting out of the printer or printer not being used for a long time)
Clogged jets are very common with cartridges that have sat for a lengthy period of time without use. To remedy this; Place a wet paper towel in the microwave for 20 seconds. Take your cartridge and place the print head on the paper towel. DO NOT scrape the cartridge along the towel. Just allow it to rest on the paper towel for 15 seconds. Repeat on a different portion of the towel. Blot print head on a dry absorbent cloth or towel. Hot water will break up the caked ink and start the capillary action working again.

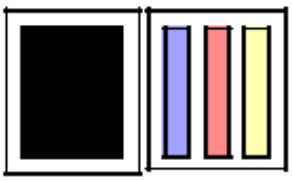
COLOR SHIFT:
Color Shift, such as a green tint or purple tint in output can be the result of filling ink too quickly or allowing ink to wick at the bottom of the cartridge. Essentially what occurs is that ink from one chamber is allowed to wick back up into another chamber from the print head level. To resolve this issue you will need to perform several printer cleanings. Wait 20-30 seconds after each set. First perform the printers routine cleaning followed by an intermediate. If shift is persistent follow with a priming of the cartridge.
Color shift can also be a result of missing ink from one color. The easiest way to determine which is the problem is to perform the printers diagnostic from the services tab of your printer. The diagnostic prints a series of nozzle checks. If the test print lines are not printing the correct colors then your concern can be resolved with the above mentioned method. If the lines are missing then your concern is ink not flowing properly.
If ink is not flowing properly check the top of your cartridge to make sure you have not closed off the vent holes at the top of the cartridge. The vent holes appear as indentations at the top of the cartridge in several locations around the label. If these are completely sealed then air will not be capable of getting into the cartridge therefore ink can not get out of the cartridge.
Additional information on this can be found on next page

Electrical Contacts:
If ink is adequately flowing through the print heads when attempting to wick with paper towel but no ink will come through when attempting to print then there is a great possibility that the contacts (the foil circuit board) is worn or damaged. The only solution for this is a new cartridge.

WHAT TO KNOW

Due to nature of the print heads on Hewlett Packard cartridges, it is common that after several refills that the cartridge components become fatigued and cease to function. There are many factors involved in why the cartridge will fail. How long it takes is partially up to you. Here are some guideline to protecting your cartridge and getting the most from it.
1. Never touch the contact points or print head of the cartridge. Oil from your finger tips will corrode the delicate surface.
2. Clean the contact points with a Q-tip or soft coated cleaning cloth (such as those made for CDs). Using distilled or filtered water is recommended.
3. Refill the cartridge before it is empty. HP cartridges use a heating mechanism to dispense ink. Running a dry cartridge for any length of time can ‘burn up’ the cartridge.
4. Expect the inevitable: Cartridges will eventually cease to work. Have an extra cartridge on hand. All printer manufacturers recommend this as well. It is just good practice to keep a new cartridge available at all times
5. Never scrape the contact points or print head area with any type of abrasive material. This includes paper towels, newspaper…

PRIMER PAGES



Primer pages can be used to assist in clearing blockage in a print head, or simply for ‘priming’ the cartridge. The purpose is to force ink, air and blockage out of the cartridge.
To create primer pages simple follow the instructions below.
1. Black Primer: Take any painting or draw program and cover the surface of your page with a single large block of black. The more surface that is covered on the page the better.
2. Color Primer: Take any paint of draw program and create three blocks running the length of the page. Make one Cyan the second Magenta the third Yellow
3. To Use. Just print the page! Print one page and then allow printer to sit for 2 minutes. Repeat if necessary
This is a more effective method than performing routine head cleanings.

CARTRIDGE REJECTIONS ON HP 7260, 7450, 7660, 7755, 7760 & 7960 PHOTOSMART PRINTERS

If your printer does not recognize your cartridge then your printer may be one of the printers affected by HP’s cartridge rejection problem.
Hewlett Packard released technical information and support information related to their cartridges and printers not accepting ink jet cartridges.
According to
Hewlett Packard certain PhotoSmart models including HP PhotoSmart 7260, 7450, 7660, 7755, 7760 & 7960 may receive error messages when installing ink cartridges. This error is an OEM related issue that can be considered a hardware problem since it deals directly with power modules in the printers. The problem occurs with new as well as refilled cartridges. Because there are several steps involved to correcting this issue you can see detailed updates on how to correct the issue at HPs website at www.hp.com for updates. On HPs website the information is a bit difficult to locate so you may want to search according to the keywords “cartridge”, “rejection” and your printer model.

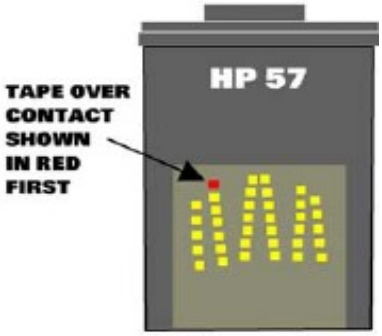
INK LEVEL INDICATORS:
Ink Level Indicators do not always work. This means that even on brand new cartridges the ink level indicators may be wrong.
Users of HP cartridge commonly have issues with erroneous ink level indicators showing yellow in available when there is none in the cartridge. This can be a result of two things;
1. HP ink level indicators are designed to fail so close that erroneous information is given if printer is shut off and turned on too many times.
2. This is accidental and that HP ink level indicators are inefficient
3. Ink determined available for use contains ink that can not actually be used by the cartridge. The filter screen placement as shown on the image to the right displays that the screen sits slightly higher than bottom of the cartridge. Therefore though there is “X” amount of ink in the cartridge this does not mean all of the ink is used. It is recommended for this reason that you refill when ink level indicators first come on—or before they come on at regular intervals. This is something we call “topping off” a cartridge.

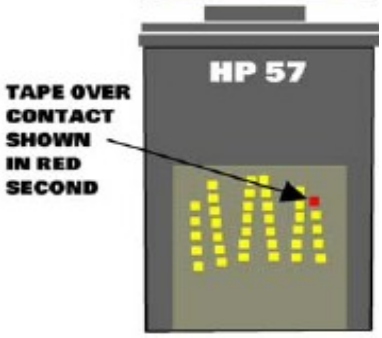
INK LEVEL RESET FOR #22 #28 #57 (On most models)

RESETTING

1. Remove cartridge from your printer.
2. Place a piece of tape over the top left contact as shown in red on the picture to the right.
3. With the tape covering the contact place cartridge back into printer.
4. The printer will perform and alignment page. (*Some newer models no longer print alignment pages. If printer runs through*
a series of priming routines and stops for 20 seconds continue through with next step)
5. Once an alignment page has been printed remove cartridge from printer.
6. Place a piece of tape over the second contact shown in red.
7. Place cartridge into printer with both pieces of tape. (One covering the first contact and one cover the second contact.)
8. Printer will print another alignment page. (*Some newer models no longer print alignment pages. If printer runs through a*
series of priming routines and stops for 20 seconds continue through with next step.)
9. Once the second alignment page has been printed remove cartridge from printer.
10. Remove tape pieces from cartridge contacts
Make sure there is no residual adhesive on cartridge contacts.
11. Place cartridge into printer. Cartridge should now read full.

Additional Notes:
As stated above it is very important that there is no residual adhesive on the cartridge contact point. This will make reading
the cartridge difficult.
If for some reason this does not work for you then you will need to repeat this process. If you have to reattempt the reset
please turn computer off before doing so. Leave computer off during the reset process.



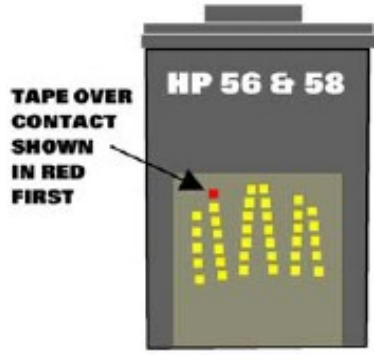


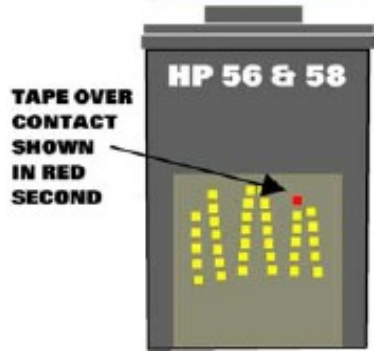
INK LEVEL RESET FOR #21 #27 #56 & #58 (On most models)

RESETTING

1. Remove cartridge from your printer.
2. Place a piece of tape over the top left contact as shown in red on the picture to the right.
3. With the tape covering the contact place cartridge back into printer.
4. The printer will perform and alignment page. (*Some newer models no longer print alignment pages. If printer runs through*
a series of priming routines and stops for 20 seconds continue through with next step.)
5. Once an alignment page has been printed remove cartridge from printer.
6. Place a piece of tape over the second contact shown in red.
7. Place cartridge into printer with both pieces of tape. (One covering the first contact and one cover the second contact.)
8. Printer will print another alignment page. (*Some newer models no longer print alignment pages. If printer runs through a*
series of priming routines and stops for 20 seconds continue through with next step.)
9. Once the second alignment page has been printed remove cartridge from printer.
10. Remove tape pieces from cartridge contacts
Make sure there is no residual adhesive on cartridge contacts.
11. Place cartridge into printer. Cartridge should now read full.

Additional Notes:
As stated above it is very important that there is no residual adhesive on the cartridge contact point. This will make reading
the cartridge difficult.
If for some reason this does not work for you then you will need to repeat this process. If you have to reattempt the reset
please turn computer off before doing so. Leave computer off during the reset process.



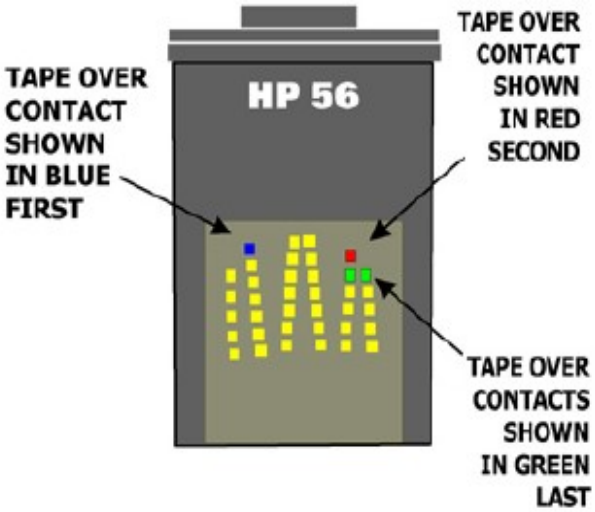


ALTERNATE INK LEVEL RESET FOR ALL CARTRIDGES.

RESETTING

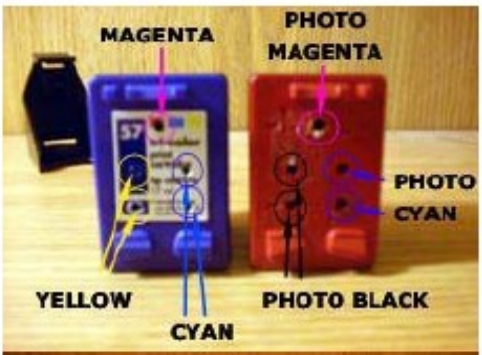
1. Turn your **computer** OFF & then remove cartridge from printer.
2. Turn printer off
3. Place a piece of tape over the top left contact as shown in BLUE on the picture to the right.
4. Turn on printer. *Printer will automatically print test page. (if printer does not print a test page but*
goes through a priming routine continue following steps when routine ends.
5. Remove cartridge from printer.
6. Place a piece of tape over top right contact as shown in RED on the picture to the right.
7. Return cartridge to printer. *Printer will go through a series of tests. Which will be quite audible.*
9. Remove cartridge from printer.
10. Place a piece of tape over the two contacts on the right side of the cartridge as shown in GREEN
on the picture to the right.
11. Return cartridge to printer. *Printer will run additional tests and be quite audible.**
12. Remove cartridge from printer & remove all tape from cartridge.
13. Reinstall cartridge.*
14. Turn printer off. Wait for 20 seconds and turn the printer back on.
Ink level should now read full.
15. Turn computer back on.

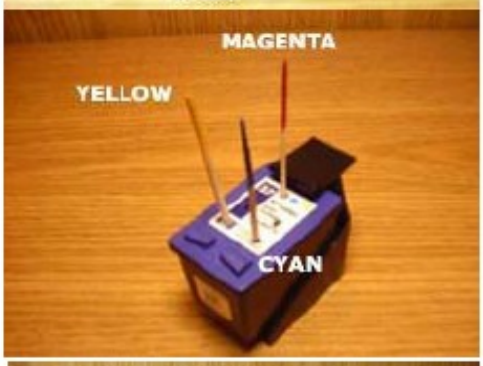
* If you check your ink levels at this point you will receive a “printer busy message”

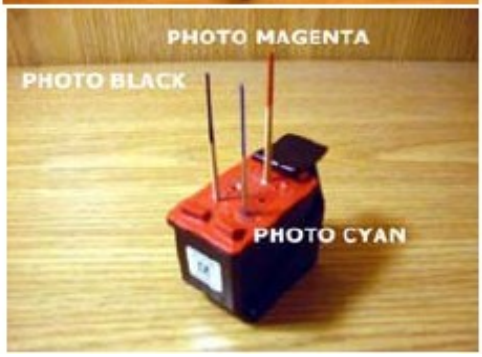


MAINTENANCE, GOOD CLEANING HABITS & TIPS

FILL HOLE LOCATIONS
There are two ways to access the fill holes of the HP #57 & #58. (The #22 and #28 are the same as the #57)
The image to the right shows the two methods used. The first, also the easiest is to simply locate the fill holes by
running the supplied pry tool that came with your kit over the top of the cartridge until you feel indentations on the
cartridge. (the #57 blue cap)
These indentations mark the original fill holes as used by HP.
Once you have located the fill holes simply push into the tape on the top of the cartridge.
The second methods which is really a bit more than is required, but is good if you feel that seeing the fill holes
completely is a necessity is to remove the top label completely. This is shown on the far right cartridge. (The #58 red
cap)







DO NOT SEAL CARTRIDGE COMPLETELY!
It is a common misconception that these cartridges are sealed AIR TIGHT. Fact is they are not. When you initially look at a cartridge from the top you'll see that around the label are little indentations in the plastic. These indentations are part of the air vents that leads into the colors chambers. Sealing these completely will prevent air from getting into the cartridge and ink from getting out. Note: The amount of ink that leaves the cartridge must be equal to the amount of air that gets into the cartridge otherwise a pressure build up occurs.
DO NOT!
Here are a few DO NOT do for you just to make sure your colors do not contaminate and you do not damage your
cartridges.
DO NOT place cartridge in a zip lock bag unless it is in a cartridge clip. Contact with the bag can cause color to bleed
and wick into another chamber.
DO NOT store cartridge on its side. Storing a cartridge on its side can lead to missing colors when ink settles to one
side of the cartridge.
DO NOT use your printer or cartridge if temperature is below recommended printing temperatures. If ink is too cold it
will not flow properly through the cartridge filter screen. This can inadvertently cause missing and burn the jets.
DO NOT seal the entire cartridge top—do not seal cartridge air tight.
DO NOT reapply the original blue tape used on the bottom of the cartridge. This can cause cross contamination as it
does not create a completely air tight seal. It does though assist in pulling ink out of the cartridge which can wick into
another set of jets!

INK BLEEDING FROM THE BOTTOM OF THE CARTRIDGE:
This issue is most commonly found on the #21 & #22 cartridges when overfilled but can also occur with the #27, #28, #56, #57, #58 cartridges if filled beyond capacity.
What will occur if too much ink is injected is the cartridge will release the ink until the ink inside the cartridge can be retained by the sponge. Allow cartridge to sit in a container such as a plastic container until ink has bled from the cartridge. Excess ink on the print head can assist in a wicking action that will allow cartridge to bleed more then it should. To avoid wicking it is helpful to periodically wipe excess ink from bottom of cartridge with a non abrasive cloth or coffee filter.

ORIGINAL CARTRIDGE CAPACITIES & EXPECTED NUMBER OF REFILLS
The chart on the right shows the original cartridge capacities according to Hewlett Packard. The colors are shown as TOTAL amount of ink for all color combined and should be divided by 3 to get individual color quantities. Because HP uses a somewhat ineffective method for determining ink levels the amount of ink remaining in your cartridge may be extremely off from what the ink level indicator shows. The ink level indicator does attempt to base ink level on the most depleted color of ink when stating a cartridge has run out of
ink. This means that any other color in the cartridge can still be near full capacity depending on your printing. Do not expect absolutes when refilling these cartridges. One color may take a full refill while another may only take 1/5 of a refill because of this.

HP 21	Black	5ml
HP 27	Black	10ml
HP 56	Black	19ml
HP 22	Color	5ml
HP 28	Color	8ml
HP 57	Color	17ml
HP 59	Gray	17ml

The expected number of refills varies greatly depending on several factors. This includes but is not limited to the amount of time it takes to use a cartridge up, the amount of time cartridges are left standing empty, if the cartridge has been allowed to run dry, the number of times you turn your printer on and off as well as other factors. As a general rule of thumb the number of expected refills is on the bottom chart to the right. These numbers are NOT fixed. These are used as a general guide of life expectancy of a cartridge.

21, 22, 27, 28	5 refills
56, 57, 58	4 refills