

HP 74/75 Problem Resolution

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No...your cartridge is not empty since it was just refilled. Many of the HP printer error messages you'll encounter using HP 74/74XL/75/75XL refilled ink cartridges can typically be overcome using the steps provided below, however in some cases, a marginally performing cartridge might be considered faulty by the printer. In this event, printer bypass and HP diagnostic '**Tap Test**' procedures are also provided to help you diagnose the cause of failure.

Refill Alert Notifications

1. "Non-Genuine Cartridge" / "Used Print Cartridge"

HP 74/75 Cartridge Refills - Solving Errors & Warnings – Youtube video

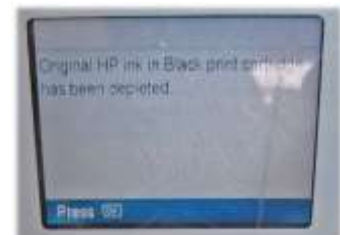
<http://www.youtube.com/watch?v=C5ISTGyScWU>

How an Integrated Ink Cartridge Works – Youtube video

<http://www.youtube.com/watch?v=RgXA8nA-Cko>

This message is typically generated by the printer since it recognizes the used cartridge state (i.e. when original cartridge reaches an 'out of ink' condition this information is recorded). When the refilled cartridge is installed back into the printer, the printer recalls the cartridge was already used and displays:

- **Non-genuine cartridge**
- **Counterfeit or Used Cartridge Detected**
- **Used Tri-color or Black print cartridge installed**
- **Original HP ink in xxxxx cartridges has been depleted**



These types of messages/indications are completely normal and are nothing to be alarmed over; simply press proceed/continue/accept/yes or Ok to dismiss the prompt, if available. This should allow you to resume print operations following a cartridge alignment.



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Also, there is no need for concern when a ‘**Counterfeit Cartridge**’ message is received.



Under certain circumstances, a “**Print Cartridge Error**” message can be ignored and printing may be allowed until the printer prohibits such operations from continuing – but normally this is not the case. If printing is not permitted then refer to ‘Printer Rejects Cartridge’ and ‘Tap Test’ diagnostic procedures to troubleshoot further.



NOTE 1: After a cartridge is refilled, the printer cannot track the ink level, nor can it be reset. Where applicable, ignore low/empty alert messages and any ink sensor warnings, by pressing ‘Ok’ or ‘Continue’. In most cases, the only way to gauge current ink levels is by monitoring output print quality (watch for color loss during printing).

NOTE 2: If you are installing a black, photo, or gray photo print cartridge, slide it into the right slot.

2. Common Error Messages/Display Conditions:

- Steady lights (non-serious) or blinking lights (severe) on the printer
- A message that says “Check black/color cartridge” on your monitor or on the printer display
- A similar message that says “Remove and check the black/color cartridge”
- A printer window or toolbox appears that shows a message that a “Cartridge is not seated properly”
- “Replace your black/color cartridge” message
- “The cartridge has failed” message

It is suggested to keep a set of replacement cartridges available at all times to avoid possible printing delays.



Ink Level Monitoring Problems (with possible error messages)

Low Ink Warning & Other Messages – Youtube Video:
<http://www.youtube.com/watch?v=KEkCP2jCUVc>

After a cartridge is refilled, the printer cannot track the ink level. Ignore any incorrect low/empty alert messages and any ink sensor warnings, by pressing ‘Ok’ or ‘Continue’.

New HP 74/75 Cartridges



Refilled HP 74/75 Cartridges





1. Disabling Low Ink Warning Messages

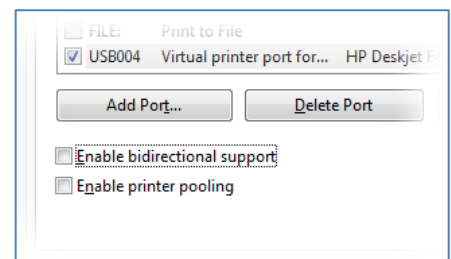
(1) Bypass Procedure #1 (PCs; Win XP and earlier*) Disabling the low ink warning messages on an HP Printer (i.e. Photosmart C5250 in this example) removes future warnings about ink levels before or after the print process. To eliminate low ink alerts, disable the HP Status Monitor or ink level management settings*. When lighter or blotchy text appears on paper, then it's almost guaranteed ink levels are low.

- a. Click the "Start" button and click the "Devices and Printers" option.
- b. Right-click your "HP C5250" printer and click the "Properties" option.
- c. Click the "Advanced" tab and click the "HP PrinterPreferences" button (i.e. Win XP). The HP Printer Settings screen appears on screen.
- d. Click the "Disable HP Ink Level Monitor" check box and click the "OK" button to apply the changes.

* Available on Win XP and earlier operating systems only. Win 7/8 do not appear to support ink level monitor disabling. Lack of ink monitoring should not interfere with the use of refilled ink cartridges.

(2) Bypass Procedure #2 (PC & MAC): Some HP printers come with software that warn the customer when an ink cartridge is almost out of ink. The printer's software communicates with the ink cartridges in the printer to determine the amount of ink left. If the ink cartridges in the printer have been refilled or are not genuine HP ink cartridges, the printer's software will display a warning that the cartridge is almost out of ink. Disabling this warning involves a short and simple process.

- a. Look for a message that reads "Don't Show This Again" on the "low ink" warning message. If such a message shows up, click on the box next to it to disable the warning.
- b. Click on the "Start" button on your computer. Select "Printers and Faxes." Right-click on your printer's icon and select "Properties."
- c. Click on the "Ports" tab in the properties window and click on the check mark in the box that says "Enable Bi-Directional Support." Make sure the box no longer has a check mark and click on "Apply" then "OK."



CAUTION: Disabling Bi-directional communications support will cause many of the non-printing functions to cease working (i.e. scanning/faxing, etc). This is not a suggested solution.

Macintosh Procedure (i.e. HP OfficeJet 6500 on a MacBook Pro OS 10.7.4)

1. Open HP Utility.
2. Select All Settings.
3. Select Message Center.
4. Near top right, select Settings.

5. Change your alert settings.

Printer Rejects Ink Cartridge with Error Message(s)

Youtube Procedure (Photosmart C4200-C4500, C5200-C5500 printers – error bypass procedure):

http://www.youtube.com/watch?v=UDxRkAGOJal&feature=em-share_video_user

1. HP 74/75 Cartridge Errors

As the electronics in the ink cartridge and the printer communicate with each other, sometimes the printer will incorrectly identify an ink cartridge as empty or non-functional. These error messages can appear as PC screen messages, printer LCD display messages, or as blinking lights on the printer. Depending on your printer model and type of error condition, please adhere to the suggested printer reset procedure below as the button selections vary slightly between printer model series*. Please note that in some cases the cartridge may have internal electrical damage and may need to be replaced – refer to the ‘Printer Bypass’ and ‘Tap 41’ diagnostic tests down below for advanced cartridge diagnosis.

HP 74-75 ink cartridges which have been newly refilled and installed into the HP printer may produce the following ‘printer shutdown’ error messages:

- **Incompatible Print Cartridges**
- **Print Cartridges Missing or Not Detected**
- **Cartridges Installed Incorrectly**
- **Refer to printer documentation**
- **Cartridge in slot on left/right is not intended for use in this product**
- **Cartridge not intended for use in this printer**
- **Low ink light blinking**



NOTE: These errors may also occur with the new HP cartridges under certain circumstances (i.e. defective cartridge and worn or damaged printer). The cartridge might need to be reinstalled, the electrical contacts could be dirty, the cartridges might need to be aligned, or there could be a failure of the cartridge or printer (i.e. cartridge contact area inside printer).

2. “Refer to Printer Documentation”error (i.e. Photosmart C52xx/53xx series and Officejet 57xx/64xx printer series)

This message is sometimes generated due to poor electrical contact with cartridge, but more likely the cartridge has electrically failed and will probably



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need to be replaced.

NOTE: If there is ink on the "wiring" of the cartridge (copper lines within "sticker portion") you may get this error message – refer to cartridge cleaning procedures below.

To help bypass the error message:

- a. Open printer and remove both the color and black cartridges.
- b. Close the printer and wait for the prompt to install the tri-color cartridge.
- c. Open the printer and install the tri-color cartridge **ONLY**.
- d. Close the printer and wait for the prompt to install the black cartridge.
- e. Open the printer and install the black cartridge.
- f. Close the printer and it should then prompt you to insert paper to perform the cartridge alignment.
- g. If this does not correct the error, refer to Step 5 below for your printer series model.

3. "Cartridge on the right (left) must be replaced" / "Cartridge in slot on right (left) is not intended for use in this printer"error (i.e. HP Officejet 57xx / 64xx printer models)

Refer to 'Printer Rejects Ink Cartridge' section below to temporarily bypass this message on certain printer models. It is believed this message is more inherent with certain HP printer models (i.e. Officejet J6450, J6480, & C5550).

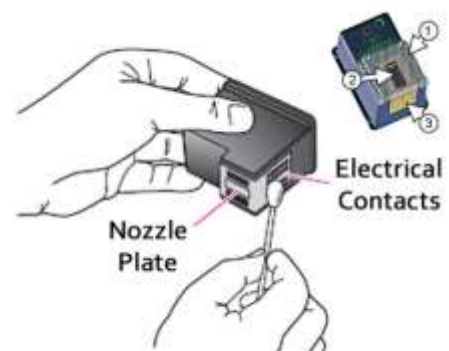
NOTE: Refer to Printer Bypass instructions (Step 5.) and HP Tap Tests to diagnose cartridge issues further.

4. "Unrecognized Cartridge" (or other printer messages)

The contact between the ink cartridge and the printer must be clean for proper functioning. If any dirt, ink or paper dust is on the contacts, the printer may indicate that the ink cartridge is bad. To ensure a clean contact, follow the steps below:

(1) Remove and re-install the cartridge:

- a. Turn the printer on; open the printer to access the print cartridges.
- b. Remove the suspect cartridge(s) from the station. Clean electrical contacts if dirty.
- c. Re-install the cartridges in their stations.
- d. Close the printer.



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- e. Turn off the printer for a few seconds and then turn it back on.
- f. Print a test page following your printer's instructions.
- g. If this does not work, please proceed to step (2).

(2) Clean the contacts on the printer and the ink cartridge (*refer to complete **HP Cartridge/Printer Cleaning Procedure** section*):

- a. Turn on the printer; open the printer to access the print cartridges.
- b. Remove the suspect cartridge(s) from the station.
- c. Using a clean, dry lint-free cloth wipe the contacts on the print cartridge from top to bottom. The contacts inside the printer may also need to be cleaned.
- d. After cleaning the print cartridge and printer contacts, re-install the print cartridges and close the printer.
- e. Print a test pattern to determine if the problem has been fixed; if not proceed to step (3).

(3) Re-set the printer (i.e. "Ink Delivery System Failure" ...error message)

- a. If the problem has not been fixed it may be useful to perform a "hard reset". This can correct an electronic flag setting inside the printer telling it that the print cartridge is problematic. Please refer to your printer's user manual or the manufacturer's website for the correct "hard reset" procedure for your printer. Often times it simply involves turning off your printer by unplugging it for at least 30 seconds (do not use the printer's Power On switch).
 - 1) Reset procedure #1 for models with # key (on control panel):
 - i. Unplug power cable while the printer is ON.
 - ii. Press and hold the '#' and '6' buttons (or '9' key), and plug the cable back into the printer.
 - iii. Continue holding the buttons down for 20 seconds, and then release it.
 - iv. Then turn the printer off and on. Check for print operations.
- b. Print a test page to determine if the problem has been resolved.
 - 1) If not, for 42xx/43xx printer models, repeat procedure (3).a. with cartridge access door left in the open position.
- c. If problem persists, refer to 'Printer Error Bypass' procedures below or run the 'Tap 41' diagnostic tests.



NOTE: For Photosmart C52xx/C53xx series printers please refer below.

5. Printer Error Bypass Procedure (Photosmart C4200-C4500 & C5200-C5500 printers):

Youtube Inkjet411 Procedure (Photosmart C4200-C4500 & C5200-C5500 printers):
http://www.youtube.com/watch?v=UDxRkAGOJal&feature=em-share_video_user

The following printer bypass (clear) procedures below have been used by many printer customers to help clear the 'Print Cartridges Missing/Not Detected', 'Incompatible Print Cartridges' message along with several other error messages, though it should be considered a temporary solution as the ink cartridge is likely suffering from marginal internal electrical performance. Printer bypass instructions results vary by printer model and overall success will vary.

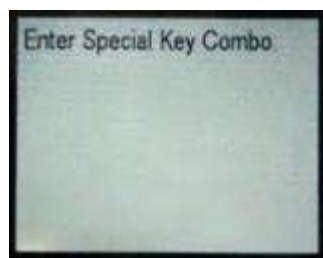


(1) Photosmart C4400 and C4500 series printers:

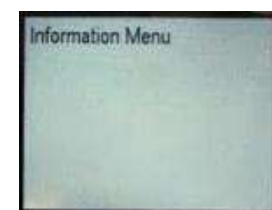
3rd Party YouTube Procedure (HP PS C4480):

<http://www.youtube.com/watch?feature=endscreen&v=Ao2UJT60-hk&NR=1>

- With the above error message(s) displayed at printers LCD screen, press and hold the **Power** and **Cancel** buttons down together.
- When it says "Enter Special Key Combo", press the blue button (top), then the green button (bottom), then the grey button (middle).



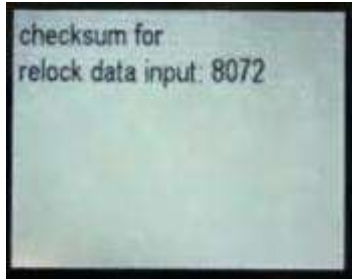
- Press the grey button (middle) several times until display says "information menu".
- Press the OK button, then the grey button (middle); now it says "checksum for relock data input".
- Wait a few seconds for a random number to appear on



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display (i.e. “checksum for relock data input: 8072”).

- f. Press the Cancel button three (3) times; the 4-digit code should disappear on the first Cancel button push.



- g. The incompatible or missing and not detected error message should disappear; the printer has now been restored to normal operations.

NOTE: If the printer error message does not disappear (or reappears immediately following a single print job) then the ink cartridge could be damaged and may need to be replaced. Refer to the Tap 41 and/or Tap 10 diagnostic test procedures to diagnose cartridge's electrical health further.



(2) Photosmart C4200 and C4300 series printers:

YouTube Procedure (HP PS 4385)*

http://www.youtube.com/watch?feature=player_detailpage&v=euzrPLMqDnc

- a. With the error message displayed at printers LCD screen, press and hold the **Power** and **Cancel** buttons down together.
- b. When it says “Enter Special Key Combo”, press the blue button (Scan), Green button (Color Copy), then the grey button (Copy Black).
- c. Press the green button (bottom or Copy Color) several times until display says “Information Menu”.
- d. Press the green button (Copy Color), then the grey button (Copy Black); now it says “checksum for relock data input”.
- e. Wait a few seconds for a random number to appear on display (i.e. “checksum for relock data input: 3865”).



- f. Press the Cancel button three (3) times until the Cartridges missing or not detected message disappears.

NOTE: If the printer error message does not disappear (or reappears immediately following a single print job) then the ink cartridge could be damaged and may need to be replaced. Refer to the Tap 41 and/or Tap 10 diagnostic test procedures to diagnose cartridge's electrical health further.



(3) Photosmart C5200 and C5300 series printers:

- a. Press **Red Eye Removal & Print Photos** buttons simultaneously
- b. Enter Special Key Combo is displayed on the screen.
- c. Press and release in sequence "Red Eye Removal", "Print Photos", then "Red Eye Removal"
- d. Display should say "Support" and display the FW rev XXXXX.
- e. Press **Right Arrow** button until "Information Menu" is displayed. Press **OK**.
- f. Press **Left Arrow** button to display "checksum for relock data input".
- g. Select **OK**, a four (4) or five (5) digit number will be displayed (i.e. "checksum for relock data input: 53588").
- h. Press the **Cancel** button once (the 4/5 digit number should disappear); press **Cancel** two more times.



- i. If prompted to print an Alignment Page, go ahead, or select Cancel.

NOTE: If the printer error message does not disappear (or reappears immediately following a single print job) then the ink cartridge could be damaged and may need to be replaced. Refer to the Tap 41 and/or Tap 10 diagnostic test procedures to diagnose cartridge's electrical health further (see page 11).

6. Officejet J5700 and J6400 Printer Cartridge Error Bypass Procedure:

- a. Load Letter/A4-size paper into paper feed tray.
- b. If any lights are blinking, first press Cancel to attempt to clear.
- c. Press the * and # keys simultaneously.
- d. Enter 123 (or 124) at keypad.
- e. Use the arrow keys to navigate to the Information Menu.
Select Ok.
- f. Use the arrow keys to navigate to the 'checksum for relock data input'. Select Ok. LCD should display a 5-digit number after a few seconds.
- g. Attempt to send a print job to printer [NOTE: with a marginally performing ink cartridge, this typically results in allowing 1 entire print job to be printed at a time].
 - a. If this does not permit any print operations then the cartridge has severe internal electrical damage and will need to be replaced.



NOTE: To diagnose the cartridge's electrical health further, please refer to the Tap 41 diagnostic test procedures (see HP Tap Tests).

7. General cartridge/printer reset procedure for Photosmart / Deskjet / Officejet printers:

- a. Turn the printer on; open the printer to access the print cartridges.
- b. Remove both ink cartridges from the station.
- c. Turn printer off for 30 seconds.
- d. Turn the printer on; re-install the cartridges in their stations.
- e. Close the printer; resume normal printer operations if possible.
- f. If this does not work, then open the printer to access the print cartridges.
- g. Remove the ink cartridges and leave the cartridge access door open (i.e. 42xx/43xx).
- h. Remove (pull out) the power plug (at printer or receptacle); wait 1 minute and then re-install the power plug and power on the printer.
- i. Reinstall cartridges and close the access door. A printer alignment page should initiate on most models.
 - a. Reset procedure #1 for models with # key (i.e. Officejet series):
 - i. Unplug power cable while the printer is ON.
 - ii. Press and hold the '#' and '6' button (or alternatively the '9' key), and plug the cable back into the printer.
 - iii. Continue holding the buttons down for 20 seconds, and then release.
 - iv. Then turn the printer off and on. Check for print operations.
- j. If this does not work, replace the problematic ink cartridge.

(5) 'Semi-Full' reset procedure for Photosmart C5200 & C5300 series printers:

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- a. Press Red Eye Removal & Print Photos button simultaneously
- b. Enter Special Key Combo is displayed on the screen.
- c. Press and release in sequence "Red Eye Removal", "Print Photos", "Red Eye Removal"
- d. Display should say "Support" and display the FW rev XXXXX.
- e. Press Right Arrow button until "Resets Menu" is displayed. Press OK.
- f. Press Right arrow until "Semifull Reset" is displayed.
- g. Press OK (printer will deenergize).
- h. Press Power ON button and re-enter country/language selections.
- i. Reinstall ink cartridges when prompted and print an alignment page.



NOTE: A semi-full reset will reset user settings to the factory defaults, Language and country settings on some models.

*Procedure will vary between printer models. **HP printers which use HP 74-75 Ink Cartridges:**

HP Deskjet Series D4260, D4263, D4268, D4280, D4360, D4363, D4368

HP OfficeJet Series J5730, J5740, J5750, J5780, J5785, J5788, J6410, J6413, J6415, J6450, J6480

HP PhotoSmart Series C4200, C4205, C4210, C4225, C4235, C4240, C4250, C4270, C4272, C4273, C4275, C4280, C4283, C4285, C4288, C4293, C4294, C4345, C4380, C4385, C4440, C4450, C4472, C4473, C4480, C4483, C4485, C5225, C5240, C5250, C5280, D5345, D5360, D5363, D5368

HP Tap Tests (Built-In Diagnostic Tests)

Following a printer shutdown error message, to help determine if either of the HP 74/75 (or HP 74XL/75XL) ink cartridges has (1) electrically failed, (2) is potentially mating improperly and (3) all nozzles are firing properly, conduct an internal diagnostic 'Tap Test'.

NOTE: 'Tap 41' and 'Tap 10' diagnostic tests are available on most 74/75-ink series printer models).

1. HP Photosmart C4200, C5200-C5500 printers* – Tap 41 Diagnostic Test Procedure:

* Printer diagnostic's menu access is similar for other printers which use HP 74-75 ink cartridges.

Youtube Inkjet411 Support Video: <http://www.youtube.com/watch?v=8fE-IM4AVMc>

TECHNICAL NOTE: If the printer's error message prohibits you from accessing the diagnostics menu, first replace the suspect cartridge with a new/good cartridge, then access the diagnostics menu using the steps below. Just prior to activating the test print (i.e. step H below), swap the good cartridge out with the suspect cartridge.

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- a. Load Letter/A4-size paper into paper feed tray.
- b. If any lights are blinking, first press Cancel to attempt to clear.
- c. Press and HOLD the **Cancel** button, press **Ok** button once.



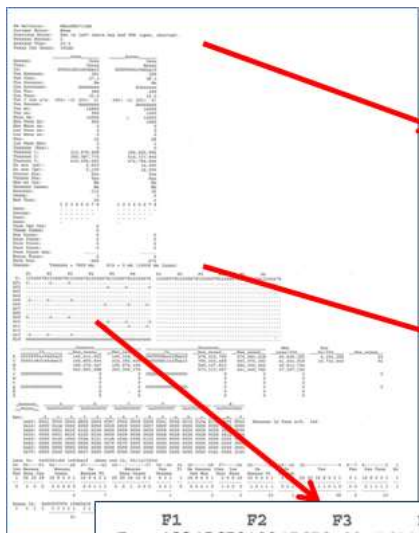
- d. At 'Mfg Commands' menu, click **Right Arrow** once until 'uiaux service' menu is displayed.
- e. At 'uiaux service' menu, click the **Right Arrow** 3 times until Special Reports menu is displayed.
- f. Select **Ok**, then click **Right Arrow** 2 times until the 'print-mech button tap' menu is displayed.



- g. Select **Ok** (Code = 0 will be displayed); click and hold **Right Arrow** until code = 41' is displayed. Use the **Left Arrow** if you need to decrease numerical count.
- h. Select **Ok**. Within one minute the Tap 41 diagnostic test pattern should be initiated and print (whether ink cartridges are good or not, i.e. this is a forced print test).



NOTE: If the printer attempts to print the diagnostic test pattern then the printer is generally considered operational and functional, if nothing is printed then the tri-color ink cartridge is either empty, clogged or electrically damaged (black ink cartridge is not used). The pattern is printed using CMY ink from the tri-color cartridge only. Replacing the ink cartridge is the best way to verify cartridge/printer performance.



Cartridge Errors

```

FW Revision:      NExxFN0713AR
Current Error:    None
Previous Error:   Pen in left chute has bad TSR (open, shorted).
XXXXXXXX XXXXXX: Z
Axxxxxx Txxx:    23.2
Txxxx Lxx Uxxxx: 391mxx
  
```

Nozzle Count

	HP 75 Color	HP 74 Black
Exxxx Fxxxx:	0	0
Gxxx Rxxx:	600	672

Nozzle Test (X's indicate electrically failed cartridge nozzles)

	F1	F2	F3	F4	F5	F6	F1	F2	F3	F4	F5	F6
D:	123456781234567812345678123456781234567812345678	123456781234567812345678123456781234567812345678	123456781234567812345678123456781234567812345678	123456781234567812345678123456781234567812345678	123456781234567812345678123456781234567812345678	123456781234567812345678123456781234567812345678	123456781234567812345678123456781234567812345678	123456781234567812345678123456781234567812345678	123456781234567812345678123456781234567812345678	123456781234567812345678123456781234567812345678	123456781234567812345678123456781234567812345678	123456781234567812345678123456781234567812345678
A01	o	o	o	o	o	o	o	o	o	o	o	o
A02	.	.	.	.	.	.	.	.	.	.	.	.
A03	.	.	.	.	.	.	.	.	.	.	.	.
A04	.	.	.	.	.	.	.	.	.	.	.	.
A05	o	o	o	o	o	o	o	o	o	o	o	o
A06	.	.	.	.	.	.	.	.	.	.	.	.
A07	.	.	.	.	.	.	.	.	.	.	.	.
A08	.	.	.	.	.	.	.	.	.	.	.	.
A09	o	o	o	o	o	o	o	o	o	o	o	o
A10	.	.	.	.	.	.	.	.	.	.	.	.
A11	.	.	.	.	.	.	.	.	.	.	.	.
A12	.	.	.	.	.	.	.	.	.	.	.	.
A13	o	o	o	o	o	o	o	o	o	o	o	o
A14	o	o	o	o	o	o	o	o	o	o	o	o

Tap 41 Test Print

NOTE: If the upper section displays the error message “**Pen in left (right) chute has 1 or more open or shorted control lines**” then the cartridge could be installed incorrectly or suffers from an internal electrical nozzle failure. Remove and firmly reseal cartridge(s) to eliminate connectivity issues. Repeat the Tap 41 Test.

i. Inspect the Tap 41 diagnostic test print in 3 sections to determine electrical health of both ink cartridges.

1) Check for presence of a ‘current’ cartridge error message in top section

“Too Many Good Nozzles.” / “Pen in chute -open, shorted control lines” / “Wrong pen Type” / “Unknown Pen Type” / “Bad TSR”

NOTE: In some cases the ink cartridge may just need to be reseated (i.e. for some of errors listed above). Perform the Tap 10 test to determine which color is out (if Tap 41 prints in some color other than composite black) using the same general procedure above; enter “Code = 10” to activate – refer below.

2) Check cartridges functional nozzle count (ideally a good **Color cartridge** nozzle count is = **600** nozzles, while **Black** = **672** nozzles).



A nozzle failure rate higher than 20% (i.e. 120 bad nozzles) would be considered deficient to support adequate print operations (the Bxxxx / Fxxxx line displays faulty nozzle count).

Nozzle Count	HP 75 Color	HP 74 Black
Bxxxx Fxxxx:	0	0
Gxxxx Rxxx:	600	672

On the other hand, if greater than 600 (color) or 672 (black) nozzles are good, then cartridge is also considered electrically damaged and will likely need to be replaced.

- 3) The presence of X's (o's) within the lower section (A01 thru A14 lines) indicate damaged nozzles.

	F1	F2	F3	F4	F5	F6	F1	F2	F3	F4	F5	F6
D:	123456781234567812345678123456781234567812345678						123456781234567812345678123456781234567812345678					
A01	.....o.....o.....o.....o.....o.....						.....o.....o.....o.....o.....o.....					
A02	.....o.....o.....o.....o.....o.....						.....o.....o.....o.....o.....o.....					
A03	.....o.....o.....o.....o.....o.....						.....o.....o.....o.....o.....o.....					
A04	.....o.....o.....o.....o.....o.....						.....o.....o.....o.....o.....o.....					
A05	.....o.....o.....o.....o.....o.....						.....o.....o.....o.....o.....o.....					
A06	.....o.....o.....o.....o.....o.....						.....o.....o.....o.....o.....o.....					
A07	.....o.....o.....o.....o.....o.....						.....o.....o.....o.....o.....o.....					
A08	.....o.....o.....o.....o.....o.....						.....o.....o.....o.....o.....o.....					
A09	.....o.....o.....o.....o.....o.....						.....o.....o.....o.....o.....o.....					
A10	.....o.....o.....o.....o.....o.....						.....o.....o.....o.....o.....o.....					
A11	.....o.....o.....o.....o.....o.....						.....o.....o.....o.....o.....o.....					
A12	.....o.....o.....o.....o.....o.....						.....o.....o.....o.....o.....o.....					
A13	.....o.....o.....o.....o.....o.....						.....o.....o.....o.....o.....o.....					
A14	oo											

j. **Pass/Fail Criteria.** If the Tap 41 test print successfully prints (or attempts to print but page is blank) then the printer is operational and functional.

- 1) If normal printing is not possible, then either one (or both) of the ink cartridges are electrically defective and will need to be replaced.
- 2) Replace with a new cartridge and rerun tap 41 test ...the '**Previous Error**' message should be displayed at top of the diagnostic print

a. **Example #1** – ink cartridge was unseated (i.e. error has now been cleared):

Current Error:	None
Previous Error:	Pen in right chute is wrong pen type for chute or printer, or is unknown pen type.

b. **Example #2**- portion of cartridge nozzles are electrically bad – ink cartridge will likely need to be replaced (i.e. printer suffers "Refer to Printer Documentation" or "Cartridge(s) Error"):

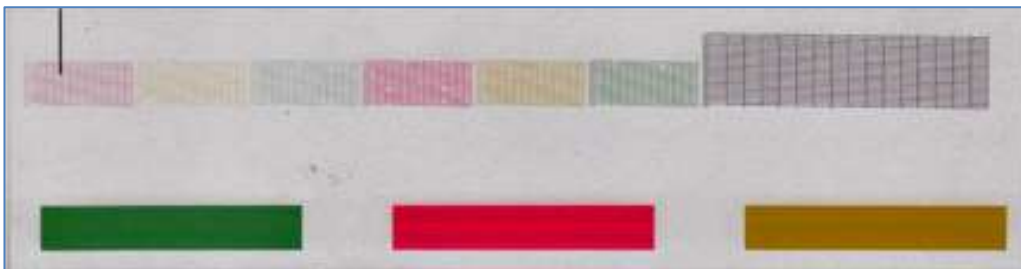
Current Error:	Pen in right chute has 1 or more open or shorted control lines.
Previous Error:	Pen in right chute has 1 or more open or shorted control lines.

- 3) Typically with the error message (“Too Many Good Nozzles...”, etc.), a significant number of blown cartridge nozzles displayed in the A01 thru A16 fields (indicated as XXXXX’s), or more than 20% failed nozzles are bad (Bxxxx Fxxxx line), signifies there is a damaged ink cartridge. Equally, if greater than 600 (color) or 672 (black) nozzles are good, then the cartridge is electrically damaged.

NOTE: Only the Tri-color ink cartridge (75 or 75XL) is used to print the Tap 41 diagnostic test print so it must be partially functional. The Black cartridge (74 or 74XL) is NOT used for printing, though information about the Black ink cartridge’s electrical performance will be shown in the printout. Print the Tap 10 diagnostic test pattern to check all 4 colors.

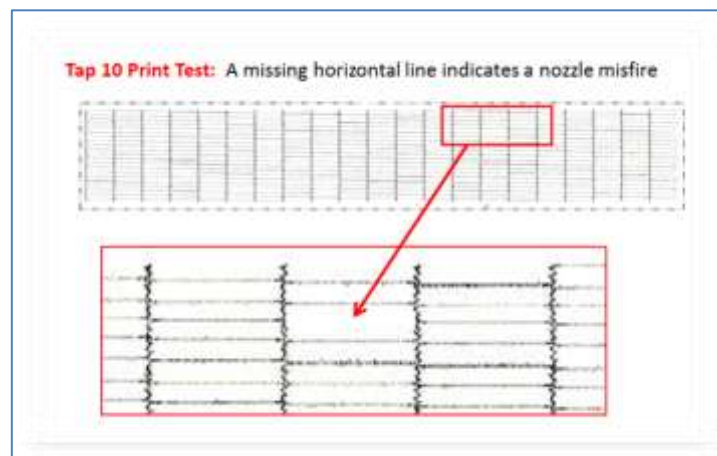
2. HP Photosmart C4200 thru 5500 series printers – *Tap 10 Diagnostic Test Procedure:*

- a. Activate the ‘Tap 10’ diagnostic test print (*i.e. same procedure as the ‘Tap 41’ procedure above except enter ‘Code = 10’*) to determine which cartridge nozzles and/or colors are misfiring.
- b. The ‘Tap 10’ diagnostic pattern should print, or attempt to print, indicating the printer is generally functional. A series of stair-step patterns and color and black density bars should be printed along with miscellaneous printer information settings.



Tap 10 Test Print (*partial*)

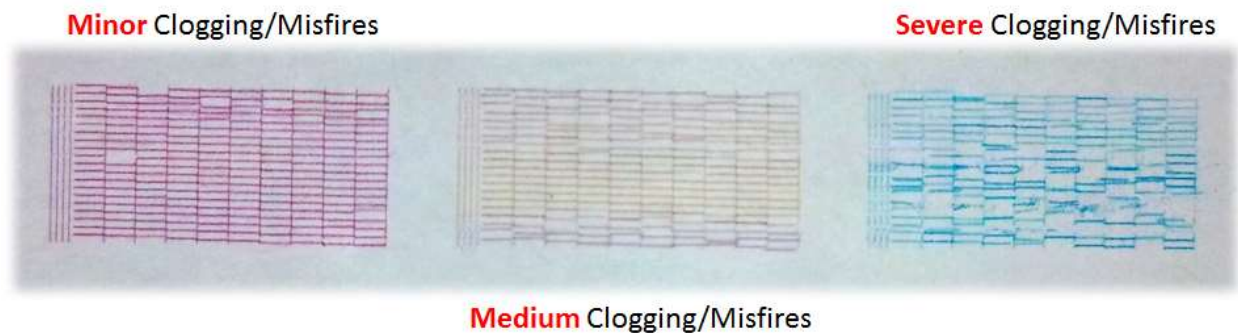
- c. Inspect each stair-step pattern. A missing horizontal line indicates a misfire or clogged ink nozzle. Typically, a loss of greater than 20% of total nozzles, for each color, can lead



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to degraded print quality performance depending on the print mode (i.e. draft, normal, best, etc.).

- d. For minor nozzle failures (i.e. less than 20 missing lines) it is suggested to run the printer clean utility or print a test print from the <http://www.inkjet411.com> web site.
- e. For nozzle losses greater than 20 it is suggested to thoroughly clean the ink cartridge and carriage flex cable contacts (refer to Cleaning Procedures below).



- f. If, after following thorough cartridge and printer cable cleaning, printer error messages persist and/or significant nozzle loss is visible in the Tap 10 diagnostic print (i.e. more than 120 nozzles are out in a single color or black), then the cartridge, or cartridges, may be electrically damaged and/or severely clogged. Perform cartridge cleaning; cartridge replacement may be required for severe misfires or printing failures.
- g. Install new ink cartridge(s) and repeat tap 10 diagnostic print test until the problem has been resolved.

3. HP Deskjet D4200 - D4300 series printers – *Tap 41 Diagnostic Test Procedure:*

- a. Load Letter/A4-size paper into paper feed tray.
- b. If any lights are blinking, first press Cancel to attempt to clear.
- c. Press and HOLD the **Power** button, press **Cancel** button 4 times, then **Resume** button (down arrow) once.
- d. Release the **Power** button. The Tap 41 diagnostic test should print.



4. HP Officejet J5700 & J6400 series printers – *Tap 41 Diagnostic Test Procedure:*

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- h. Load Letter/A4-size paper into paper feed tray.
- i. If any lights are blinking, first press Cancel to attempt to clear.
- j. Press the * and # keys simultaneously.
- k. Enter 124 (or 123) at keypad.
- l. Use the arrow keys to navigate to the System Menu. Select Ok.
- m. Use the arrow keys to navigate to the 'print-mech tap test'. Select Ok. Should display code = 0.
- n. Use the arrow keys to enter code = 41 (or just enter 41 on keypad). Select Ok. The Tap 41 diagnostic test pattern should begin to print.
- o. Refer to video above (C4200/C5200-C5500) to analyze printed diagnostic pattern.

Print Quality Issues

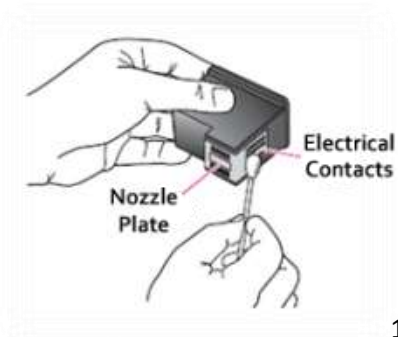
1. HP Cartridge / Printer Cleaning Procedure

If intermittent cartridge error messages persist or you have poor print quality ensure the cartridge's electrical contacts are completely clean of all ink and paper fiber residues. Follow the procedure below if you have streaks or smudges in your printed output and you have already performed all three cleaning levels in the Clean Print Cartridges utility.

- a. Obtain cleaning supplies:
Clean distilled, filtered, or bottled water. Tap water may contain contaminants which could damage the cartridge. Clean cotton swabs or any soft, lint-free material that will not stick to the cartridges (i.e. coffee filters). Paper towel to rest the cartridge(s) on during cleaning.
- b. Remove the cartridge and place it on a piece of paper with the nozzle plate facing up. If you see any debris or ink buildup, clean the cartridge as follows:
- c. Lightly moisten the lint-free cleaning material with clean water. Use the swab to wipe clean the faces and edges around the nozzle plate. The area to be cleaned is cross-hatched in the picture. Replace the cleaning material if it gets dirty.

Cleaning the cartridge:

- (1) – Clean in the cross-hatched area (pictured above).
- (2) – Only clean the nozzle plate (#2) if saturated/covered with ink; gently blot nozzle plate area to remove residue buildup.



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(3) – Only clean the copper-colored contacts (#3) if dirty (pictured below).

CAUTION: Unless dirty, do not touch either the nozzle plate or the copper-colored contacts. Touching these parts can cause clogs, ink failure, and bad electrical connections.

- d. Examine both cartridges. Even if the streaks are only visible in one color (streaks in black ink are commonly caused by fibers and debris stuck to the bottom of the tri-color print cartridge). Thoroughly clean the cartridge if you see any debris or buildup.



NOTE: A pencil eraser can also be used to clean the cartridges rear electrical contacts.

- e. Allow cartridge to sit for five minutes and/or use a new swab to dry the cleaned areas before you reinsert the cartridges into the printer.

NOTE 1: Do not touch the electrical contacts/surfaces with your bare fingers as there are oils in your skin which can interfere with proper cartridge connectivity and subsequent printer operations.

NOTE 2: Do not leave the print cartridges outside the printer for longer than 30 minutes. If a cartridge is left outside of the printer for too long, the ink will dry out and the cartridge will become unusable.



- f. Gently blot the cartridge Nozzle Plate with a damp lint-free towel/wipe – a small amount of ink should be dispensed, and be visible, on the towel (all 3 colors should be present for a Tri-color cartridge).



- g. If no ink is dispersed from nozzle plate (i.e. visible on towel) or ink cartridge completely fails to print on paper after installed in printer, then more drastic cartridge and printer cleaning steps will likely need to be performed to resume printer operations.

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- 1) Clean printer carriage flexible cable contacts using isopropyl alcohol (99%) on damp cloth (or cotton swab). Ensure no fibers remain on contact surfaces.

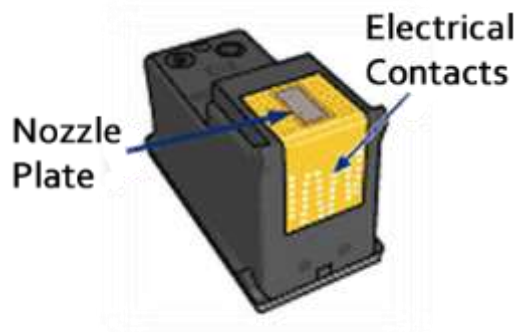


- 2) Immerse cartridge base (lower ¼ inch) in **very hot**, near boiling, distilled or de-ionized water for 2-4 minutes **(CAUTION!)**.

CAUTION



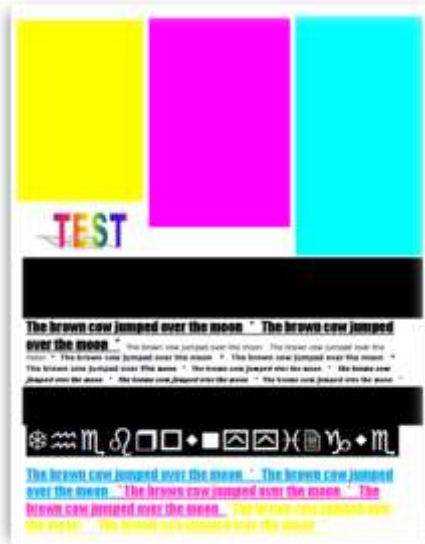
- 3) A few table spoons of Isopropyl rubbing alcohol may be added to water to help break down the dried ink within the nozzle plate. Do not leave cartridge in water more than 20 minutes.
- 4) Completely dry the ink cartridge with a lint-free towel. Ensure the electrical contacts are thoroughly clean and dry. Blot cartridge nozzle plate to check for ink flow (i.e. commonly referred to “wetted” or “flowing”).



- 5) Reinstall cartridge into the printer and retest. If the cartridge fails to print then obtain a new ink cartridge.

NOTE: If the printer/cartridge is rarely used, or old, there is the possibility the internal foam has hardened (dried) to a point where the ink will not absorb properly into the foam and flow down to the nozzle plate (often cartridges may experience severe ink pooling or leaking at the bottom when this occurs). If this is the case then the cartridge will need to be replaced.

- h. Print a test print from either the printer's control panel (i.e. Self-Test Report) or from the Inkjet411.com website (see **Test Prints** tab) to verify all colors are firing properly.



Test Print_CMYK.pdf (test file)

Always store refilled cartridges in storage clips when not in use. Exercise care when removing and installing ink cartridges into storage clips – do not allow printhead nozzle plate to come into contact with the hard plastic body of clip or permanent damage may occur to ink cartridge.

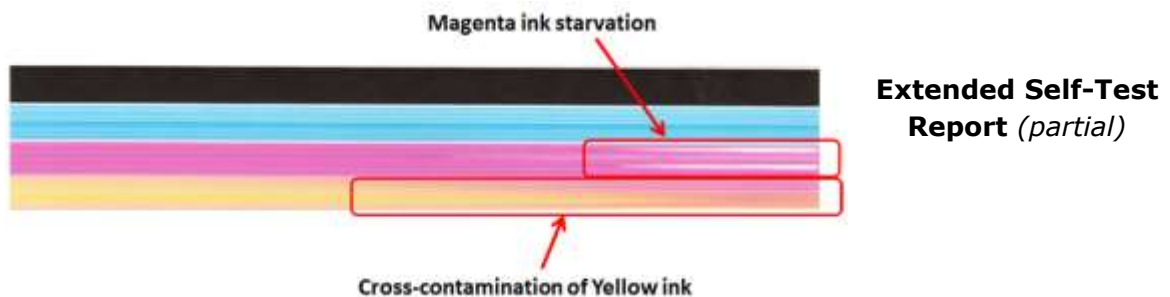
Firmly bend down this way to remove clip...



2. Service Station Caps - Cleaning Procedure

If printed output appears to be smeared with multiple colors* then the service station or parking pad is likely dirty (i.e. full of residual ink buildup) and will need to be cleaned. In the example below the yellow ink is contaminated with magenta ink (“cross contamination”).

NOTE: The Extended Self-Test Report may be run on most C4200 thru C5200 printer models by pressing and holding **Cancel** button, then selecting **Black Copy** button (or similar procedure). Many of the HP 74-75 ink series printer models include a ‘Self-Test Report’ under the Tools menu; a quick print of the 4-color bars can aid in identifying which color is degraded or completely out.



NOTE: Ensure that paper thickness/paper weight does not exceed manufacturers suggested printer specifications...the majority of consumer inkjet printers can only handle up to 24 lb plain paper thickness or up to 260 gsm photo paper weight.**

General service station cleaning procedure:

This procedure is not applicable to HP printer models which feature a maintenance station that ‘cycles’ out of the way during cartridge loading and unloading (i.e. C5200 printer model series).

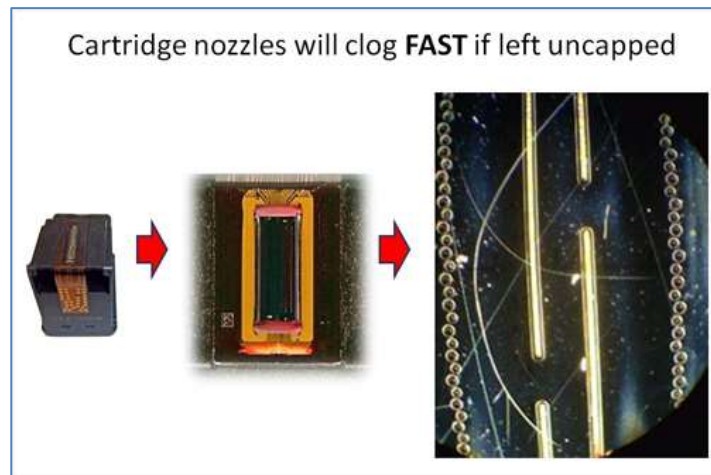
- Remove both ink cartridges from the carriage.
- Dampen a lint free cotton swab with distilled water. Gently clean both service station caps (cartridge parking pads) until thoroughly clean of ink residue / debris build-up.
- Inspect to ensure no fibers remain on station caps, if present.



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- * Storing ink cartridges upside down may also cause cross contamination or smearing of printed output.
- ** Repeated 'head strikes' with the paper surface can cause cartridge failure and/or print head leaking.

NOTE: Random droplets of ink on your paper are normally caused by contaminants on the printhead nozzle plate area such as a fiber, hair, built up dust, dried ink. The smallest fiber on the printhead can act as a wick and collect ink from the head until it is oversaturated and therefore drip. In many cases both the



service station cap and both ink cartridges will need to be cleaned to correct this issue.

HP Printhead Nozzle Plate (under 10X magnification)