

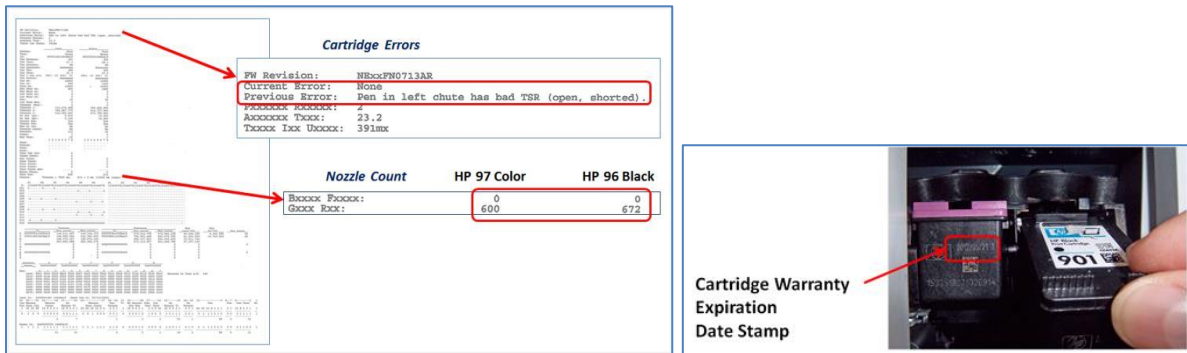
To further troubleshoot your printer please visit:  
<http://www.inkjet411.com>

## HP Inkjet Printer Diagnostic Tests

The internal HP printer self-tests, including 'Tap 10' test, can be used to verify cartridge nozzle performance and that the printer's internal firmware is functioning properly. The Tap 41/43 diagnostic tests can provide valuable cartridge/printhead health diagnostics information (most models); as this is a forced service test the printer will attempt to print the 'tap 41/43' diagnostic page whether the ink cartridges are electrically good or not. The tests do not verify computer-printer connectivity.

**NOTE 1:** "Non-Genuine"/"Counterfeit" ink alert messages can be bypassed, however if "Incompatible Print Cartridge" / "Print Cartridge(s) Problem" / "Refer to printer documentation" / "Cartridge Error: Cartridge must be replaced" / "Cartridge in left or right slot is not intended for use in this printer" / "Replace Ink Cartridge" / "Ink Cartridge Failure" is displayed then the cartridge may be electrically damaged (internal micro-electronics). Remove and clean ink cartridge (or printhead) electrical contacts. Re-install and re-test printer using the suggested procedures provided below. Videos available at [www.inkjet411.com](http://www.inkjet411.com)

**NOTE 2:** If you are able to print the internal Self-Test print but 'regular' printing is still not possible, then one (or both) of the ink cartridges (or PRINTHEAD) may have internal micro-electronic damage and may need to be replaced to restore print functions.



Cartridge Errors		
FW Revision:	MS000713AR	
Current Error:	None	
Previous Error:	Pen in left chute has had TSR (open, shorted).	
Page Count:	2	
Approx. Toner:	23.2	
Approx. Ink:	391ml	

Nozzle Count	HP 97 Color	HP 96 Black
Black Ink:	0	0
Color Ink:	600	672

Tap 41 Diagnostic Print Test (i.e. HP 92-99 Ink Cartridges)

Check expiration; cartridges are prone to failure after this date

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## HP Deskjet Printers

Print the HP Self-Test Report (*older HP printer models*) – click here for instructions/sample prints:

<http://h10025.www1.hp.com/ewrf/wc/document?cc=us&lc=en&dlc=en&docname=bpu00734>

### Deskjet Printers (*most models*)

Tap 10 Diagnostic Test (*Extended Self-Test*):

1. Press and hold the Power button, and then press the Cancel button once.
2. Release the buttons. The Extended Self-Test (“Tap 10”) prints.
3. Review test pattern; ensure all colors are firing. A missing horizontal block or blocks within the nozzle stair step pattern indicates a misfiring ink nozzle. Perform cartridge cleaning to correct.

### Deskjet 400, 400L, 420c series printers (*HP 25, 26 ink cartridges*)

Running a self-test:

1. Turn the printer off.
2. Press and hold down the PAPER FEED button.
3. Turn the printer on.
4. Release the PAPER FEED button.

Running a clean test:

1. Turn the printer on.
2. Press and hold down the CHANGE CARTRIDGE button for five seconds.

### Deskjet 460 and Officejet H470 (H100?) Mobile Printer series (*HP 94, 95, 97, 100 cartridges*)

Running a self-test:

1. Make sure the product is on and loaded with unused, plain white paper.
2. Hold down the Power button, and then press the Resume button 10 times. Release both buttons, and the test page prints.

**NOTE:** If test page prints then the printer is functioning normally and the problem can be isolated to an ink cartridge. Replace ink cartridge and retest.

### Deskjet 500, 510, 520 series printers (*HP 26 black ink cartridge*)

#### Deskjet 550c, 560c series printers (*HP 25, 26 ink cartridges*)

Running a self-test:

1. Press FONT and RESET, or LOAD EJECT while turning on the printer.

Running a clean test:

1. Turn the printer on.
2. Press the CLEAN button.

Running an alignment test:

1. Turn the printer on.
2. Press the ALIGNMENT TEST button.

### Deskjet 540 printers (*HP 25, 26 ink cartridges*)

Running a self-test

1. Turn the printer on.

2. Press and hold down the RESUME button until the printer starts printing.

Running a clean test:

1. Turn the printer on.
2. Press and hold down the POWER button.
3. Press the RESUME button seven times.
4. Release the POWER button.

Running a diagnostic test:

Regular Test:

1. Turn the printer on.
2. Press and hold down the POWER button.
3. Press the RESUME button five times.
4. Release the POWER button.

Extended Test:

1. Turn the printer on.
2. Press and hold down the POWER button.
3. Press the RESUME button twelve times.
4. Release the POWER button.

**Deskjet 600, 600c, 610c, 630c, 632c, 640c, 642c, 648c, 656c series printers** (HP 20, 49 ink cartridges)

**Deskjet 660c, 670c, 680c, 690c, 692c, 693c, 694c, 695c, 697c series printers** (HP 29, 49 ink cartridges)

Running a self-test:

1. Turn the printer on.
2. Press and hold the RESUME button until the printer starts printing.
3. Release the RESUME button.

Running a clean-test:

1. Turn the printer on.
2. Press and hold the POWER button.
3. Press the RESUME button seven times.
4. Release the POWER button.

Running a diagnostic-test:

A. Regular Test

1. Turn the printer on.
2. Press and hold the POWER button.
3. Press the RESUME button five times.
4. Release the POWER button.

B. Extended Test

1. Turn the printer on.
2. Press and hold the POWER button.
3. Press the RESUME button twelve times.
4. Release the POWER button.

**Deskjet 700 series printers** (HP 23, 45 Ink Cartridges)

**Deskjet 710c and 720c series printers** (HP 23, 45 ink cartridges)

Running a self-test:

1. Turn the printer on.

2. Press and hold the POWER button.
3. Press the RESUME button four times.
4. Release the POWER button.

**NOTE 1:** This may need to be performed several times before the printer prints the page.

**NOTE 2:** There are no internal clean or diagnostic tests for the HP Deskjet 710c and 720c series printers. The clean test can be performed from the printer's toolbox.

**Deskjet 800 series printers (HP 15, 23 ink cartridges)**

**Deskjet 820c printers (HP 41, 45 ink cartridges)**

Running a self-test:

1. Turn the printer on.
2. Press and hold the POWER button.
3. Press the RESUME button four times.
4. Release the POWER button.

**NOTE:** There are no internal clean or diagnostic tests for the HP Deskjet 820cse and 820cxi printers.

**Deskjet 810c, 840c, 841, 842, 843, 845, 845c (HP 15, 17 ink cartridges)**

**Deskjet 825c (HP 15, 23 ink cartridges)**

**Deskjet 830c, 880, 880c, and 895c series printers (HP 23, 45 ink cartridges)**

Running a sample page:

1. Turn the printer on.
2. Press and hold the RESUME button until the printer starts printing.
3. Release the RESUME button.

Running a diagnostic test:

1. Turn the printer on.
2. Press and hold the POWER button.
3. Press the RESUME button four times.
4. Release the POWER button.

**NOTE:** There is no internal clean test for the HP Deskjet 810c, 830c, 880c, and 895c series printers.

**Deskjet 850, 850c, 855, 855c, 870c series printers (HP 41, 45 ink cartridges)**

**Deskjet 890c, 895 series printers (HP 23, 45 ink cartridges)**

Running a self-test:

1. Turn the printer on.
2. Press and hold the RESUME button until the printer starts printing.
3. Release the RESUME button.

Running a clean-test:

1. Turn the printer on.
2. Press and hold the POWER button.
3. Press the RESUME button seven times.
4. Release the POWER button.

Running a diagnostic test:

1. Turn the printer on.
2. Press and hold the POWER button.
3. Press the RESUME button five times.
4. Release the POWER button.

**Deskjet 900c, 916c, 920c, 940, 940c series printers (HP 15, 78 ink cartridges)**

**Deskjet 930c, 950c, 952, 960c, 970c, 980c, 990c (HP 45, 78 ink cartridges)**

Running a sample page:

1. Turn the printer on.
2. Press and hold the RESUME button until the printer starts printing.
3. Release the RESUME button.

Running a self-test:

1. Turn the printer on.
2. Press and hold the POWER button.
3. Press the RESUME button four times.
4. Release the POWER button.

Running a diagnostic test:

1. Turn the printer on.
2. Press and hold the POWER button.
3. Press the X (Cancel) button eight times.
4. Press the RESUME button four times.
5. Release the POWER button.

Print a HP Self-Test Report (older HP printer models) – click here for instructions & sample prints:

<http://h10025.www1.hp.com/ewrf/wc/document?cc=us&lc=en&dlc=en&docname=bpu00734>

**TBD:** A good HP 45 black cartridge should display xxx good nozzles, while a good HP 78 color ink cartridge should show xxx good nozzles.

**DeskJet 1000 J110a, 1000 J110c, 1000 J110d, 1000 J110e, 1000 J110f, 1050 J410a, 1050 J410c, 1050 J410d, 1050 J410e, 1051A, 1055 J410e, 2000 J210a, 2000 J210b, 2000 J210c, 2000 J210d, 2050 J510a, 2050 J510c, 2050 J510d, 2050 J510e, 3000 J310a, 3000 J310c, 3050, 3050A e, 3050A J611a, 3051A, 3052A e, 3054 J610a, 3054A e J611j, 3510 (HP 61/61XL Ink Cartridges)**

Tap 10 Diagnostics Print:

1. Press and hold the Power button, and then press the Cancel button once.
2. Release the buttons. The 10-tap test prints.

Tap 41 Diagnostic Test (Deskjet 1000-3056 only- see video: [http://inkjet411.com/?page\\_id=1476](http://inkjet411.com/?page_id=1476))

1. Turn printer Power ON – allow printer to fully energize.
2. PRESS AND HOLD the Power Button
3. Press the Cancel (X) button 4 times
4. Press the Scan button once
5. Release the Power button

**NOTE:** A good HP 61/61XL color cartridge should display 612 good nozzles, while a good HP 61/61XL black ink cartridge should show 336 good nozzles.

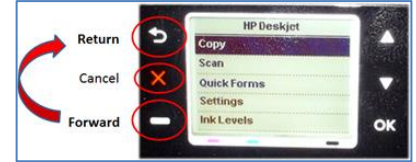
Bxxxx Fxxxx:	0	0
Gxxx Rxx:	612	336

**DeskJet 3520, 3521, 3522 (HP 564 cartridges):**

Tap 41 **PRINTHEAD** Health Diagnostics:

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<http://www.inkjet411.com>

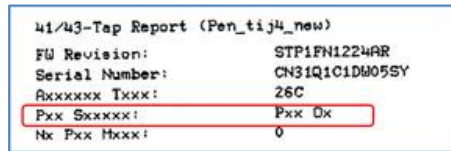
1. Use a random button pressing technique to gain access to 'Support Menu'. Beginning with the 'Forward' button, alternatively press the 'Forward' and 'Return' buttons 3-4 times each, then press the 'Cancel' button every so often, until the '**Support**' menu is displayed.



**NOTE 1:** this can be somewhat tricky to perform successfully.

**NOTE 2:** If the Manufacturing Menu comes up, select 'Underware' Menu – select 'Ok', scroll to 'System' menu – select 'Ok', the 'print-mech button tap' menu will be displayed. See step 4.

2. At 'Support' Menu, using the down arrow key, navigate to the 'Reports Menu', press Ok.
3. Use arrow keys to advance to the 'Special Reports' Menu. Select Ok.
4. Use arrow keys to advance to the 'print-mech button tap' menu. Select Ok.
5. 'Code = 0' will be displayed. Use arrows keys to change value to '41' (i.e. press and hold right arrow key).
6. When '**Code = 41**', select 'Ok'. The diagnostic test pattern will print.
7. Check the 4<sup>th</sup> line at the top of the printed report; an electrically good/stable PRINTHEAD will state "**Pxx Sxxxx: Pxx Ox**".....which translated means "**Pen Status: Pen OK**".....if any other message is displayed then the PRINTHEAD may have electrically failed and may need to be replaced.



**NOTE:** For "printhead" error messages or for no-printing conditions, it is suggested to remove the PRINTHEAD and clean the rear electrical contacts; also inspect and clean electrical mating contacts on carriage assembly. Reinstall PRINTHEAD and test to verify connectivity is not the issue. Click here for more information: [http://inkjet411.com/?page\\_id=1451](http://inkjet411.com/?page_id=1451)

Printer Reset (i.e. use in the event of "Incompatible Printhead" or "Ink System Failure" message, etc.):

1. Remove ink cartridges from printer.
2. Access the Service menu – refer to suggested methods provided above.
3. Support Menu should be displayed. Navigate to the 'Resets Menu', press Ok.
4. Navigate to the 'Semi-Full Reset'. This will restore the printer back to the factory default setting...you will need to re-configure printer following this action (i.e. similar to when you first purchased and set-up the printer).
5. Reinstall ink cartridges and test.

**Deskjet 3000 series printers (HP 15, 78 ink cartridges)**

**Deskjet 3740, 3745 Printers (HP 27/28 ink cartridges)**

Running a diagnostic test (except for HP Deskjet 3820 series)

1. Turn the printer on.
2. Press and hold down the POWER button.
3. Open and close the top cover four times.
4. Release the POWER button.

**NOTE:** When running the test on the HP Deskjet 3600-3800 series printers it may be helpful to use a pen or pencil to hold down the Power button.

### Deskjet 3820 printers (HP 15, 78 ink cartridges)

Running a sample page

1. Turn the printer on.
2. Press and hold the RESUME button until the printer starts printing.
3. Release the RESUME button.

Running a self-test

1. Turn the printer on.
2. Press and hold the POWER button.
3. Press the RESUME button four times.
4. Release the POWER button.

### Deskjet 3900 Printer series (HP 21/22 Ink Cartridges)

1. Press and hold the power button.
2. Raise and lower the product cover four times.
3. Release the power button, and the self-test page prints.
4. Refer to video at link below to help evaluate test pattern.

**NOTE:** A good HP 21 black cartridge should display 416 good nozzles, while a good HP 22 color ink cartridge should show 300 good nozzles.

**REFERENCE: Tap 43 Diagnostics** [HP Deskjet 5650 -use HP 56/57/58 cartridges]: [http://inkjet411.com/?page\\_id=2358](http://inkjet411.com/?page_id=2358)

### Deskjet 5000, 5100, 5160, 5500 series printers (HP 56, 57, 58 ink cartridges)

Running a sample page:

1. Turn the printer on.
2. Press and hold the RESUME button until the printer starts printing.
3. Release the RESUME button.

Running a self-test:

1. Turn the printer on.
2. Press and hold the POWER button.
3. Press the RESUME button four times.
4. Release the POWER button.

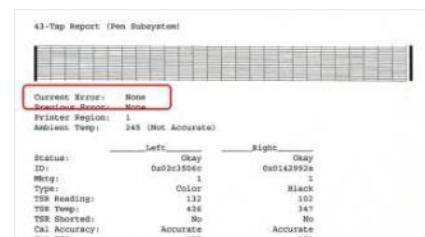
Activate 'Tap 43' Cartridge Health Diagnostics: [http://inkjet411.com/?page\\_id=2358](http://inkjet411.com/?page_id=2358)

**NOTE:** You must first stop the blinking ink error light by pressing the Cancel button. You may need to remove one of the ink cartridges first in order to do this before you can proceed, then re-install cartridge just prior to commencing the diagnostic test.

1. To begin, Press and HOLD the Power Button.
2. Press the Cancel (X) button 4 times, then...
3. Press the Resume/Down Arrow button 3 times.
4. Release the Power button; the Tap 43 report will print.

**NOTE 1:** The Tap 43 test report will be printed using the black ink cartridge by default; if a blank page appears then remove the black ink cartridge from the printer and repeat steps; report will be printed using the Color cartridge. This can also help you isolate the problem to one of the ink cartridges.

The 'Current' error message should state 'None', however if you observe errors such as... "Too Many Good Nozzles." / "Pen in chute -open, shorted control lines" / "Wrong pen Type" / "Unknown Pen Type" / "Pen in left or right chute has Bad TSR" / "Too Many Resistors Blown or

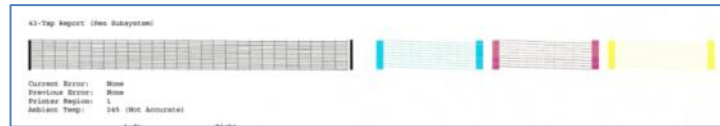


43-Tap Report: (Pen Subsystem)

Current Error:	None	
Downstream Error:	None	
Printer Region:	1	
Ambient Temp:	245 (Not Accurate)	
	Left	Right
Status:	Okay	Okay
ID:	0e02c856c	0e0142892e
Weight:	3	3
Type:	Color	Black
TSR Reading:	132	102
TSR Temp:	626	341
TSR Shorted:	No	No
Cal Accuracy:	Accurate	Accurate
Pen TSR:	157	161

Unreachable” then a severe cartridge error condition is present and the ink cartridge may need to be replaced.

5. The Left and Right ‘Status’ columns should state ‘Okay’. If not, then the respective ink cartridge may be electrically damaged and may need to be replaced.
6. If ‘TSR Shorted’ states anything other than ‘No’, then the respective ink cartridge is electrically damaged and will need to be replaced.
7. If diagnostic test data information is satisfactory, then confirm all 4 colors are firing properly by inspecting the printed stair-step patterns.



**NOTE 2:** Ideally, a good Color cartridge will display 300 nozzles (for example, check the printed 10 x 10 stair step patterns for each of the 3 colors), while a good Black cartridge will display 416 nozzles (for example, check the printed 26 x 16 stair-step pattern).

**NOTE 3:** Ensure the top cover is closed and that the interlock switch at top-right side is properly closing the circuit – you may need to depress with a small pencil to ensure this is not causing a false error condition.

#### **Deskjet 5440 Printer (HP 92, 93, 98 ink cartridges)**

Running a sample page:

1. Turn the printer on.
2. Press and hold the RESUME button until the printer starts printing.
3. Release the RESUME button.

Running a self-test:

1. Turn the printer on.
2. Press and hold the POWER button.
3. Press the RESUME button four times.
4. Release the POWER button.

#### **Deskjet 5700, 5740 Printer (HP 94, 95, 96, 97, 99, 100 ink cartridges)**

#### **Deskjet 5940 Printer (HP 95, 96, 97, 98, 99 ink cartridges)**

Running a sample page:

1. Turn the printer on.
2. Press and hold the RESUME button until the printer starts printing.
3. Release the RESUME button.

Running a self-test:

1. Turn the printer on.
2. Press and hold the POWER button.
3. Press the RESUME button four times.
4. Release the POWER button.

Tap 41 Cartridge Health Diagnostics (see video: [http://inkjet411.com/?page\\_id=1741](http://inkjet411.com/?page_id=1741)):

1. Turn printer Power ON – allow printer to fully energize.
2. Press and HOLD the Power Button
3. Press the Cancel (X) button 4 times
4. Press the Scan button once



To further troubleshoot your printer please visit:  
<http://www.inkjet411.com>

- Release the Power button. The test page prints.  
**NOTE:** A good HP 93/95/97 color cartridge should display 600 good nozzles, while a good HP 92/94/96/98 black ink cartridge should show 672 good nozzles. On some models you may remove the tri-color cartridge, reactivate the tap 41 test and the printer will print the diagnostic test print in black ink.

Black Nozzles:	0	0
Good Black:	600	672

**Deskjet 5650, 5800 printers (HP 56, 57, 58 ink cartridges)**

Running a sample page:

- Turn the printer on.
- Press and hold the RESUME button until the printer starts printing.
- Release the RESUME button.

Running a self-test:

- Turn the printer on.
- Press and hold the POWER button.
- Press the RESUME button four times.
- Release the POWER button.

Activate 'Tap 43' Cartridge Health Diagnostics: [http://inkjet411.com/?page\\_id=2358](http://inkjet411.com/?page_id=2358)

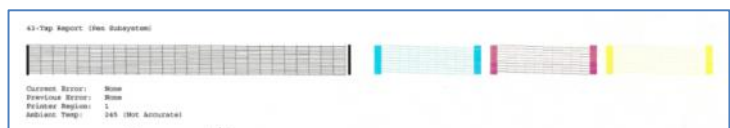
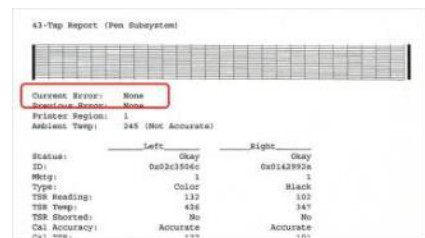
**NOTE:** You must first stop the blinking ink error light by pressing the Cancel button. You may need to remove one of the ink cartridges first in order to do this before you can proceed, then re-install cartridge just prior to commencing the diagnostic test.

- To begin, Press and HOLD the Power Button.
- Press the Cancel (X) button 4 times, then...
- Press the Resume/Down Arrow button 3 times.
- Release the Power button; the Tap 43 report will print.

**NOTE 1:** The Tap 43 test report will be printed using the black ink cartridge by default; if a blank page appears then remove the black ink cartridge from the printer and repeat steps; report will be printed using the Color cartridge. This can also help you isolate the problem to one of the ink cartridges.

The 'Current' error message should state 'None', however if you observe errors such as... "Too Many Good Nozzles." / "Pen in chute -open, shorted control lines" / "Wrong pen Type" / "Unknown Pen Type" / "Pen in left or right chute has Bad TSR" / "Too Many Resistors Blown or Unreachable" then a severe cartridge error condition is present and the ink cartridge may need to be replaced.

- The Left and Right 'Status' columns should state 'Okay'. If not, then the respective ink cartridge may be electrically damaged and may need to be replaced.
- If 'TSR Shorted' states anything other than 'No', then the respective ink cartridge is electrically damaged and will need to be replaced.
- If diagnostic test data information is satisfactory, then confirm all 4 colors are firing properly by inspecting the printed stair-step patterns.



**NOTE 2:** Ideally, a good Color cartridge will display 300 nozzles (for example, check the printed 10 x 10 stair step patterns for each of the 3 colors), while a good Black cartridge will display 416 nozzles (for example, check the printed 26 x 16 stair-step pattern).

**NOTE 3:** Ensure the top cover is closed and that the interlock switch at top-right side is properly closing the circuit – you may need to depress with a small pencil to ensure this is not causing a false error condition.

#### **Deskjet 5900 printers (HP 95, 96, 97, 98, 99 ink cartridges)**

Running a self-test:

1. Turn the printer on.
2. Press and hold the POWER button.
3. Press the RESUME button four times.
4. Release the POWER button.

#### **Deskjet 6000 series printers (HP 45, 78 ink cartridges)**

Running a sample page:

1. Turn the printer on.
2. Press and hold the RESUME button until the printer starts printing.
3. Release the RESUME button.

Running a self-test:

1. Turn the printer on.
2. Press and hold the POWER button.
3. Press the RESUME button (Down Arrow) four times.
4. Release the POWER button.

#### **Deskjet 6500, 6520, 6540 printers (HP 94, 95, 96, 97, 99, 100 ink cartridges)**

Running a self-test:

1. Turn the printer on.
2. Press and hold the POWER button.
3. Press the RESUME (Down Arrow) button four times.
4. Release the POWER button.

**NOTE:** Refer to Video: [http://inkjet411.com/?page\\_id=1741](http://inkjet411.com/?page_id=1741):

#### **Deskjet 6830v series printers (HP 96, 97, 99, 100 ink cartridges)**

Customer Support Diagnostic test page

1. Press and hold the Power button.
2. While holding the Power button, press the Cancel (X) button, and then release both buttons.

Resetting the printer:

1. Press and hold down the check mark (report page) button
2. Press cancel button three (3) times.
3. Release the check mark button

#### **Deskjet 6900 Printer series (HP 92-99 Ink Cartridges)**

Extended Self-Test Print:

1. Turn the product on.
2. Press and hold the Power button.
3. Press the Cancel button.

4. Release both buttons. The 10-tap test prints.
5. Review test pattern; ensure all colors are firing. A missing horizontal block or blocks within the nozzle stair step pattern indicates a misfiring ink nozzle. Perform cartridge cleaning to correct.

Tap 41 Cartridge Health Diagnostics (see video: [http://inkjet411.com/?page\\_id=1741](http://inkjet411.com/?page_id=1741)):

1. Turn printer Power ON – allow printer to fully energize.
2. Press and HOLD the Power Button
3. Press the Cancel (X) button 4 times
4. Press the Scan button once
5. Release the Power button. The test page prints.

**NOTE:** A good HP 93/95/97 color cartridge should display 600 good nozzles, while a good HP 92/94/96/98 black ink cartridge should show 672 good nozzles. On some models you may remove the tri-color cartridge, reactivate the tap 41 test and the printer will print the diagnostic test print in black ink.

Good Nozzles:	0	0
Good Ink:	600	672

#### **Deskjet 6940, 6940dt, 6980, 6988 Printers (HP 96, 97, 99, 100 ink cartridges)**

Tap 41 Test Print (see reference video on how to read diagnostic test report: [http://inkjet411.com/?page\\_id=1741](http://inkjet411.com/?page_id=1741)):

1. Turn the printer on.
2. Press and hold the 'POWER' button.
3. Press the 'Cancel' (X) button four (4) times.
4. Press the 'RESUME' button (Down Arrow) once.
5. Release the POWER button.
6. The Tap 41 diagnostics page prints.

**NOTE:** A good HP 93/95/97 color cartridge should display 600 good nozzles, while a good HP 92/94/96/98 black ink cartridge should show 672 good nozzles. On some models you may remove the tri-color cartridge, reactivate the tap 41 test and the printer will print the diagnostic test print in black ink.

Good Nozzles:	0	0
Good Ink:	600	672

Tap 10 Extended Self-Test Print (Cartridge Nozzle Health; typically with HP 96 & 97 installed)

1. Turn the printer on.
2. Press and hold the 'POWER' button.
3. Press the 'Cancel' (X) button once.
4. Release the Power Button
5. The self-test prints.

Resetting the printer:

4. Press and hold down the check mark (report page) button
5. Press cancel button three (3) times.
6. Release the check mark button

#### **Deskjet 9800 Printers (HP 94, 95, 96, 97, 99, 100 ink cartridges)**

Tap 41 Test Print (Cartridge Diagnostics)

7. Turn the printer on.
8. Press and hold the 'POWER' button.
9. Press the 'Cancel' (X) button four (4) times.
10. Press the 'RESUME' button (Down Arrow) once.
11. Release the POWER button.

12. The Tap 41 diagnostics page prints.

**NOTE:** A good HP 93/95/97 color cartridge should display 600 good nozzles, while a good HP 92/94/96/98 black ink cartridge should show 672 good nozzles. On some models you may remove the tri-color cartridge, reactivate the tap 41 test and the printer will print the diagnostic test print in black ink.

Black Block:	0	0
Color Block:	600	672

Tap 10 Extended Self-Test Print (*Cartridge Nozzle Health; typically with HP 96 & 97 installed*)

6. Turn the printer on.
7. Press and hold the 'POWER' button.
8. Press the 'Cancel' (X) button once.
9. Release the Power Button
10. The self-test prints.

## HP Deskjet D/F Series

**Deskjet D1300, D1400, D2300 series printers (HP 21/22 Cartridges)**

Running a self-test:

1. Turn the printer on.
2. Press and hold down the Power button.
3. While holding down the Power button, open and shut the lid of the printer four times.
4. Release the Power button. The self-test prints.
5. Review test pattern; ensure all colors are firing. A missing horizontal line within the nozzle stair step pattern indicates a misfiring ink nozzle. Perform cartridge cleaning to correct.

**NOTE 1:** When running the test on an HP Deskjet D2300/D2400 series printer it may be helpful to use a pen or pencil to hold down the Power button.

**NOTE 2:** Refer to support video (for similar printer model): [http://inkjet411.com/?page\\_id=2358](http://inkjet411.com/?page_id=2358)

**Deskjet D2500, D2512, D2530, D2545, D2560, D2660, D2680 Printers (HP 60/60XL ink cartridges)**

Extended Self-Test (*Tap 10 diagnostics; refer to video: [http://inkjet411.com/?page\\_id=579](http://inkjet411.com/?page_id=579)*):

1. Press and HOLD the 'Power' button.
2. Press the 'CANCEL' (X) button once.
3. Release the 'Power' button.
4. The extended self-test prints. Inspect stair-step patterns and color blocks (all 4 colors) for printing consistency.

**Deskjet D2500, D2512, D2530, D2545, D2560 Printers (HP 60/60XL ink cartridges)**

Tap 41 Diagnostics Test (*Refer to video: coming soon*):

1. Press and HOLD the 'Power' button.
2. Press the 'CANCEL' (X) button four times (4x).
3. Press the 'Resume' button once (i.e. Down Arrow)
4. Release the 'Power' button.
5. The 'Tap 41' diagnostic test print should print.

**NOTE:** A good HP 60/60XL color cartridge should display 1248 good nozzles, while a good HP 60/60XL black ink cartridge should show 336 good nozzles. If the results yield anything different then the ink cartridge is likely damaged and will need to be replaced.

Good Nozzles:	1248	336
---------------	------	-----

### Deskjet D4100 series printers (HP 93, 98, 99 Cartridges)

Extended Self-Test (see 2<sup>nd</sup> video for REFERENCE ONLY: [http://inkjet411.com/?page\\_id=792](http://inkjet411.com/?page_id=792)):

1. Make sure plain white paper is loaded in the product.
2. Press and hold the Power button.
3. Press the Photosmart Essential button, and then release both buttons.

**NOTE:** The self-test prints. Review test pattern; ensure all colors are firing. A missing horizontal line within the nozzle stair step pattern indicates a misfiring ink nozzle. Perform cartridge cleaning to correct.

Tap 41 Test Print (Cartridge Diagnostics) – refer to 2<sup>nd</sup> video: [http://inkjet411.com/?page\\_id=1741](http://inkjet411.com/?page_id=1741)

1. Turn the printer on.
2. Press and hold the 'POWER' button.
3. Press the 'Cancel' (X) button four (4) times.
4. Press the 'RESUME' button (Down Arrow) once.
5. Release the POWER button.
6. The Tap 41 diagnostics page prints.

**NOTE:** A good HP 93/95/97 color cartridge should display 600 good nozzles, while a good HP 92/94/96/98 black ink cartridge should show 672 good nozzles. On some models you may remove the tri-color cartridge, reactivate the tap 41 test and the printer will print the diagnostic test print in black ink.

Good Nozzles:	0	0
Good Nozzles:	600	672

### Deskjet D4200 series printers (HP 74/75 and 74XL/75XL ink cartridges)

Extended Self-Test (see 2<sup>nd</sup> video: [http://inkjet411.com/?page\\_id=792](http://inkjet411.com/?page_id=792)):

4. Make sure plain white paper is loaded in the product.
5. Press and hold the Power button.
6. Press the Photosmart Essential button, and then release both buttons.
7. The self-test prints. Review test pattern; ensure all colors are firing. A missing horizontal line within the nozzle stair step pattern indicates a misfiring ink nozzle. Perform cartridge cleaning to correct.

Tap 41 Cartridge Health Diagnostics (see 3<sup>rd</sup> video: [http://inkjet411.com/?page\\_id=792](http://inkjet411.com/?page_id=792)):

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

**NOTE:** A good HP 75/75XL color cartridge should display 600 good nozzles, while a good HP 74/74XL black ink cartridge should show 672 good nozzles. Refer to video on how to read the test print.

Good Nozzles:	0	0
Good Nozzles:	600	672

### Deskjet F2110, F4135, F4140, F4172, F4180, F4185, F4190 Printer series (HP 21/22 ink cartridges)

Self-Test Page (also refer to printer's User Manual):

1. Press and hold the 'Cancel' button and then press the 'Start Copy Color' button. Release both buttons.
2. The self-test report should print.
3. Review test pattern; ensure all 4 colors are firing. A missing horizontal line within the nozzle stair step pattern indicates a misfiring ink nozzle.

**NOTE 1:** A good HP 21 black cartridge should have 416 good nozzles (26 x 16 stair-step pattern), while a good HP 22 color ink cartridge should have 300 good nozzles (100 for each color, 10x10 stair-step pattern).

**NOTE 2: Reference Video:** [http://inkjet411.com/?page\\_id=2358](http://inkjet411.com/?page_id=2358)

Tap 41/43 Diagnostic Report (*this procedure has not yet been validated*):

1. Press and hold the Power Button.
2. Press 'Cancel' button 4 times, then open and close the top cover 3 times. Release power button.  
.....or Press and Hold the Cancel button, open and close the Top Cover 4 times.

The product prints a printer diagnostic report.

**NOTE: Reference Video:** [http://inkjet411.com/?page\\_id=2358](http://inkjet411.com/?page_id=2358)

### Deskjet F2200 Printer series (HP 21/22 ink cartridges)

Self-Test Page:

1. Press the Setup or Menu button until Print Report appears in the display then press Enter.
2. Press the Setup or Menu button until Self-Test appears in the display, and then press Enter.
3. Review test patterns; ensure all 4 colors are firing. A missing horizontal line within the nozzle stair step pattern indicates a misfiring ink nozzle.

**NOTE 1:** A good HP 21 black cartridge should have 416 good nozzles (26 x 16 stair-step pattern), while a good HP 22 color ink cartridge should have 300 good nozzles (100 for each color, 10x10 stair-step pattern).

**NOTE 2: Reference Video:** [http://inkjet411.com/?page\\_id=2358](http://inkjet411.com/?page_id=2358)

Additional Solutions from HP:

[http://h10025.www1.hp.com/ewfrf/wc/document?docname=c01000539&tmp\\_track\\_link=ot\\_fags/top\\_issues/en\\_us/c01000539/loc:4&cc=us&dlc=fi&lang=fi&lc=en&product=3235678&sw\\_lang=pl#N2318](http://h10025.www1.hp.com/ewfrf/wc/document?docname=c01000539&tmp_track_link=ot_fags/top_issues/en_us/c01000539/loc:4&cc=us&dlc=fi&lang=fi&lc=en&product=3235678&sw_lang=pl#N2318)

### Deskjet F2400/F4400/F4500 Printer series (HP 60/60XL ink cartridges)

Self Test Page:

1. Press and HOLD the Power button, press the Cancel button. Release both buttons.
2. The self test page should print.

Tap 41 Cartridge Health Diagnostics Report: (See Video: [http://inkjet411.com/?page\\_id=440](http://inkjet411.com/?page_id=440))

1. While holding the Power button, press Cancel (X) button 4 times, then press the Color Copy button once.
2. Release the Power button.
3. The 'Tap 41' diagnostic test print should print.

**NOTE:** A good HP 60/60XL color cartridge should display 1248 good nozzles, while a good HP 60/60XL black ink cartridge should show 336 good nozzles. If the results yield anything different then the ink cartridge is likely damaged and will need to be replaced.



**Deskjet F4200, F4210, F4213, F4235, F4240, F4272, F4275, F4280, F4283, F4288 Printer series (HP 60/60XL ink cartridges)**

Self Test Page:

3. Press and HOLD the Power button, press the Cancel button. Release both buttons.
4. The self test page should print.

Tap 41 Cartridge Health Diagnostics Report: (See Video: [http://inkjet411.com/?page\\_id=444](http://inkjet411.com/?page_id=444) )

1. While holding the Power button, press 'Cancel' (X) button 4 times, then press the 'Resume' button once.
2. Release the Power button.
3. The 'Tap 41' diagnostic test print should print.

**NOTE:** A good HP 60/60XL color cartridge should display 1248 good nozzles, while a good HP 60/60XL black ink cartridge should show 336 good nozzles. If the results yield anything different then the ink cartridge is likely damaged and will need to be replaced.



## HP PSC Printers

**NOTE 1:** HP Self-Test Reports (*older HP printer models*) – click here for instructions/sample prints:

<http://h10025.www1.hp.com/ewrf/wc/document?cc=us&lc=en&dlc=en&docname=bpu00734>

**NOTE 2:** If you have colored paper loaded in the paper tray when you align the print cartridges, the alignment fails. Load unused plain white letter or A4 paper into the paper tray, and then try the alignment again.

### **PSC 1200, 1310, 1315, 1340, 1350 Printer series (HP 27,28,56, 57 ink cartridge)**

Self Test Report:

1. Load plain, white paper into the paper tray.
2. Press and hold the Cancel button, and then press the Start Copy Color button.
3. The product prints a self-test report.

--- Examine the resulting self-test page that prints. There should be lines extending all the way across the page in black, yellow, cyan and magenta. A missing black line indicates a problem with the black or photo cartridge. Faded, streaked or missing lines in the other colors indicates a problem with the color ink cartridge. Refer to video at link below to help evaluate test pattern.

NOTE: A good HP 56 black cartridge should display 416 good nozzles, while a good HP 57/58 color ink cartridge should show 300 good nozzles.

REFERENCE: [HP Deskjet 5650 -use HP 56/57/58 cartridges]: [http://inkjet411.com/?page\\_id=2358](http://inkjet411.com/?page_id=2358)

Alignment Test Page (Manual Force Test):

If the alignment page does not print automatically, follow these steps to print one manually:

1. If the product is off, press the On/Resume button to turn on the product.
2. Disconnect the USB cable from the rear of the product.

A sequence of buttons on the control panel must now be pressed in the order presented. The sequence must be completed within ten seconds. It might take several tries to complete the sequence within ten seconds.

3. Press and hold the Cancel button.
4. While holding the Cancel button, press and hold the On/Resume button.
5. When the Check Paper and Check Print Cartridge lights begin to blink simultaneously, release both the Cancel button and the On/Resume button.
6. Press and release the Cancel button again.
7. Press and release the Copies button.
8. Press and release the Paper Type button.
9. Press and release the Color Start Copy button.
10. The alignment page prints.

**NOTE:** If the alignment page fails to print, repeat the button-press sequence in this step. The sequence must be completed within ten seconds. Ensure plain white paper (only) is loaded.

Printer Reset:

1. Power off printer and remove power plug; wait 15 seconds.
2. Reconnect the power cord to the rear of the product.
3. When the lights begin to blink, press and hold both the On/Resume button and the Paper Size button at the same time.
4. When only the On/Resume button is blinking, release both buttons.



5. Wait until the On/Resume button is steady. The reset is now complete.

### PSC 1401, 1402, 1403, 1408, 1410, 1410v, 1410xi and 1417 Printer series (HP 21, 22 Cartridges)

#### Self Test Report:

1. Load plain, white paper into the paper tray.
2. Press and hold the Cancel button, and then press the Start Copy Color button.
3. The product prints a self-test report.

Inspect the self-test page that prints. There should be lines extending all the way across the page in black, yellow, cyan and magenta. A missing black line indicates a problem with the black or photo cartridge. Faded, streaked or missing lines in the other colors indicates a problem with the color ink cartridge. Refer to video at link below to help evaluate test pattern. NOTE: A good HP 21 black cartridge should display 416 good nozzles, while a good HP 22 color ink cartridge should show 300 good nozzles.

REFERENCE: [NOTE: HP 56/57/58 and HP21/22 cartridges are similar]: [http://inkjet411.com/?page\\_id=2358](http://inkjet411.com/?page_id=2358)

To help determine which cartridge is causing an ink cartridge alert/message:

1. Open the cartridge access door.
2. Remove either cartridge (not both).
3. Close the cartridge access door.

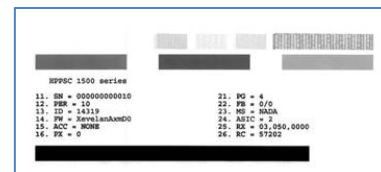
If the computer message shows 'Print Cartridge Error', then the print cartridge that is still in the printer is the problem cartridge. If the message is NOT Print Cartridge Error (instead, it says that the cartridge you have removed is ...Either missing, not detected, or incorrectly installed), then the cartridge you have removed is the problem cartridge.

Source: [http://h10025.www1.hp.com/ewfrf/wc/document?docname=c00094661&cc=us&destPage=document&lang=cs&lc=en&product=441115&tmp\\_docname=c00094661](http://h10025.www1.hp.com/ewfrf/wc/document?docname=c00094661&cc=us&destPage=document&lang=cs&lc=en&product=441115&tmp_docname=c00094661)

### PSC 1503, 1504, 1507, 1508, 1510, 1510v, 1510xi, 1513, and 1514 (HP 92/93 ink cartridges)

#### Extended Self-Test:

1. Press and hold the Cancel button.
2. Press the Start COLOR COPY button.
3. The self test prints.



#### Tap 41 Cartridge Health Diagnostics Test:

1. Press and HOLD the CANCEL (X) button
2. Depress the COLOR COPY button four (4) times.
  - a. You may also attempt by selecting twelve (12) times
3. Depress the SCAN (START SCAN) button once (1)
4. Release the CANCEL (X) button.

**NOTE:** A good HP 93/95/97 color cartridge should display 600 good nozzles, while a good HP 92/94/96/98 black ink cartridge should show 672 good nozzles. Refer to video at following link.

**Reference Video:** [http://inkjet411.com/?page\\_id=1741](http://inkjet411.com/?page_id=1741)

Black: Black:	0	0
Black: Black:	600	672

### PSC 2110xi (HP 56/57/58 cartridges)

Print self-test report:

<http://h20000.www2.hp.com/bizsupport/TechSupport/Document.jsp?objectID=c00042632&lang=en&cc=us&taskId=135&contentType=SupportFAQ&prodSeriesId=295848>

1. Press Setup on the product control panel.
2. The Setup menu displays.
3. Press the Right Arrow ( > ) until Print Report displays, and then press OK . The Print Report menu displays.
4. Press the Right Arrow ( > ) until Self-Test Report displays, and then press OK .
5. The self-test report prints.



Bypass "Remove and Check" Cartridge error: *(further validation required)*:

1. In sequential order, quickly press the "proof sheet" button + "copy" button + "black" (or "color") button.
2. Check to see if the copy function has been restored *(blinking ink error lights may continue)*

Bypass "Align Print Cartridge" error: *(further validation required)*:

1. Press 'Set-up' + 'Options' simultaneously

Partial Reset:

**NOTE:** A partial reset returns user settings to factory defaults. You might have to reset the language and country/region settings after the partial reset.

1. Disconnect the power cord from the product.
2. Press and hold the Cancel button (X) and then Left Arrow button ( < ).
3. While still holding the buttons down, plug the power cord back in.
4. When 'Reset' displays on the control panel, release both buttons.

### PSC 2175xi, 2210, 2400, 2500 Series (HP 56/57/58 cartridges)

Self Test Print (Reference Video: [http://inkjet411.com/?page\\_id=2358](http://inkjet411.com/?page_id=2358)):

1. From the front panel, press Setup, press 1, and then press 4.
2. Refer to test print sample at HP's website to evaluate your test print. Inspect nozzle test pattern; missing bars or lines in the stair-step pattern represent an ink clog, a mis-firing nozzle or a damaged ink nozzle. If the test print prints, but normal printing is still not possible then one of the ink cartridges likely has internal micro-electronic damage.

**NOTE:** A good HP 56 black cartridge should have 416 good nozzles (26 x 16 stair-step pattern), while a good HP 57/58 color ink cartridge should have 300 good nozzles (100 for each color, 10x10 stair-step pattern)..

<http://h20000.www2.hp.com/bizsupport/TechSupport/Document.jsp?objectID=c00048607>

Semi-full reset:

**NOTE:** A semi-full reset will return printer to factory defaults.

1. Remove both ink cartridges from printer.
2. Press and hold "#" and "6" buttons on the front panel keypad and simultaneously plug in the power cord.

3. Allow printer to energize for a few seconds, release the # & 6 buttons.
4. Re-install the ink cartridges.

Tap 41/43 Cartridge Diagnostics (*validation still required*):

1. Press \* and # keys at same time
2. Enter 124 (or 1234)
3. Using left/right arrow keys, navigate to either System Menu or Special Reports menu. Select Enter.
4. Select Ok, then click Right Arrow until the 'print-mech button tap' menu is displayed.
5. Select Ok ('code = 0' will be displayed); click and hold Right Arrow until 'code = 43' is displayed. Use the Left Arrow if you need to decrease numerical count.
6. Select Ok. The test page prints. NOTE: If the test page does not print, then try and enter 'code = 41'.
7. Select Enter to print test print.

Providing the color cartridge is partially functioning, the diagnostic test print will be printed (this is a forced service print test which is mainly used for the evaluation of ink cartridge electrical health). A good HP 21/27/56 black cartridge should display 416 good nozzles (26x16 stair-step pattern/grid), while a good HP 22/28/57/58 color ink cartridge should show 300 good nozzles (100 for each color in a 10x10 color grid). For reference, please refer to video at link below to help evaluate test pattern. [NOTE: HP 56/57/58 and HP21/22 cartridges are electrically similar]: [http://inkjet411.com/?page\\_id=2358](http://inkjet411.com/?page_id=2358)

**PSC 7280 (HP 02 Cartridges)**

Tap 43 **PRINTHEAD** Health Diagnostics – See Video Procedure: [http://inkjet411.com/?page\\_id=2391](http://inkjet411.com/?page_id=2391)

1. Press \* and # keys simultaneously.
2. "Enter Special Key Combo" will be displayed.
3. Press 123 to display the 'Support/Service' menu.
4. At 'Support/Service' menu, click the Right Arrow 3 times until Special Reports menu is displayed.
5. Select Ok, then click Right Arrow 2 times until the 'print-mech button tap' menu is displayed.
6. Select Ok ('code = 0' will be displayed); click and hold Right Arrow until 'code = 43' is displayed. Use the Left Arrow if you need to decrease numerical count.
7. Select Ok. The test page prints.
8. Check the 4<sup>th</sup> line at the top of the printed report; an electrically good/stable PRINTHEAD 'Pen Status' will state "**Pen Status: Pen OK**" .....if any other message is displayed then the PRINTHEAD may have failed and may need to be replaced (if part is still available). It is suggested to perform the 'Printer Reset' procedure below to first rule out printer firmware related problem.

```
43-Tap Report (Pen_tij4_new) Matalla Specific
FW Revision:          CLP1CN1150CR
Serial Number:        CN2CRBWJTM05KC
Ambient Temp:         25C
Pen Status:           Pen Ok
No Pen Mode:          u
```

Printer Reset (i.e. "Ink System Failure" message)

1. Press and Hold the \* key.
2. While holding the \* key, press # key and then release both keys.
3. "Enter Special Key Combo" will be displayed.
4. Press 123 to display the 'Support' menu.

5. Using the > arrow button scroll to 'System Config Menu'.
6. Press arrow (>) key to display 'Hardware Failure Status' and press OK.
7. Keep pressing 'OK' until 'Hardware Failure Status Cleared'. Press Cancel until 'Continue' is displayed.
8. Press Cancel as many times until the 'Welcome To Photosmart Express' is displayed (*or 'Ink System Failure' message is no longer displayed*).
9. Turn Off your printer by unplugging the power cord from the back of the printer. Wait for 1 minute before turning your printer back "ON." If asked, press "OK" to continue and allow the One Time Ink Initialization to proceed. Once the printer is settled down, try printing a sample page.

## HP Photosmart Printers

### **Photosmart 245, 320, 330, 370, 375, 380 & 385 Printer series** (HP 95, 97, 100 ink cartridges)

1. Press either the Right Arrow button or the Left Arrow button. Main Menu displays on the control panel.
2. Press OK to select Tools.
3. Press the Right Arrow button to select 'Print Test Page', and then press OK. The test page prints.

### **Photosmart 230 and 420 Printer series** (HP 95, 97, 100 ink cartridges)

1. Make sure the camera is in the camera dock.
2. Load paper in the input tray.
3. Press Menu/OK on the control panel to select Print Menu (or Press the Up/Down arrow button to display the Tools menu).
4. Press the Up/Down Arrow button to select Print Test Page, and then press OK. The test page prints.

### **Photosmart 470, 475 Printer series** (HP 95, 97, 100 ink cartridges)

1. Press Menu. Main Menu displays on the control panel.
2. Press the Down Arrow button to select Tools, and then press OK.
3. Press the Down Arrow button to select Print Test Page, and then press OK. The test page prints.

### **Photosmart 1000, 1100 & 1115 Printer series** (HP 45, 78 ink cartridges)

#### Internal Test Print:

1. Ensure that the memory card has been removed from the memory card slot.
2. Make sure plain paper is loaded in the In Tray.
3. On the control panel, press the Right arrow in the 'Tools' button until 'Print a Test Page' is displayed.
4. Press the OK/Yes button.

### **Photosmart 1215 & 1218 Printer series** (HP 45, 78 ink cartridges)

#### Internal Test Print:

1. Ensure that the memory card has been removed from the memory card slot.
2. Make sure plain paper is loaded.
3. On the control panel, press the Right arrow in the Menu button until 'Print a Test Page' is displayed.
4. Press the OK/Yes button.

### **Photosmart 1315 Printer series** (HP 45, 78 ink cartridges)

#### Self Test Page:

1. Ensure that the memory card has been removed from the memory card slot.
2. Make sure plain paper is loaded.
3. Press the Menu button.
4. Press the Up/Down arrow button to highlight 'Print a Test Page'. Then press the tick symbol button.

### **Photosmart 2570, 2575xi Printer series** (HP 95-99 ink cartridges)

#### Self Test Page:

1. Make sure the printer is on and loaded with unused, plain, white paper.

2. Press Setup. The Setup Menu appears.
3. Press the Down-arrow button to select the Print Report Menu , and then press OK . The Self-Test Report option displays.
4. Press OK to print the self-test report.
5. Evaluate test pattern. The color stair-step patterns at top-left are printed by the color cartridge. The black stair-step pattern at top-right is printed by the black cartridge.

**NOTE:** Assuming electrical contacts are clean, if the self test page prints but regular/normal printing is not possible, then one of the ink cartridges is likely electrically damaged and may need to be replaced.

### Photosmart 2605, 2608, 2610, 2610xi, 2613, 2710, 2710xi, 2575, 2575xi (HP 94-99 ink cartridges)

Extended Self-Test (may only work with electrically good cartridges):

1. Press \* and # keys at same time
2. Enter 124 (or 1234)
3. Using left/right arrow keys, navigate to Special Reports. Select Enter.
4. Using left/right arrow keys, navigate to 'extended self test'.
  - a. Select Enter to print test print - evaluate test print.
5. Or using left/right arrow keys, navigate to 'pen electrical test'.
  - a. Select Enter to print test - evaluate nozzle electrical test print.
6. Or if supported, using left/right arrow keys, navigate to System Menu. Select Enter.
  - a. Navigate to 'print-mech button tap' menu.
  - b. Select Ok (Code = 0 will be displayed); click and hold Right Arrow until code = 41' is displayed.
  - c. Select Ok. Within one minute the Tap 41 diagnostic test pattern should be initiated and print. Refer to video to help evaluate test pattern.  
[http://inkjet411.com/?page\\_id=1741](http://inkjet411.com/?page_id=1741) Refer to 2<sup>nd</sup> video for guidance on how to read the diagnostic test pattern.

**NOTE 1:** A good HP 56 black cartridge should display 432 good nozzles, while a good HP 57/58 color ink cartridge should show 300 good nozzles.

**NOTE 2:** A good HP 93/95/97 color cartridge should display 600 good nozzles, while a good HP 92/94/96/98 black ink cartridge should show 672 good nozzles. Refer to video.

Black Nozzles:	0	0
Color Nozzles:	600	672

### Photosmart 3110, 3210, 3210xi, 3310, 3310xi Printer series (HP 02 Cartridges)

Tap 43 **PRINTHEAD** Health Diagnostics – See Video Procedure: [http://inkjet411.com/?page\\_id=2391](http://inkjet411.com/?page_id=2391)

9. Press \* and # keys simultaneously.
10. "Enter Special Key Combo" will be displayed.
11. Press 123 to display the 'Support/Service' menu.
12. At 'Support/Service' menu, click the Right Arrow 3 times until Special Reports menu is displayed.
13. Select Ok, then click Right Arrow 2 times until the 'print-mech button tap' menu is displayed.
14. Select Ok ('code = 0' will be displayed); click and hold Right Arrow until 'code = 43' is displayed. Use the Left Arrow if you need to decrease numerical count.
15. Select Ok. The test page prints.
16. Check the 4<sup>th</sup> line at the top of the printed report; an electrically good/stable PRINTHEAD 'Pen Status' will state "**Pen Status: Pen OK**" .....if any other message is displayed then the PRINTHEAD may have

To further troubleshoot your printer please visit:  
<http://www.inkjet411.com>

failed and may need to be replaced (if part is still available). It is suggested to perform the 'Printer Reset' procedure below to first rule out printer firmware related problem.

```
43-Tap Report (Pen_tij4_new) Matalla Specific
FW Revision:          CLP1CN1150CR
Serial Number:       CN2CRBWJTM05KC
Ambient Temp:        25C
Pen Status:          Pen Ok
No Pen Mode:         0
```

Printer Reset (i.e. "Ink System Failure" message)

10. Press and Hold the \* key.
11. While holding the \* key, press # key and then release both keys.
12. "Enter Special Key Combo" will be displayed.
13. Press 123 to display the 'Support' menu.
14. Using the > arrow button scroll to 'System Config Menu'.
15. Press arrow (>) key to display 'Hardware Failure Status' and press OK.
16. Keep pressing 'OK' until 'Hardware Failure Status Cleared'. Press Cancel until 'Continue' is displayed.
17. Press Cancel as many times until the 'Welcome To Photosmart Express' is displayed (or 'Ink System Failure' message is no longer displayed).
18. Turn Off your printer by unplugging the power cord from the back of the printer. Wait for 1 minute before turning your printer back "ON." If asked, press "OK" to continue and allow the One Time Ink Initialization to proceed. Once the printer is settled down, try printing a sample page

**Photosmart 5510, 5511, 5512, 5514, 5515, 6510, 6512, 6515, 7510, 7515 (HP 564 cartridges):**

*NOTE: If this service menu access procedure does not work refer to 'Photosmart Plus B Series' printers*

Tap 41 **PRINTHEAD** Health Diagnostics:

1. Using two fingers, gently tap the 'Return' and 'Home' keys on touchscreen until the Engineering Menu is displayed (for example, press the button 3-4 times each in alternating succession).  
Using arrow keys navigate to Service Menu.



.....or if a keypad is available: Press \* and # keys simultaneously. Service Menu should be displayed.

2. Use arrow keys to advance to the Special Reports Menu. Select OK.
3. Use arrow keys to advance to the 'print mech button tap' menu. Select Ok.
4. 'Code = 0' will be displayed. Use arrows keys to change value to '41' (i.e. press and hold right arrow key).
5. When 'code = 41', select 'OK'. The diagnostic test pattern will print.

**NOTE:** The Tap 10 self-test print may also be initiated via 'code = 10' (use to verify all nozzles are firing)

6. Check the 4<sup>th</sup> line at the top of the printed report; an electrically good/stable PRINTHEAD will state "**Pen OK**".....if any other message is displayed then the PRINTHEAD has likely failed and may need to be replaced. Re-seat PRINTHEAD and repeat 'Tap 41' test to verify connectivity is not the issue.

```
43-Tap Report (Pen_tij4_new) Matalla Specific
FW Revision:          CLP1CN1150CR
Serial Number:       CN2CRBWJTM05KC
Ambient Temp:        25C
Pen Status:          Pen Ok
No Pen Mode:         0
```

**Photosmart 5520, 5522, 5524, 5525, 6520, 7520, 7525 – with Touchscreens (HP 564 Cartridges):**

Tap 41 **PRINTHEAD** Health Diagnostics (*NOTE: applies to touchscreen printer models only*):



1. Press 'Return' button (*lower left side*) four (4) times until 'Support' menu is displayed.
2. At 'Support' Menu, using the arrow key, navigate to the 'Service Menu', press Ok.
3. Use arrow keys to advance to the 'Special Reports' Menu. Select OK.
4. Use arrow keys to advance to the 'print mech button tap' menu. Select Ok.
5. 'code = 0' will be displayed. Use arrows keys to change value to '41' (i.e. press and hold right arrow key).
6. When 'Code = 41', select 'OK'. The diagnostic test pattern will print.
7. Check the 4<sup>th</sup> line at the top of the printed report; an electrically good/stable PRINTHEAD will state "**Pxx Sxxxxx: Pxx Ox**"....which *translated* means "**Pen Status: Pen OK**".....if any other message is displayed then the PRINTHEAD may have electrically failed and may need to be replaced.

```
41/43-Tap Report (Pen_tij4_new)
FW Revision:          STP1FN1224AR
Serial Number:       CN31Q1C1D005SY
Pxxxxx Txxx:        26C
Pxx Sxxxxx:         Pxx Ox
Nx Pxx Hxxx:        0
```

**NOTE:** For "printhead" error messages or for no-printing conditions, it is suggested to remove the PRINTHEAD and clean the rear electrical contacts; also inspect and clean electrical mating contacts on carriage assembly. Reinstall PRINTHEAD and test to verify connectivity is not the issue. Click here for more information: [http://inkjet411.com/?page\\_id=1451](http://inkjet411.com/?page_id=1451)

Printer Reset (i.e. use in the event of "Incompatible Printhead" or "Ink System Failure" message, etc.):

1. Remove ink cartridges from printer.
2. Access the Service menu – refer to suggested methods provided above.
3. Support Menu should be displayed. Navigate to the 'Resets Menu', press Ok.
4. Navigate to the 'Semi-Full Reset'. This will restore the printer back to the factory default setting...you will need to re-configure printer following this action (i.e. similar to when you first purchased and set-up the printer).
5. Reinstall ink cartridges and test.

#### **Photosmart 7150 Printer (HP 56, 57, 58 cartridges)**

Internal Test Print:

1. Make sure plain paper is loaded in the In Tray.
2. Press and hold the Power button.
3. Press the Resume button four times.
4. Release the Power button.

#### **Photosmart 7200, 7260, 7400 & 7450 Printer Series (HP 56, 57, 58 cartridges)**

Internal Test Print:

1. Make sure plain paper is loaded in the In Tray.
2. Press and hold the Power button.
3. Press the Save button four times.
4. Release the Power button.

#### **Photosmart 7350 Printer (HP 56, 57, 58 cartridges)**

Internal Test Print:

1. Ensure that the memory card has been removed from the memory card slot.



2. Make sure plain paper is loaded in the In Tray.
3. On the control panel, press the Right/Left arrow button in the Tools button several times until 'Print a Test Page' is displayed.
4. Press the OK/Yes button.

--- If the self test page prints then this illustrates that the printer is functional and the problem is likely limited to either one of the ink cartridges. There should be lines extending across the page in black, yellow, cyan and magenta. A missing black line indicates a problem with the black or photo cartridge. Faded, streaked or missing lines in the other colors indicates a problem with the color ink cartridge.

**NOTE:** Ideally, a good Color cartridge will have/display 300 nozzles (for example, check the printed 10 x 10 stair step patterns for each of the 3 colors), while a good Black cartridge will have/display 416 nozzles (for example, check the printed 26 x 16 stair-step pattern).

#### Cartridge Health Diagnostics Test (Pen Tests).....**VALIDATION REQUIRED!**

1. To enter the Manufacturing Tests menu, press the 3 small, round buttons on the front panel simultaneously for >5secs: 'OK', 'CANCEL', & 'PRINTS' (*...service menu button combination?*)
2. Using left/right arrow keys, navigate to Special Reports (or System Menu). Select Enter.
3. Navigate to 'print-mech button tap' menu.
4. Select Ok ('code = 0' will be displayed); click and hold Right Arrow until 'code = 41' (or attempt 'code = 43' if nothing prints using '41') is displayed.
5. Select Ok. Within one minute the Tap 41 (or 43) diagnostic test pattern should be initiated and print. Refer to video to help evaluate test pattern: [http://inkjet411.com/?page\\_id=2358](http://inkjet411.com/?page_id=2358)

**NOTE:** The Tap 41/43 test report will be printed using the black ink cartridge by default; if a blank page appears then remove the black ink cartridge from the printer and repeat steps; report will be printed using the Color cartridge. This can also help you isolate the problem to one of the ink cartridges. The 'Current' error message should state 'None', however if you any other message then either the ink cartridge is incorrectly seated in the carriage assembly or a severe cartridge error condition is present and the ink cartridge may need to be replaced.

#### **Photosmart 7550 Printer (HP 56, 57, 58 cartridges)**

##### Internal Test Print:

1. Ensure that the memory card has been removed from the memory card slot.
2. Make sure plain paper is loaded in the In Tray.
3. Press the Menu button.
4. Press the Up/Down arrow button to display the 'Tools' menu. Then press the OK button.
5. Press the Down arrow button to highlight 'Print a Test Page'. Then press the OK button.

--- If the self test page prints then this illustrates that the printer is functional and the problem is likely limited to either one of the ink cartridges. There should be lines extending across the page in black, yellow, cyan and magenta. A missing black line indicates a problem with the black or photo cartridge. Faded, streaked or missing lines in the other colors indicates a problem with the color ink cartridge.

**NOTE:** Ideally, a good Color cartridge will have/display 300 nozzles (for example, check the printed 10 x 10 stair step patterns for each of the 3 colors), while a good Black cartridge will have/display 416 nozzles (for example, check the printed 26 x 16 stair-step pattern).

Cartridge Health Diagnostics Test (Pen Tests).....**VALIDATION REQUIRED!**

6. To enter the Manufacturing Tests menu, press the 3 small, round buttons on the front panel simultaneously for >5secs: 'OK', 'CANCEL', & 'PRINTS' (...service menu button combination?)
7. Using left/right arrow keys, navigate to Special Reports (or System Menu). Select Enter.
8. Navigate to 'print-mech button tap' menu.
9. Select Ok ('code = 0' will be displayed); click and hold Right Arrow until 'code = 41' (or attempt 'code = 43' if nothing prints using '41') is displayed.
10. Select Ok. Within one minute the Tap 41 (or 43) diagnostic test pattern should be initiated and print.  
Refer to video to help evaluate test pattern: [http://inkjet411.com/?page\\_id=2358](http://inkjet411.com/?page_id=2358)

**NOTE:** The Tap 41/43 test report will be printed using the black ink cartridge by default; if a blank page appears then remove the black ink cartridge from the printer and repeat steps; report will be printed using the Color cartridge. This can also help you isolate the problem to one of the ink cartridges. The 'Current' error message should state 'None', however if you any other message then either the ink cartridge is incorrectly seated in the carriage assembly or a severe cartridge error condition is present and the ink cartridge may need to be replaced.

**Photosmart 7600 Printer series (HP 56, 57, 58 ink cartridges)**

Internal Test Print:

1. Ensure that the memory card has been removed from the memory card slot.
2. Make sure plain paper is loaded.
3. On the control panel, press the Right arrow in the Menu button until 'Print a Test Page' is displayed.
4. Press the OK/Yes button.

**Photosmart 7700 & 7960 Printer series (HP 56, 57, 58 cartridges)**

Internal Test Print:

1. Ensure that the memory card has been removed from the memory card slot.
2. Make sure plain paper is loaded in the In Tray.
3. Press the Menu button.
4. Press the Up/Down arrow button to display the Tools menu. Then press the OK button.
5. Press the Down arrow button to highlight Print a Test Page. Then press the OK button.

**Photosmart 7800 & 7850 Printer series (HP 92-95, 99 cartridges)**

Internal Test Print:

1. Press and hold the OK button, and then press the Left Arrow button once.
2. Release the buttons. The internal test page prints.

**Photosmart 8000 Printer Series (HP 02 cartridges)**

Internal Test Print:

1. Press the Menu button, press the Right Arrow button to select 'Tools', and then press 'OK'.
2. Press the Right Arrow button several times to select 'Print Test Page', and then press 'OK'. The test page prints.

Tap 43 **PRINthead** Health Diagnostics – See Video Procedure: [http://inkjet411.com/?page\\_id=2377](http://inkjet411.com/?page_id=2377)

1. Turn ON the printer.
2. Press and Hold the "Print Photos" & "Red Eye Removal" buttons.



3. Release both buttons.
4. You will see a new screen that says, "Enter Special Key Combo"... The Key combo is: press and release in sequence the "Red Eye Removal", "Print Photos", and then "Red Eye Removal"
5. Scroll through the menu by pressing the right arrow button until the display says 'Special Reports'.
6. Select Ok, then press the arrow button until the 'print-mech button tap' menu is displayed.
7. Select Ok ('code = 0' will be displayed); click and hold Right Arrow until 'code = 43' is displayed.
8. Select Ok. The test page prints.
9. Check the 4<sup>th</sup> line at the top of the printed report; an electrically good/stable PRINTHEAD 'Pen Status' will state "**Pen Status: Pen OK**".....if any other message is displayed then the PRINTHEAD may have failed (unfortunately the PRINTHEAD is not replaceable). It is suggested to perform the 'Printer Reset' procedure below to first rule out printer firmware related problem.

```
43-Tap Report (Pen_tij4_new) Matalla Specific
FW Revision:          CLP1CN1150CR
Serial Number:       CN2CRBWTM05KC
Ambient Temp:        25C
Pen Status:          Pen Ok
No Pen Mode:         0
```

#### **Photosmart 8049, 8050, 8100, 8150, 8400, 8450 Printer series (HP 94/95-99 cartridges)**

*NOTE: Depending on printer model, use either procedure below to gain access into the service menu.*

##### Internal Test Print:

1. Ensure that the memory card has been removed from the memory card slot.
2. Make sure plain paper is loaded.
3. Press the Menu button.
4. Press the Up/Down arrow button to display the 'Tools' menu. Then press the OK button.
5. Press the Down arrow button to highlight 'Print a Test Page'. Then press the OK button.

##### Customer Diagnostic Test:

1. Make sure the main tray is loaded with full size media, and that the tray selector is in the main tray position (the lever is all the way out).
2. Press and hold Cancel and Save. Hold both buttons for about five seconds.
3. The Service menu displays on the control panel. Scroll to Customer Diagnostic Test and press OK. The diagnostic test page prints - evaluate nozzle stair-step test patterns.

##### Pen Electrical Test:

1. Press and hold Cancel and Save. Hold both buttons for about five seconds. The Service menu displays on the control panel.
2. Scroll to Using left/right arrow keys, navigate to 'pen electrical test'.
3. Select Enter to print test - evaluate nozzle test pattern.
4. Check for presence of 'Current Error' & 'Previous Error' messages (see page 1).

##### Tap 41/43 Diagnostics Test – Photosmart 8450 only (*need to validate*)

1. To enter the Manufacturing Tests menu, press the 3 small, round buttons on the front panel simultaneously for >5secs: 'OK', 'CANCEL', & 'SELECT PHOTOS' (...or 'Print Photos')
2. Using left/right arrow keys, navigate to Special Reports (or System Menu). Select Enter.

To further troubleshoot your printer please visit:  
<http://www.inkjet411.com>

3. Navigate to 'Perform Tap Test' menu.
4. Select Ok ('code = 0' will be displayed); click and hold Right Arrow until 'code = 41' (or attempt 'code = 43' if nothing prints using '41') is displayed.
5. Select Ok. Within one minute the Tap 41 (or 43) diagnostic test pattern should be initiated and print. Refer to video to help evaluate test pattern. Refer to 2nd video for guidance on how to read the diagnostic test pattern: [http://inkjet411.com/?page\\_id=1741](http://inkjet411.com/?page_id=1741)

**NOTE 1:** A good HP 93/95/97 color cartridge should display 600 good nozzles, while a good HP 92/94/96/98 black ink cartridge should show 672 good nozzles. Refer to video.

Black Nozzle:	0	0
Good Nozzle:	600	672

**Error Bypass Procedure – Photosmart 8450 only (need to validate)**

1. To enter the Manufacturing Tests menu, press the 3 small, round buttons on the front panel simultaneously for >5secs: 'OK', 'CANCEL', & 'SELECT PHOTOS' (...or 'Print Photos')
2. Using left/right arrow keys, navigate to Reports Menu (or System Menu). Select 'pen electrical test'.
3. Select Level 1, 2, or 3. Enter to print test - evaluate nozzle electrical test print.

**NOTE 2:** Pen recovery level 1, 2 or 3 clears cartridge errors, unblocking the printer to permit you to print the TEST PAGE with the normal MENU / TOOLS /PRINT TEST PAGE choice to aid in printer evaluation.

**Photosmart 8200 Printer series – No Keypad Display (HP 02 cartridges)**

Test Page:

1. Make sure the main tray is loaded with clean, plain white paper.
2. Press Menu, and then press the Down Arrow button to scroll down to Tools. Press OK .
3. Press the Down Arrow button to scroll to Print Test Page, and then press OK. The report prints.

Tap 43 **PRINthead** Health Diagnostics – See Video Procedure: [http://inkjet411.com/?page\\_id=2377](http://inkjet411.com/?page_id=2377)



1. Turn ON the printer.
2. Press and Hold the "Print Photos" & "Red Eye Removal" buttons.
3. Release both buttons.
4. You will see a new screen that says, "Enter Special Key Combo"... The Key combo is: press and release in sequence the "Red Eye Removal", "Print Photos", and then "Red Eye Removal"
5. Scroll through the menu by pressing the right arrow button until the display says 'Special Reports'.
6. Select Ok, then press the arrow button until the 'print-mech button tap' menu is displayed.
7. Select Ok (**code = 0** will be displayed); click and hold Right Arrow (>) until '**code = 43**' is displayed.
1. Select Ok. The test page prints.
2. Check the 4<sup>th</sup> line at the top of the printed report; an electrically good/stable PRINthead 'Pen Status' will state "**Pen Status: Pen OK**".....if any other message is displayed then the PRINthead may have failed (unfortunately the PRINthead is not replaceable). It is suggested to perform the 'Printer Reset' procedure below to first rule out printer firmware related problem.

43-Tap Report (Pen_tij4_new) Matalla Specific	
FW Revision:	CLP1CN1150CR
Serial Number:	CN2CRBWJTM05KC
Ambient Temp:	25C
Pen Status:	Pen Ok
No Pen Mode:	0

Printer Reset Procedure (for “Ink System Failure Message”):

1. Turn ON the printer.
2. Press and Hold the “Print Photos” & “Red Eye Removal” buttons.
3. Release both buttons.
4. You will see a new screen that says, “Enter Special Key Combo”... The Key combo is: press and release in sequence the ‘Red Eye Removal’, ‘Print Photos’, and then ‘Red Eye Removal’.
5. Scroll through the menu by pressing the right arrow button until the display says “System Configuration Menu”. Select Ok.
6. Using arrow keys scroll to “Hardware failure status”. Press OK to clear
7. If you still see the error message, click “Cancel” repeatedly until the ‘error’ message is no longer displayed.



**Photosmart 8750 Professional Photo Printer (HP 96-99 cartridges)**

Extended Self Test (Tap 10 Test Page):

1. Load plain paper.
2. Press and hold Layout and the Right Arrow button for several seconds until Tap Test #0 displays on the control panel.
3. Press the Layout button once. Tap Test #10 displays on the control panel.
4. Press OK. The 10-tap test prints. Evaluate stair-step patterns for missing nozzles.

*or.....*

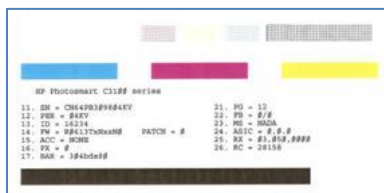
1. Load plain paper.
2. Press the Menu button on the printer control panel.
3. Press the Right arrow button six times.
4. Confirm the display says Print a test page.
5. Press the Select Photo button on the control panel to print the test page.

## HP Photosmart B/C/D Series Printers

**Photosmart C3100, C3110, C3125, C3135, C3140, C3150, C3170, C3173, C3175, C3180, C3183, C3188, C3190, C3193, C3194 (HP 92/93/99 ink cartridges)**

Self Test Page (*might only work with electrically good cartridges*):

1. Press and hold the CANCEL button.
2. Press the COLOR COPY button. Release both buttons.
3. The self test prints. The printed pattern will verify printer is generally functional. Inspect color bars to verify proper nozzle/jetting health.



Tap 43 Cartridge Health Diagnostics Test (*validation in process; might only work with electrically good cartridges*):

1. Press and HOLD the CANCEL (X) button.
2. Depress the COLOR COPY button four (4) times, *then...*
3. Depress the SCAN (START SCAN) button three (3) times.
4. Release the CANCEL (X) button. The test prints.
5. **NOTE:** A good HP 93/95/97 color cartridge should display 600 good nozzles, while a good HP 92/94/96/98 black ink cartridge should show 672 good nozzles. Refer to 2<sup>nd</sup> video at link below on how to interpret the test pattern:  
[http://inkjet411.com/?page\\_id=1741](http://inkjet411.com/?page_id=1741).

Black Nozzles:	0	0
Color Nozzles:	600	672

**Photosmart C4100 Printer series, C4180 (HP 92/93/95/98/99 ink cartridges)**

Self Test Page:

1. Press and hold the CANCEL button.
2. Press the COLOR COPY button. Release both buttons.
3. The self test prints. The printed pattern will verify printer is generally functional. Inspect color bars to verify proper nozzle/jetting health.

Tap 41 Cartridge Health Diagnostics (*Reference video: [http://inkjet411.com/?page\\_id=1741](http://inkjet411.com/?page_id=1741)*):

1. Press and HOLD the 'LEFT ARROW' button.
2. Press the 'Setup' button (wrench icon). Release both buttons.
  - a. Or alternatively, press the following five (5) buttons simultaneously: 'Photosmart Express' + 'Photo Fix' + 'Reprints' + 'Photos' + 'Help'
3. At "Enter Special Key Combo" menu, select 'OK'. 'Support' menu should be displayed.
4. Click the Right Arrow until 'Reports Menu' is displayed.
5. Select Ok. Click Right Arrow until the 'print-mech button tap' menu is displayed.
6. Select Ok. ('code = 0' will be displayed); click and hold Right Arrow until 'code = 41' is displayed.
7. Select Ok. The test page prints. Refer to video on how to read the test print.

**NOTE:** A good HP 93/95/97 color cartridge should display 600 good nozzles, while a good HP 92/94/96/98 black ink cartridge should show 672 good nozzles. Refer to video link above.

Black Nozzles:	0	0
Color Nozzles:	600	672

Printer Reset:

1. Press and HOLD the 'LEFT ARROW' button.
2. Press the 'Setup' button (wrench icon). Release both buttons.
3. At "Enter Special Key Combo" menu, select 'OK'. 'Support' menu should be displayed.
4. Click the Right Arrow until 'Resets Menu' is displayed.
5. Select Ok. Click Right Arrow until the 'Semi-Full Reset' is displayed.
6. Select Ok. The printer will be restored to the factory default settings.

**Photosmart C4200-C4300 Printer series (HP 74/75 ink cartridges)**

Self Test Page:

1. Press and hold the CANCEL button.
2. Press the COLOR COPY button. Release both buttons.

3. The self test prints. The printed pattern will verify printer is generally functional. Inspect color bars to verify proper nozzle/jetting health.

Tap 41 Cartridge Health Diagnostics (see video: [http://inkjet411.com/?page\\_id=536](http://inkjet411.com/?page_id=536)):

1. Load Letter/A4-size paper into paper feed tray.
2. If any lights are blinking, first press 'Cancel' to attempt to clear.
3. Press and HOLD the 'Cancel' button, press 'Ok' button once.
4. At 'Mfg Commands' menu, click Right Arrow once until 'uiaux service' menu is displayed.
5. At 'uiaux service' menu, click the Right Arrow 3 times until Special Reports menu is displayed.
6. Select Ok, then click Right Arrow 2 times until the 'print-mech button tap' menu is displayed.
7. 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.
8. Select Ok. The test page prints.

**NOTE:** A good HP 75/75XL color cartridge should display 600 good nozzles, while a good HP 74/74XL black ink cartridge should show 672 good nozzles.

Black Nozzles:	0	0
Color Nozzles:	600	672

Cartridge Error Bypass (Emergency Printing Only)

1. With the error message displayed at printers LCD screen, press and hold the Power and Cancel buttons down together.
2. When it says "Enter Special Key Combo", press the blue button (Scan), Green button (Color Copy), then the grey button (Copy Black).
3. Press the green button (bottom or Copy Color) several times until display says "Information Menu".
4. Press the green button (Copy Color), then the grey button (Copy Black); now it says "checksum for relock data input".
5. Wait a few seconds for a random number to appear on display (i.e. "checksum for relock data input: 3865").
6. Press the Cancel button three (3) times; code may or may not disappear.
7. Attempt to send emergency print job thru; in most cases the cartridge error message will immediately return.

**Photosmart C4400-C4500 Printer series (HP 74/75 ink cartridges)**

Self Test Page:

1. Press and hold the CANCEL button.
2. Press the COLOR COPY button. Release both buttons.
3. The self test prints. The printed pattern will verify printer is generally functional. Inspect color bars to verify proper nozzle/jetting health.

Tap 41 Cartridge Health Diagnostics (see video: [http://inkjet411.com/?page\\_id=536](http://inkjet411.com/?page_id=536)):

1. Load Letter/A4-size paper into paper feed tray.
2. If any lights are blinking, first press Cancel to attempt to clear.
3. Press and HOLD the Cancel button, press Ok button once.
4. At 'Mfg Commands' menu, click Right Arrow once until 'uiaux service' menu is displayed.
5. At 'uiaux service' menu, click the Right Arrow 3 times until Special Reports menu is displayed.
6. Select Ok, then click Right Arrow 2 times until the 'print-mech button tap' menu is displayed.
7. 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.
8. Select Ok. The test page prints.

To further troubleshoot your printer please visit:  
<http://www.inkjet411.com>

**NOTE:** A good HP 75/75XL color cartridge should display 600 good nozzles, while a good HP 74/74XL black ink cartridge should show 672 good nozzles.

Black Nozzles:	0	0
Color Nozzles:	600	672

**Cartridge Error Bypass (Emergency Printing Only)**

1. With the cartridge error message displayed at printers LCD screen, press and hold the Power and Cancel buttons down together.
2. When it says "Enter Special Key Combo", press the blue button (top), then the green button (bottom), then the grey button (middle).
3. Press the grey button (middle) several times until display says "information menu".
4. Press the OK button, then the grey button (middle); now it says "checksum for relock data input".
5. Wait a few seconds for a random number to appear on display (i.e. "checksum for relock data input: 8072").
6. Press the Cancel button three (3) times; the 4-digit code should disappear on the first Cancel button push.
7. Attempt to send emergency print job thru; in most cases the cartridge error message will immediately return.

**NOTE:** with a marginally performing ink cartridge, this typically results in allowing 1 entire print job to be printed at a time. If this does not permit any print operations then the cartridge has severe internal electrical damage and will need to be replaced.

**Photosmart C4600, C4700 & D110a Printer series (HP 60/60XL ink cartridges)**



Self Test Page:

1. Load plain white paper in the input tray.
2. Touch the lower-left corner of the control panel 4 times until Support Menu displays on the control panel, and then touch **OK**.

**NOTE:** The **OK** button becomes visible when you access the Support Menu



Illustration highlighting lower-left corner of the control panel

3. Touch the Menu button next to Support in the upper-right corner of the control panel (  ) until Reports Menu displays, and then touch **OK**.
4. Touch the button in the upper-right corner of the control panel (  ) until Printer Status Report displays, and then touch **OK**. The self-test report should print.

Tap 41 Cartridge Health Diagnostics: (see video: [http://inkjet411.com/?page\\_id=434](http://inkjet411.com/?page_id=434))

1. Using two fingers, gently tap the 'Return' and 'Home' keys on touchscreen until the 'Support' Menu is displayed (for example, press the button 3-4 times each in alternating succession).
2. At 'Support' menu, select the upper right button until the 'Reports Menu' is visible. Select **OK**.
3. Press upper right button until 'print mech button tap' menu is displayed.





4. Press OK, the 'code = 0' menu should be displayed.
5. Use arrows keys to change value to 'code = 41' (i.e. press and hold right arrow key). When 'code = 41', select 'OK'.

**NOTE 1:** The Tap 10 self-test print may also be initiated via 'code = 10'

6. The diagnostic 'tap 41' test pattern will print.

**NOTE 2:** A good HP 60 color cartridge should display 1248 good nozzles, while a good HP 60 black ink cartridge should show 336 good nozzles).

Nozzle Count	HP 60 Color	HP 60 Black
Вхххх Вхххххх :	0	0
Вхххх Вххх :	1248	336

Cartridge Error Bypass Procedure: (see video: [http://inkjet411.com/?page\\_id=434](http://inkjet411.com/?page_id=434))

1. Using two fingers, gently tap the 'Cancel' (X) and 'OK' keys on touchscreen until the Support Menu is displayed (for example, press the button 3-4 times each in rapid alternating succession).
2. Select OK. The Support Firmware Menu should be displayed.
3. Select Top Right Key (button) once to display the Information Menu.
4. Select OK.
5. Press the Top Right Key (button) 15 times until 'checksum for relock data input' is displayed.
6. Select OK.
7. After a few seconds the service menu will be automatically exited and you will be returned to the top level menu.

**NOTE:** The printer error register has now been cleared and a single print job can be accepted (results will vary by printer model and error type).

### Photosmart C5100, C5140, C5150, C5175, C5180, C5183, C5185, C5188, C5190, D7100, D7460 Printer Series – NO keypad display (HP 02/363 ink cartridges)

Basic Printer Reset:

1. Turn ON printer.
2. While the printer is Turned ON, remove the power cord from the back of the printer.
3. Wait for 10 seconds.
4. Plug the power cord back into the printer, and while doing this press and hold the "HELP" and "OK" buttons.
5. The printer should turn ON automatically and will start to reset. If not, turn ON the printer manually to initiate the reset.

Internal Self Test Page:

1. Ensure that the memory card has been removed from the memory card slot.
2. Make sure the printer is turned on.
3. Load plain paper.
4. Press the Home button to access the Home screen.
5. Press the Left/Right arrow button to highlight Settings. Then press the OK button.
6. Press the Up/Down arrow button to display the Tools menu. Then press the OK button.
7. Press the Up/Down arrow button to highlight Print Test Page.
8. Press the OK button to begin printing the test page.

<http://h20000.www2.hp.com/bizsupport/TechSupport/Document.jsp?lang=en&cc=us&objectID=c00728224>

Tap 43 **PRINTHEAD** Health Diagnostics - See Video Procedure: [http://inkjet411.com/?page\\_id=2377](http://inkjet411.com/?page_id=2377)

1. Turn ON the printer.
2. Press and Hold the “Print Photos” & “Red Eye Removal” buttons.
3. Release both buttons.
4. You will see a new screen that says, “Enter Special Key Combo”... The Key combo is: press and release in sequence the “Red Eye Removal”, “Print Photos”, and then “Red Eye Removal”
5. Scroll through the menu by pressing the right arrow button until the display says ‘Special Reports’.
6. Select Ok, then press the arrow button until the ‘print-mech button tap’ menu is displayed.
7. Select Ok (Code = 0 will be displayed); click and hold Right Arrow until ‘code = 43’ is displayed.
8. Select Ok. The test page prints.
9. Check the 4<sup>th</sup> line at the top of the printed report; an electrically good/stable PRINTHEAD ‘Pen Status’ will state "**Pen Status: Pen OK**".....if any other message is displayed then the PRINTHEAD may have failed and may need to be replaced (if part is still available). It is suggested to perform the 'Printer Reset' procedure below to first rule out printer firmware related problem.

```

43-Tap Report (Pen_tij4_new) Matalla Specific
FW Revision:          CLP1CN1150CR
Serial Number:       CN2CRBWJTM05KC
Ambient Temp:        25C
Pen Status:          Pen Ok
No Pen Mode:         0
  
```

Printer Reset Procedure (for “Ink System Failure Message”):

1. Turn ON the printer.
2. Press and Hold the “Print Photos” & “Red Eye Removal” buttons.
3. Release both buttons.
4. You will see a new screen that says, “Enter Special Key Combo”... The Key combo is: press and release in sequence the “Red Eye Removal”, “Print Photos”, and then “Red Eye Removal”
5. Scroll through the menu by pressing the right arrow button until the display says “System Configuration Menu”. Select Ok.
6. Using arrow keys scroll to “Hardware failure status”. Press OK to clear.
7. Press CANCEL
8. Press CANCEL
9. Press CANCEL
10. Turn printer off, unplug power cord for 2 minutes, plug cord back in then turn printer back on.
11. Test printer by sending a print job.



**Photosmart D7345, D7355, D7360, D7363 & D7368 Printers – NO keypad display (HP 02/363 ink cartridges)**

Internal Self Test Page:

1. Ensure that the memory card has been removed from the memory card slot.
2. Make sure the printer is turned on.
3. Load plain paper.
4. Touch the home icon in the upper left-hand corner to access the home screen.
5. Touch Settings on the screen.
6. Touch Tools on the screen.
7. Touch the Up/Down arrow on the right of the screen to scroll for more options.

8. Touch Print Test Page to begin printing the test page.

<http://h20000.www2.hp.com/bizsupport/TechSupport/Document.jsp?lang=en&cc=us&objectID=c00728224>

Tap 43 **PRINTHEAD** Health Diagnostics – refer to general instructions on previous page:

- See Video Procedure: [http://inkjet411.com/?page\\_id=2377](http://inkjet411.com/?page_id=2377)

### Photosmart C5200-C5500 Printer series (HP 74/75 ink cartridges)

Tap 41 Cartridge Health Diagnostics (see video: [http://inkjet411.com/?page\\_id=536](http://inkjet411.com/?page_id=536)):

1. Load Letter/A4-size paper into paper feed tray.
2. If any lights are blinking, first press Cancel to attempt to clear.
3. Press and HOLD the Cancel button, press Ok button once.
4. At 'Mfg Commands' menu, click Right Arrow once until 'uiaux service' menu is displayed.
5. At 'uiaux service' menu, click the Right Arrow 3 times until Special Reports menu is displayed.
6. Select Ok, then click Right Arrow 2 times until the 'print-mech button tap' menu is displayed.
7. 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.
3. Select Ok. The test page prints.

**NOTE:** A good HP 75/75XL color cartridge should display 600 good nozzles, while a good HP 74/74XL black ink cartridge should show 672 good nozzles.

Black Nozzles:	0	0
Color Nozzles:	600	672

Cartridge Error Bypass (Emergency Printing Only - see video: [http://inkjet411.com/?page\\_id=536](http://inkjet411.com/?page_id=536)):

1. Press 'Red Eye Removal' & 'Print Photo' buttons simultaneously
2. "Enter Special Key Combo" should be displayed on the screen.
3. Press and release in sequence 'Red Eye Removal', 'Print Photos', then 'Red Eye Removal'
4. Display should read 'Support' and display the FW rev XXXXX.
5. Press 'Right Arrow' button until 'Information Menu' is displayed. Press OK.
6. Press 'Left Arrow' button to display "checksum for relock data input".
7. Select OK, a four (4) or five (5) digit number will be displayed (i.e. "checksum for relock data input: 53588").
8. Press the Cancel button once (the 4/5 digit number should disappear); press Cancel two more times.
9. Attempt to send emergency print job thru; in most cases the cartridge error message will immediately return.



**NOTE:** with a marginally performing ink cartridge, this typically results in allowing 1 entire print job to be printed at a time. If this does not permit any print operations then the cartridge has severe internal electrical damage and will need to be replaced.

### Photosmart C6100, C6150, C6175, C6180, C6183, C6185, C6188, C7200, C7280, C8100 Printer Series – printers with a keypad display (HP 02/HP 363 ink cartridges)

Self-Test Page:

1. Load letter, A4, or legal, unused plain white paper into the input tray.
2. Press the Setup button.
3. Press ▼ to select **Print Report** and then press OK .

4. **Self-Test Report** is selected. Press OK and the self-test diagnostic page prints.  
or.....

1. Touch **Setup** on the display.
2. Touch **Tools**.
3. Touch **Self-Test diagnostic page**. The self-test diagnostic page prints.

<http://h20000.www2.hp.com/bizsupport/TechSupport/Document.jsp?lang=en&cc=us&objectID=c00728224>

Tap 10 Extended Self-Test:

1. Press \* and # keys simultaneously.
2. Enter '123' on keypad.
3. At 'Service' menu, click the Right Arrow 7 times until 'Special Reports' menu is displayed.
4. Select Ok, then click Right Arrow 2 times until the 'print-mech button tap' menu is displayed.
5. Select Ok (Code = 0 will be displayed); click and hold Right Arrow until 'code = 10' is displayed (or enter 10 on keypad).
6. Select Ok. The extended self-test ('Tap 10') page prints.
7. Printed pattern verifies printer is generally functional. Inspect color bars.  
**NOTE:** As an option, you may just select 'extended self test' under the Reports menu.

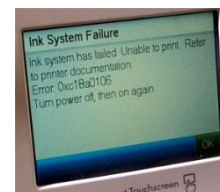
Tap 43 **PRINTHEAD** Health Diagnostics – See Video Procedure: [http://inkjet411.com/?page\\_id=2391](http://inkjet411.com/?page_id=2391)

1. Press \* and # keys simultaneously.
2. Enter '123' on keypad.
3. At 'Service' menu, click the Right Arrow 7 times until Special Reports menu is displayed.
4. Select Ok, then click Right Arrow 2 times until the 'print-mech button tap' menu is displayed.
5. Select Ok ('code = 0' will be displayed); click and hold Right Arrow until 'code = 43' is displayed. Use the Left Arrow if you need to decrease numerical count.
6. Select Ok. The 'Tap 43' diagnostic test page prints.
7. Check the 4<sup>th</sup> line at the top of the printed report; an electrically good/stable PRINTHEAD 'Pen Status' will state "**Pen Status: Pen OK**".....if any other message is displayed then the PRINTHEAD may have failed and may need to be replaced (if part is still available). It is suggested to perform the 'Printer Reset' procedure below to first rule out printer firmware related problem.

```
43-Tap Report (Pen_tij4_new) Matalla Specific
FW Revision:          CLP1CN1150CR
Serial Number:       CN2CRBWJTM05KC
Ambient Temp:        25C
Pen Status:           Pen Ok
No Pen Mode:         0
```

Printer Reset Procedure (i.e. for "Ink System Failure Message"):

1. Press \* and # keys simultaneously.
2. Enter '123' on keypad.
3. At 'Service' menu, click the Right Arrow until 'System Configuration Menu' is displayed.
4. Select 'OK'.
5. Using arrow keys scroll to 'Hardware failure status'. Press OK to clear.
6. Press CANCEL
7. Press CANCEL



8. Press CANCEL
9. Turn printer off, unplug power cord for 2 minutes, plug cord back in then turn printer back on.
10. Test printer by sending a print job.

#### **Photosmart D5000, D5060, D5065, & D5069 (HP 95, 98, 99, 100 Cartridges)**

##### Internal Self Test:

1. Ensure that the memory card has been removed from the memory card slot.
2. Make sure the printer is turned on.
3. Make sure plain paper is loaded in the In Main Tray.
4. Press and hold the OK button.
5. Press and release the Left arrow button once. The printer display shows '10' briefly.
6. Release the OK button to print the Test Page.

#### **Photosmart D5100, D5145, D5155, & D5160 (HP 95, 98, 99, 100 Cartridges)**

##### Internal Self Test:

1. Ensure that the memory card has been removed from the memory card slot.
2. Make sure the printer is turned on.
3. Make sure the CD tray is closed.
4. Make sure plain paper is loaded in the In Main Tray.
5. Press and hold the OK button.
6. Press and release the Left arrow button once. The printer display shows '10' briefly.
7. Release the OK button to print the Test Page.

#### **Photosmart C5300, C5324, C5370, C5373, C5380, C5383, C5388, C5390, C5393, C6300, C6324, C6340, C6350, C6375, C6380, C6383, C6388, B8550, D5400, D5445, D5460, D5463, D5468, D7560, Pro B8550, Pro B8553, Pro B8558 Printers (HP 564 Cartridges) -- *procedures still being validated on some printer models.***

##### Tap 41 **PRINTHEAD** Health Diagnostics:

1. Turn ON the printer.
2. Press and Hold the "Print Photos" & "Red Eye Removal" buttons.
3. Release both buttons - screen should display "Enter Special Key Combo"
4. Press and release in sequence the "Red Eye Removal", "Print Photos", and then "Red Eye Removal"
5. Scroll through the menu by pressing the right arrow button until the display says 'Special Reports'.
6. Select Ok, then press the arrow button until the 'print-mech button tap' menu is displayed.
7. Select Ok (Code = 0 will be displayed); click and hold Right Arrow until 'code = 41' is displayed.
8. Select Ok. The test page prints. If not, repeat steps 2-7 and enter 'code = 43', select Ok.
9. Check the 4<sup>th</sup> line at the top of the printed report; an electrically good/stable PRINTHEAD 'Pen Status' will state "**Pen Status: Pen OK**".....if any other message is displayed then the PRINTHEAD may have failed and may need to be replaced (as available). It is suggested to perform the 'Printer Reset' procedure below to rule out printer firmware related problem.
  - a. *If Step 2. does not allow service menu access, then press the 'Return' and 'Home' keys simultaneously so the Engineering Menu is displayed [or depress the 'Return' button four (4) times]*
  - b. *Select Service Menu. Use arrow keys to advance to the Special Reports Menu. Select OK. Perform steps 6-9.*



To further troubleshoot your printer please visit:  
<http://www.inkjet411.com>

```
43-Tap Report (Pen_tij4_new) Matalla Specific
FW Revision:          CLP1CN1150CR
Serial Number:        CN2CRBWJTM05KC
Ambient Temp:         25C
Pen Status:           Pen Ok
No Pen Mode:          0
```

**NOTE:** The Tap 10 extended self-test print may also be initiated via 'code = 10' (use to verify ink nozzle/jetting performance for each color).

**Self Test Page:**

1. Press CANCEL and START COPY BLACK buttons simultaneously.
2. Release both buttons. The self test prints.
3. Printing of the self test will verify the printer is functional. Verify normal ink color performance (pictured below).



**Printer Reset Procedure (for "Ink System Failure" / "Incompatible Printhead" messages):**

1. Turn ON the printer.
2. Press and Hold the "Print Photos" & "Red Eye Removal" buttons.
3. Release both buttons.
4. You will see a new screen that says, "Enter Special Key Combo"... The Key combo is: press and release in sequence the "Red Eye Removal", "Print Photos", and then "Red Eye Removal"
5. Scroll through the menu by pressing the right arrow button until the display says "System Configuration Menu". Select Ok.
6. Using arrow keys scroll to "Hardware failure status". Press OK to clear
7. If you still see the error message, click "Cancel" repeatedly until the 'error' message is no longer displayed.



**PhotoSmart Premium C309c, C309a, C309n, C310a, C310b, C310c, C410a, Touchsmart Web, PhotoSmart Premium Web C309n (HP 564 cartridges):**

*NOTE: If this service menu access procedure does not work then refer to 'Photosmart Plus B series' printers*

**Tap 41 *PRINTHEAD* Health Diagnostics:**

1. Using two fingers, gently tap the 'Return' and 'Home' keys on touchscreen until the Engineering Menu is displayed (for example, press the button 3-4 times each in alternating succession). Using arrow keys navigate to Service Menu.
2. ....or if a keypad is available: Press \* and # keys simultaneously. Service Menu should be displayed.
3. Use arrow keys to advance to the Special Reports Menu. Select OK.
4. Use arrow keys to advance to the 'print mech button tap' menu. Select Ok.
5. 'Code = 0' will be displayed. Use arrows keys to change value to '41' (i.e. press and hold right arrow key).
6. When 'code = 41', select 'OK'. The diagnostic test pattern will print.



- i. **NOTE:** The Tap 10 self-test print may also be initiated via 'code = 10' (use to verify all nozzles are firing)
7. Check the 4<sup>th</sup> line at the top of the printed report; an electrically good/stable PRINTHEAD will state "**Pen OK**".....if any other message is displayed then the PRINTHEAD has likely failed and may need to be replaced. Re-seat PRINTHEAD and repeat 'Tap 41' test to verify connectivity is not the issue.

```

43-Tap Report (Pen_tij4_new) Matalla Specific
FW Revision:          CLP1CN1150CR
Serial Number:        CN2CRBWJTM05KC
Ambient Temp:         25C
Pen Status:           Pen Ok
No Pen Mode:          0
  
```

**PhotoSmart Plus B209a, B210a, B210b, B210c, B210d, B210e, C510 eStation (HP 564 cartridges):**

Tap 41 **PRINTHEAD** Health Diagnostics:

1. Access the Service Menu (2 different methods depending on printer model); the 'Support/Manufacturing' menu will be displayed once entry is successful:
  - a. Press 'Down' arrow, press 'Cancel', then press the 'Return' button (older non-touchscreen models)



- b. Use a random button pressing technique to gain access to 'Support Menu' (newer touchscreen models – i.e. HP Photosmart Plus). Beginning with the 'Return' button, alternatively press the 'Return' and 'Home' buttons 3-4 times each, then press the 'Left Arrow' button every so often, until the '**Support**' menu is displayed.



**NOTE 1:** this can be somewhat tricky to perform successfully.

**NOTE 2:** If the Manufacturing Menu is displayed, select 'Underware' Menu – select 'OK', scroll to 'System' menu – select 'Ok', the 'print-mech button tap' menu will be displayed. See step 4.

2. At the 'Support' menu, use arrow key to navigate to the 'Service Menu', press Ok.
3. Use arrow keys to advance to the 'Special Reports' Menu. Select OK.
4. Use arrow keys to advance to the 'print mech button tap' menu. Select Ok.
5. 'Code = 0' will be displayed. Use arrows keys to change value to '41' (i.e. press and hold right arrow key).
6. When '**code = 41**', select 'OK'. The 'Tap 41' diagnostic test pattern will print.
7. Check the 4<sup>th</sup> line at the top of the printed report; an electrically good/stable PRINTHEAD will state "**Pen Status: Pen OK**".....if any other message is displayed then the PRINTHEAD has likely failed and may need to be replaced. Re-seat PRINTHEAD and test to verify connectivity is not the issue.

To further troubleshoot your printer please visit:

<http://www.inkjet411.com>

```
43-Tap Report (Pen_tij4_new) Matalla Specific
FW Revision:          CLP1CN1150CR
Serial Number:       CN2CRBWJTM05KC
Ambient Temp:        25C
Pen Status:          Pen Ok
No Pen Mode:         0
```

Printer Reset (i.e. use in the event of “Incompatible Printhead” or “Ink System Failure” message, etc.):

1. Remove ink cartridges from printer.
2. Access the Service menu – refer to suggested methods provided above.
3. Support Menu should be displayed. Navigate to the ‘Resets Menu’, press Ok.
4. Navigate to the ‘Semi-Full Reset’. This will restore the printer back to the factory default setting...you will need to re-configure printer following this action (i.e. similar to when you first purchased and set-up the printer).
5. Reinstall ink cartridges and test.

## HP Officejet/Officejet PRO Printers

### Officejet and LX

**Officejet 300 series, 700 series, T series, D series, K series, G series, V series, 4100 series, 5100 series, 6100 series, 7100 series (HP 45/78 ink cartridges)**

Self Test Print: <http://h10025.www1.hp.com/ewrf/wc/document?cc=us&lc=en&dlc=en&docname=bpu00734>

1. On the front panel of the product, press Menu (or Setup).
2. Press the Right Arrow until Print Reports displays, and then press Enter, Start, or OK.
3. Press the Right Arrow until Self-Test Report displays, and then press Enter, Start, or OK.

Printer Error Reset:

1. Open the printer/cover as if replacing the cartridge and allow the carriage assembly to move to the cartridges access/loading position.
2. Unplug the power cable from the rear of printer and close the printer’s cover.
3. While depressing the power button, plug in the power cable. Keep the power button pressed for about 10-15 seconds, allowing the error flag to reset.
4. After printer powers on, cycle printer power once again and allow printer to fully initialize (may take ~5 minutes for the message/error condition to disappear).

**NOTE:** If ink cartridge error persists then replace ink cartridge.

**Officejet 4100 series (HP 56/57/28 ink cartridges)**



To further troubleshoot your printer please visit:  
<http://www.inkjet411.com>

Self Test Print: <http://h10025.www1.hp.com/ewrf/wc/document?cc=us&lc=en&dlc=en&docname=bpu00734>

1. On the front panel of the product, press Menu (or Setup).
2. Press the Right Arrow until Print Reports displays, and then press Enter, Start, or OK.
3. Press the Right Arrow until Self-Test Report displays, and then press Enter, Start, or OK.
4. Refer to video at link below to help evaluate test pattern.

**NOTE:** A good HP 21/27/56 black cartridge should display 416 good nozzles, while a good HP 22/28/57/58 color ink cartridge should show 300 good nozzles.

**REFERENCE: Tap 43 Diagnostics** [HP Deskjet 5650 -use HP 56/57/58 cartridges]: [http://inkjet411.com/?page\\_id=2358](http://inkjet411.com/?page_id=2358)

**OfficeJet 4620 (HP 564 cartridges):**

Tap 41 **PRINTHEAD** Health Diagnostics (NOTE: printhead cannot be easily removed):

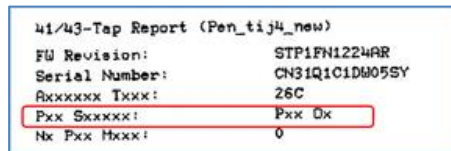
1. Use a random button pressing technique to gain access to 'Support Menu'. Beginning with the 'Forward' button, alternatively press the 'Forward' and 'Return' buttons 3-4 times each, then press the 'Cancel' button every so often, until the '**Support**' menu is displayed.



**NOTE 1:** this can be somewhat tricky to perform successfully.

**NOTE 2:** If the Manufacturing Menu comes up, select 'Underware' Menu – select 'Ok', scroll to 'System' menu – select 'Ok', the 'print-mech button tap' menu will be displayed. See step 4.

2. At 'Support' Menu, using the down arrow key, navigate to the 'Reports Menu', press Ok.
3. Use arrow keys to advance to the 'Special Reports' Menu. Select Ok.
4. Use arrow keys to advance to the 'print-mech button tap' menu. Select Ok.
5. 'Code = 0' will be displayed. Use arrows keys to change value to '41' (i.e. press and hold right arrow key).
6. When 'Code = 41', select 'OK'. The diagnostic test pattern will print.
7. Check the 4<sup>th</sup> line at the top of the printed report; an electrically good/stable PRINTHEAD will state "**Pxx Sxxxxx: Pxx Ox**" .....which *translated* means "**Pen Status: Pen OK**" .....if any other message is displayed then the PRINTHEAD may have electrically failed and may need to be replaced.



**NOTE 3:** For "printhead" error messages or for no-printing conditions, if removable, it is suggested to remove the PRINTHEAD and thoroughly clean the rear electrical contacts. Also inspect and clean electrical mating contacts on carriage assembly. Reinstall PRINTHEAD and test to verify connectivity is not the issue. Click here for more information: [http://inkjet411.com/?page\\_id=1451](http://inkjet411.com/?page_id=1451)

Printer Reset (i.e. use in the event of "Incompatible Printhead" or "Ink System Failure" message, etc.):

1. Remove ink cartridges from printer.
2. Press 'Down' arrow, press 'Cancel', then press the 'Return' button.
3. Support/Manufacturing Menu should be displayed. Navigate to the 'Resets Menu', press Ok.
4. Navigate to the 'Semi-Full Reset'. This will restore the printer back to the factory default setting...you will need to re-configure printer following this action (i.e. similar to when you first purchased and set-up the printer).

5. Reinstall ink cartridges and test.

#### Officejet 5100 series (HP 15/78 ink cartridges)

Self Test Print: <http://h10025.www1.hp.com/ewrf/wc/document?cc=us&lc=en&dlc=en&docname=bpu00734>

1. On the front panel of the product, press Menu (or Setup).
2. Press the Right Arrow until Print Reports displays, and then press Enter, Start, or OK.
3. Press the Right Arrow until Self-Test Report displays, and then press Enter, Start, or OK.

#### Officejet 5500 (56/57 cartridges)

Self Test Print:

1. From the front panel, press Setup, press 1, and then press 4.
2. Refer to video at link below to help evaluate test pattern.

**NOTE:** A good HP 56 black cartridge should display 416 good nozzles, while a good HP 57/58 color ink cartridge should show 300 good nozzles.

**REFERENCE: Tap 43 Diagnostics** [HP Deskjet 5650 -use HP 56/57/58 cartridges]: [http://inkjet411.com/?page\\_id=2358](http://inkjet411.com/?page_id=2358)

#### Officejet 5600 (HP 22/27/56/58 cartridges)

Self Test Print:

1. Press the Setup Button located on the bottom center of the control panel, beneath the LED readout.
2. Press 2 to select "Print Reports"
3. Press 6 to select "Self-Test Report" on the number keypad
4. Examine the resulting self-test page that prints. There should be lines extending all the way across the page in black, yellow, cyan and magenta. A missing black line indicates a problem with the black or photo cartridge. Faded, streaked or missing lines in the other colors indicates a problem with the color ink cartridge. Refer to video at link below to help evaluate test pattern.

**NOTE:** A good HP 21/27/56 black cartridge should display 416 good nozzles, while a good HP 22/28/57/58 color ink cartridge should show 300 good nozzles.

**REFERENCE: Tap 43 Diagnostics** [HP Deskjet 5650 -use HP 56/57/58 cartridges]: [http://inkjet411.com/?page\\_id=2358](http://inkjet411.com/?page_id=2358)

#### Officejet 6100 Series, 6110xi (HP 56/57/58 ink cartridges)

Self Test Print: <http://h10025.www1.hp.com/ewrf/wc/document?cc=us&lc=en&dlc=en&docname=bpu00734>

1. On the front panel of the product, press Menu (or Setup).
2. Press the Right Arrow until Print Reports displays, and then press Enter, Start, or OK.
3. Press the Right Arrow until Self-Test Report displays, and then press Enter, Start, or OK.

Extended Self-Test (*printer models with keypads only*):

1. Press \* and # keys at same time
2. Enter 124 (or 1234). The 'Underware' menu should be displayed.
3. Using left/right arrow keys, navigate to 'Special Reports'. Select Enter.
4. Using left/right arrow keys, navigate to 'extended self test'.
  - a. Select Enter to print test print - evaluate test print.
5. Or using left/right arrow keys, navigate to 'pen electrical test'.
  - a. Select Enter to print test - evaluate nozzle electrical test print.

6. Or if supported, using left/right arrow keys, navigate to System Menu. Select Enter.
7. Navigate to 'print-mech button tap' menu.
8. Select Ok ("code = 0" will be displayed); click and hold Right Arrow until "code = 41" is displayed.
  - a. If nothing prints, then repeat test using "code = 43".
9. Select Ok. Within one minute the Tap 41 (or Tap 43) diagnostic test pattern should be initiated and print. Refer to video at link below to help evaluate test pattern.

**NOTE:** A good HP 21/27/56 black cartridge should display 416 good nozzles, while a good HP 22/28/57/58 color ink cartridge should show 300 good nozzles.

**REFERENCE: Tap 43 Diagnostics** [HP Deskjet 5650 -use HP 56/57/58 cartridges]: [http://inkjet411.com/?page\\_id=2358](http://inkjet411.com/?page_id=2358)

### Officejet 6210 / 6310 / 7210 / 7310 / 7410 Printer Series (HP 94, 95, 96, 97, 98 ink cartridges)

Internal Self Test Report:

1. Press setup.
2. Scroll to print reports.
3. Scroll to 'self test report'. Press OK.
4. The test page will print.

The Test page includes a nozzle pattern with a rectangular outline and solid well defined lines. If there are random misdirected or partially complete short segments (the ones about 1/8" long) this would indicate a problem with the printhead nozzles which may be corrected with nozzle cleaning. If there are missing nozzles in regular patterns then the issue could be electrical, and may be corrected by cleaning the electrical flex cable contacts inside the printer and the cartridge's rear electrical (gold) contacts. Refer to cleaning procedures: [http://inkjet411.com/?page\\_id=1519](http://inkjet411.com/?page_id=1519)

Tap 41 Cartridge Health Diagnostics:

1. Load Letter/A4-size paper into paper feed tray.
2. If any lights are blinking, first press Cancel to attempt to clear.
3. Press the \* and # keys simultaneously.
4. Enter 124 (or 123) at keypad. The 'Underware' menu should be displayed (or 'Support xxxx' menu)
5. Use the arrow keys to navigate to the System Menu (for select Officejet printer models you may need to go to 'Reports Menu'). Select Ok.
6. Use the arrow keys to navigate to the 'print-mech button tap'. Select Ok. Should display "code = 0".
7. Use the arrow keys to enter "code = 41" (or just enter 41 on keypad). Select Ok. The Tap 41 diagnostic test pattern prints. Refer to 2nd video at link below on how to analyze the printed diagnostic pattern.

**NOTE 1:** If 'code=41' does not initiate a test report, then enter 'code = 43'.

**REFERENCE: Tap 41 Diagnostics** [HP Deskjet 6900 -use HP 93 thru 97 cartridges]: [http://inkjet411.com/?page\\_id=1741](http://inkjet411.com/?page_id=1741)

**NOTE 2:** A good HP 93/95/97 color cartridge should display 600 good nozzles, while a good HP 92/94/96/98 black ink cartridge should show 672 good nozzles. On some models you may remove the tri-color cartridge, reactivate the tap 41 test and the printer will print the diagnostic test print in black ink.

Black Nozzles:	0	0
Color Nozzles:	600	672

Cartridge Error Bypass (Emergency Printing Only; refer to 3<sup>rd</sup> video here- [http://inkjet411.com/?page\\_id=544](http://inkjet411.com/?page_id=544)):

1. Remove ink cartridges from printer:
2. press 4 + # + OK simultaneously, this should display the Information Menu.

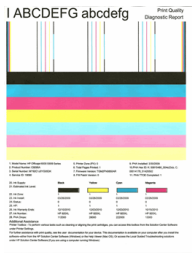
3. Using the navigation arrow keys, go to CHECKSUM FOR RELOCK DATA INPUT
4. Install ink cartridges.
5. Press Ok five (5) times.
6. Exit by pressing the Cancel (X) Button.
7. Attempt to send emergency print job thru to printer. If this doesn't work the 1st time you may need to repeat 2 or 3 times to ensure relock data clears.

**NOTE:** with a marginally performing ink cartridge, this typically results in allowing 1 entire print job to be printed at a time. If this does not permit any print operations then the cartridge has severe internal electrical damage and will need to be replaced.

### Officejet 6500 Printer series (HP 920/920XL ink cartridges)

#### Print Quality Test Report:

1. Load Letter or A4, unused, plain white paper into the input tray.
2. Select the 'Setup' button.
3. Using the arrow keys navigate to '2. Print Report'
4. Using the arrow keys navigate to '2. Print Quality Report'
5. Select OK – the test report prints.
6. Verify each color is solid and dense with no visible streaking.



7. Perform a 'Clean Printhead' from the printer's control panel menu if print quality issues persist or if you observe a color shift as there could be an air bubble in one of the ink cartridges, or between the cartridge and PRINthead (select 'Setup' button – Tools menu – 'Printhead Clean'). Refer to video: [http://inkjet411.com/?page\\_id=1983](http://inkjet411.com/?page_id=1983)

#### Tap 43 PRINthead electrical performance test (NOTE: applicable to printer models with keypad, i.e. 1-9):

Refer to 2<sup>nd</sup> video at the following link: [http://inkjet411.com/?page\\_id=1495](http://inkjet411.com/?page_id=1495)

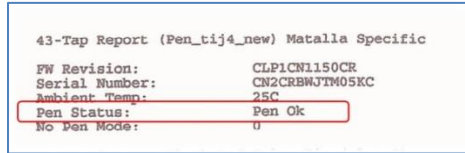
1. Load Letter/A4-size paper into paper feed tray.
2. Press the \* and # keys simultaneously.
3. Enter 123 at keypad. The 'Support xxxxxxxx' menu should be displayed.
4. Use the arrow keys to navigate to the Reports Menu. Select Ok.
5. Use the arrow keys to navigate to the 'print-mech button tap' menu.
6. Select Ok. Screen should display "code = 0".
7. Use the arrow keys to enter "code = 43" (or just enter 43 on keypad). Select Ok. The Tap 43 diagnostic test pattern prints.

**NOTE 1:** On newer printer models you may need to input 'code = 41'.

**NOTE 2:** The Tap 10 self-test print (or extended self-test) also be initiated via 'code = 10' (use to verify color output and general ink nozzle performance)


To further troubleshoot your printer please visit:  
<http://www.inkjet411.com>

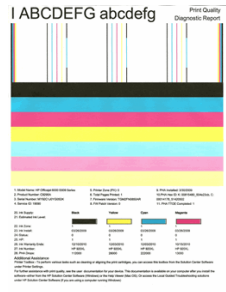
8. Check the 4th line at the top of the printed report; an electrically good/stable PRINTHEAD will state “**Pen Status: Pen OK**” .....if any other message is displayed then the PRINTHEAD may have failed and may need to be replaced.
9. Re-seat the PRINTHEAD and repeat ‘Tap 43’ test to verify connectivity is not the issue. Refer to HP.com for PRINTHEAD removal procedures or general instructions here: [http://inkjet411.com/?page\\_id=1495](http://inkjet411.com/?page_id=1495)



**Officejet 6500A/7500A Printer series (HP 920/920XL ink cartridges)**

Print Quality Test Report:

1. Load Letter or A4, unused, plain white paper into the input tray.
2. On the product control panel, touch the Right Arrow (▶) to display the second navigation screen.
3. Touch the **Setup** icon (  ). The Setup Menu displays.
4. Touch the Down Arrow (▼), and then touch **Reports**.
5. Touch **Print Quality Report**. The print quality diagnostic report prints.
6. Verify each color is solid and dense with no visible streaking.



7. Perform a 'Clean Printhead' from the printer's control panel menu if print quality issues persist or if you observe a color shift as there could be an air bubble in one of the ink cartridges, or between the cartridge and PRINTHEAD. Refer to video: [http://inkjet411.com/?page\\_id=1983](http://inkjet411.com/?page_id=1983)

Tap 43 PRINTHEAD electrical performance test (NOTE: applicable to printer models with keypad, i.e. 1-9)

-Refer to 2<sup>nd</sup> video at the following link: [http://inkjet411.com/?page\\_id=1495](http://inkjet411.com/?page_id=1495)

1. Load Letter/A4-size paper into paper feed tray.
2. Press the \* and # keys simultaneously.
3. Enter 123 (or 124) at keypad. The 'Support xxxxxxxx' menu should be displayed.
4. Use the arrow keys to navigate to the Reports Menu (System Menu on select models). Select Ok.
5. Use the arrow keys to navigate to the 'print-mech button tap' menu.
6. Select Ok. Screen should display “code = 0”.
7. Use the arrow keys to enter “code = 43” (or just enter 43 on keypad). Select Ok. The Tap 43 diagnostic test pattern prints.
  - i. **NOTE 1:** On newer printer models you may need to input ‘code = 41’.

To further troubleshoot your printer please visit:  
<http://www.inkjet411.com>

- ii. **NOTE 2:** The Tap 10 self-test print (or extended self-test) also be initiated via 'code = 10' (use to verify color output and general ink nozzle performance)

8. Check the 4th line at the top of the printed report; an electrically good/stable PRINTHEAD will state **"Pen Status: Pen OK"**.....if any other message is displayed then the PRINTHEAD may have failed and may need to be replaced.
9. Re-seat the PRINTHEAD and repeat 'Tap 43' test to verify connectivity is not the issue. Refer to HP.com for PRINTHEAD removal procedures or general instructions here:  
[http://inkjet411.com/?page\\_id=1495](http://inkjet411.com/?page_id=1495)

```
43-Tap Report (Pen_tij4_new) Matalla Specific
FW Revision:          CLP1CN1150CR
Serial Number:       CN2CRBWJTM05KC
Ambient Temp:        25C
Pen Status:          Pen Ok
No Pen Mode:         0
```

**OfficeJet 6600, 6700, 6700 Premium – with Touchscreens (HP 932-933 Cartridges):**

**Officejet PRO 8600/PRO 8700/PRO 251dw – with Touchscreens (HP 950-951 Cartridges):**

Tap 41 **PRINTHEAD** Health Diagnostics (NOTE: applies to touchscreen printer models only):

1. Press 'Return' button (*lower left side*) four (4) times until 'Support' menu is displayed.
2. At 'Support' Menu, using the arrow key, navigate to the 'Service Menu', press Ok.
3. Use arrow keys to advance to the 'Special Reports' Menu. Select OK.
4. Use arrow keys to advance to the 'print mech button tap' menu. Select Ok.
5. 'code = 0' will be displayed. Use arrows keys to change value to '41' (i.e. press and hold right arrow key).
6. When **'Code = 41'**, select 'OK'. The diagnostic test pattern will print.
7. Check the 4<sup>th</sup> line at the top of the printed report; an electrically good/stable PRINTHEAD will state **"Pen Status: Pen OK"**.....if any other message is displayed then the PRINTHEAD may have failed and may need to be replaced. Re-seat PRINTHEAD and/or clean rear electrical contacts and repeat 'Tap 41' test to verify connectivity is not the issue.



```
43-Tap Report (Pen_tij4_new) Matalla Specific
FW Revision:          CLP1CN1150CR
Serial Number:       CN2CRBWJTM05KC
Ambient Temp:        25C
Pen Status:          Pen Ok
No Pen Mode:         0
```

Nozzle test (use to determine if all ink cartridge nozzles/printhead is firing all colors properly)

1. Press return arrow 4 times
2. Press support menu
3. Press right arrow 5 times to print diagnostic menu and press ok
4. At nozzle test press ok




Self test/printer status (use to print internal printer settings)

1. Press return arrow 4 times
2. Press support menu




3. Press right hand arrow 7 times to reports menu and press ok
4. At self test report press ok

Extended self test (use to evaluate color performance and obtain total page count)

1. Press return arrow 4 times 
2. Press support menu
3. Press right hand arrow 7 times to reports menu and press ok
4. Press right hand arrow 1 time to extended self-test and press ok

Print Quality Diagnostic Page (use to determine if printing alignment is correct)

1. Press return arrow 4 times 
2. Press support menu
3. Press right hand arrow 7 times to reports menu and press ok
4. Press right hand arrow 2 times to Print Quality diagnostic report and press ok

Print head recovery (runs 'intensive' printhead service cleaning routines, i.e. for a clogged printhead)

1. Press home key twice
2. Then return key
3. Then home key twice
4. Then return key
5. Then home key twice.....this will gain access to the Engineering Menu
6. Press the 'service menu'
7. Press right arrow 4 times to 'service test' and press ok
8. Press right arrow:
  - a. 16 times to 'print head rec level 1' (basic recovery)
  - b. 17 times to 'print head rec level 2' (medium recovery)
  - c. 18 times to 'print head rec level 3' (thorough recovery)
9. Press 'ok' to activate either of the 3 selections above.

Semi full reset (can be used to help address intermittent or incorrect printer behavior issues)

1. Press return arrow 4 times
2. Press support menu
3. Press right hand arrow 2 times to Resets menu and press ok
4. Press right hand arrow 2 times to semi full reset and press ok (*Note: this will return printer to factory default condition; regional setup will be required following this action*)

#### **OfficeJet PRO 8500 eAIO (HP 940 Cartridges):**

##### Cartridge/Printhead Diagnostics:

To date, none of the internal servicing procedures have been found to be particularly useful for 'specifically' diagnosing or correcting faulty/degraded printhead related issues. To help resolve printer alerts: "The Following Printhead Appears to be Missing or Damaged" or "The Following Printhead has a Problem", refer to the following Inkjet411 support page: [http://inkjet411.com/?page\\_id=1457](http://inkjet411.com/?page_id=1457)

- Remove all four (4) ink cartridges and both PRINTHEADS from the printer. Thoroughly clean the electrical contacts on one (or both) PRINTHEAD assemblies. Reinstall PRINTHEAD(s) and ink cartridges. Retest.

Self Test Page:.....**TEST VALIDATION STILL REQUIRED**

1. Load Letter/A4-size paper into paper feed tray.
2. Press the \* and # keys simultaneously.
3. 329 at keypad. The 'Support xxxxxxxx' menu should be displayed.
4. Use the arrow keys to navigate to the 'Special Reports' menu. Select Ok.
5. Use arrow keys to advance to the 'print mech button tap' menu. Select Ok.
6. 'code = 0' will be displayed. Use down arrow keys to change value to '10'. Select Ok.
7. The printer should print the Self-Test Page.

*Possible additional tests:*

- When 'code = 60', select 'OK'. The **Ink Delivery System Report** will print.
- When 'code = 62', select 'OK'. The **Low-Level Hardware System Report** will print.
- When 'code = 63', select 'OK'. The **Ink Supply Report Report** will print.

**NOTE:** There is no correlation between a refilled ink cartridge and the failure of a PRINTHEAD assembly. All printheads will eventually fail depending on printed content, usage and time via natural electronics degradation. The HP 940 printer models (i.e. HP OJPRO 8500/8500A) have two electronic PRINTHEADS (each of these electronic devices are responsible for pulling ink from the ink cartridges and then firing the ink droplets onto the paper) – both PRINTHEADS will eventually fail depending on printed content, printer duty cycle (i.e. typically rated for ~20,000+ printed pages depending on image content & frequency of printing). The average inkjet printer can typically be refilled with ~8+ complete sets of ink cartridges over the life of the printhead, after which, either the Yellow/Black or Cyan/Magenta printhead will eventually need to be replaced (available at HP.com). Based on HP.com's customer support forum, some PRINTHEADS have reportedly only functioned for 1100-2000 printed pages, so performance results will vary widely. Refer to video on how the HP PRINTHEAD functions: [http://inkjet411.com/?page\\_id=2054](http://inkjet411.com/?page_id=2054)

**OfficeJet PRO 8500A/8500A Plus/8500A Premium (HP 940 Cartridges):**

Hard Printer Reset:

1. Make sure the printer is ON.
2. While the printer is ON, unplug the power-cord from the back of the printer.
3. Wait for 30 seconds and plug the power-cord back into the printer.
4. Turn ON the printer and let the printer do its initialization process.

Semi-Full Printer Reset:


1. Turn OFF the Printer.
2. While the printer is turned OFF, press and hold the power button for 5 seconds.
3. On the front panel of the printer, press the key sequence combo (Top Left, Bottom Left, Top Left, Top Left).
4. Select Menu.
5. Select **Semi-Full Reset**.

Full Printer Reset:

1. Turn OFF the Printer.
2. While the printer is turned OFF, press and hold the power button for 5 seconds.
3. On the front panel of the printer, press the key sequence combo (Top Left, Bottom Left, Top Left, Top Left).
4. Select Menu.
5. Select **Full Reset**.



Advanced Printer Diagnostics (may not work when Printheads errors 'Missing', 'Damaged', or 'Problem' is displayed):

1. Load Letter/A4-size paper into paper feed tray.
2. Press 'Return' button (lower left side of touchscreen) four (4) times until the 'Support' menu is displayed. Press Ok. 
3. At 'Support' Menu, using the arrow key, navigate to the 'Reports Menu', press Ok.
4. Use arrow keys to advance to the 'Reports Menu'. Select OK.
5. Use arrow keys to advance to the 'print mech button tap' menu. Select Ok.
6. 'code = 0' will be displayed. Use down arrow keys to change value to '60'.
7. When 'Code = 60', select 'OK'. The **Ink Delivery System Report** will print.
8. Repeat steps 4 thru 6, but enter 'code = 62'. The **Low-Level Hardware System Report** will print.
9. Repeat steps 4 thru 6, but enter 'code = 63'. The **Ink Supply Report Report** will print.

**NOTE:** There is no correlation between a refilled ink cartridge and the failure of a PRINTHEAD assembly. All printheads will eventually fail depending on printed content, usage and time via natural electronics degradation. The HP 940 printer models (i.e. HP OJPRO 8500/8500A) have two electronic PRINTHEADS (each of these electronic devices are responsible for pulling ink from the ink cartridges and then firing the ink droplets onto the paper) – both PRINTHEADS will eventually fail depending on printed content, printer duty cycle (i.e. typically rated for ~20,000+ printed pages depending on image content & frequency of printing). The average inkjet printer can typically be refilled with ~8+ complete sets of ink cartridges over the life of the printhead, after which, either the Yellow/Black or Cyan/Magenta printhead will eventually need to be replaced (available at HP.com). Based on HP.com's customer support forum, some PRINTHEADS have reportedly only functioned for 1100-2000 printed pages, so performance results will vary widely. Refer to video on how the HP PRINTHEAD functions: [http://inkjet411.com/?page\\_id=2054](http://inkjet411.com/?page_id=2054)

## HP Officejet J-Series Printers

**Officejet J3600 Printer series (HP 21/22 ink cartridges)..... need to validate procedure**

Self-Test Page:

1. Press the Setup Button.
2. Press 2 to select "Print Reports"
3. Press 6 to select "Self-Test Report" on the number keypad
4. Examine the resulting self-test page that prints. There should be lines extending all the way across the page in black, yellow, cyan and magenta. A missing black line indicates a problem with the black or photo cartridge. Faded, streaked or missing lines in the other colors indicates a problem with the color ink cartridge. Refer to video at link below to help evaluate test pattern.

**NOTE:** A good HP 21/27/56 black cartridge should display 416 good nozzles, while a good HP 22/28/57/58 color ink cartridge should show 300 good nozzles.

**REFERENCE:** [HP Deskjet 5650 -use HP 56/57/58 cartridges]: [http://inkjet411.com/?page\\_id=2358](http://inkjet411.com/?page_id=2358)

Cartridge Health Diagnostics (Tap 43 Report): [most Officejet printer models with keypads]

1. Press \* and # keys at same time
2. Enter 123 (or 124)
3. Using left/right arrow keys, navigate to Special Reports (.....or 'System Menu' or 'Information Menu'). Select Enter.
4. Using left/right arrow keys, navigate to 'Extended Self-Test'.

5. Select Enter to print test print - evaluate test print. If excessive nozzles are missing from the stair step pattern, then perform cartridge cleaning to correct.
6. Using left/right arrow keys, navigate to 'print-mech button tap' menu.
7. Select Ok ('code = 0' will be displayed); click and hold Right Arrow until 'code = 43' is displayed. NOTE: enter 'code = 41' if 'code =43' this does not activate the diagnostic print report.
8. Select Ok. Within one minute the Tap 43/41 diagnostic test pattern should be initiated and print. The test page prints. Refer to link to video on how to generally interpret the printed test report:

[http://inkjet411.com/?page\\_id=2358](http://inkjet411.com/?page_id=2358)

**NOTE:** Providing the color cartridge is partially functioning, the Tap 43 diagnostic test print will be printed (this is a forced service print test which is mainly used for the evaluation of ink cartridge electrical health). A good HP 21/27 black cartridge should display 416 good nozzles, while a good HP 22/28 color ink cartridge should show 300 good nozzles.

### Officejet J5700 / 6400 Printer series (HP 74/75 ink cartridges)

Extended Self Test:

1. Press CANCEL + OK buttons at the same time.
2. The extended self test page prints. Verify all colors and all stair-step nozzles are firing (i.e. no missing horizontal lines should be visible in the stair-step grid patterns)

Tap 41 Cartridge Health Diagnostics (refer to 2nd video here: [http://inkjet411.com/?page\\_id=544](http://inkjet411.com/?page_id=544)):

1. Load Letter/A4-size paper into paper feed tray.
2. If any lights are blinking, first press Cancel to attempt to clear.
3. Press the \* and # keys simultaneously.
4. Enter 124 (or 123) at keypad. The 'Underware' menu should be displayed.
5. Use the arrow keys to navigate to the System Menu. Select Ok.
6. Use the arrow keys to navigate to the 'print-mech button tap'. Select Ok. Should display "code = 0".
7. Use the arrow keys to enter "code = 41" (or just enter 41 on keypad). Select Ok. The Tap 41 diagnostic test pattern prints.

**NOTE:** A good HP 75/75XL color cartridge should display 600 good nozzles, while a good HP 74/74XL black ink cartridge should show 672 good nozzles.

Black Nozzles:	0	0
Good Nozzles:	600	672

Cartridge Error Bypass (Emergency Printing Only - [http://inkjet411.com/?page\\_id=544](http://inkjet411.com/?page_id=544)):

1. Press the \* and # keys simultaneously.
2. Enter 123 (or 124) at keypad. The 'Underware' menu should be displayed.
3. Use the arrow keys to navigate to the Information Menu. Select Ok.
4. 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.
5. 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. If this does not permit any print operations then the cartridge has severe internal electrical damage and will need to be replaced.

### Officejet J4500 / J4600 / 4500 Printer series (HP 901/901XL ink cartridges)

Extended Self Test:

1. Press CANCEL + OK buttons at the same time.

- The extended self test page prints. Verify all colors and all stair-step nozzles are firing (i.e. no missing horizontal lines should be visible in the stair-step grid patterns)

Tap 41 Cartridge Health Diagnostics (see video [http://inkjet411.com/?page\\_id=620](http://inkjet411.com/?page_id=620)):

- Load Letter/A4-size paper into paper feed tray.
- If any lights are blinking, first press Cancel to attempt to clear.
- Press the \* and # keys simultaneously.
- Enter 124 at keypad. The 'Underware' menu should be displayed.
- Use the arrow keys to navigate to the System Menu. Select Ok.
- Use the arrow keys to navigate to the "print-mech button tap". Select Ok. Should display "code = 0".
- Use the arrow keys to enter "code = 41" (or just enter 41 on keypad). Select Ok. The Tap 41 diagnostic test pattern prints.

**NOTE:** A good HP 901 color cartridge should display 1248 good nozzles, while a good HP 901/901XL black ink cartridge should show 336 good nozzles.

Nozzle Count	HP 901 Color	HP 901 Black
BEKUK FAKKUK T	0	0
OKUK BUK T	1248	336

Cartridge Error Bypass (Emergency Printing Only - [http://inkjet411.com/?page\\_id=620](http://inkjet411.com/?page_id=620)):

- Remove ink cartridges from printer:
- press 4 + # + OK simultaneously, this should display the Information Menu.
- Using the navigation arrow keys, go to CHECKSUM FOR RELOCK DATA INPUT
- Install ink cartridges.
- Press Ok five (5) times.
- Exit by pressing the Cancel (X) Button.
- Attempt to send emergency print job thru to printer. If this doesn't work at the 1st time you may need to initiate 2 or 3 times to ensure relock data clears.

**NOTE:** with a marginally performing ink cartridge, this typically results in allowing 1 entire print job to be printed at a time. If this does not permit any print operations then the cartridge has severe internal electrical damage and will need to be replaced.

## Hard Printer Reset

When the printing unit detects an issue with the cartridge, a software flag is set inside the device. This flag may not reset until performing a hard reset on the device.

### HP Deskjet and Photosmart printers

- Verify that the unit is switched on.
- Open printer and remove both cartridges.
- Unplug the power cord from the printer.
- Wait 30 seconds.
- Plug the power cord back into the printer.
- Open the top cover and reinsert both cartridges.
- Turn the unit on.
- Print a test page. If the problem persists, the cartridge may need to be replaced.

### HP Officejet and PSC all-in-one

1. Verify that the unit is switched on.
2. Remove the power cable from the back of the machine.
3. Wait 30 seconds.
4. Press and hold the POWER button on the front panel.
5. Reinsert the power cable in the backside of the unit.
6. Print a test page. If the problem persists, the cartridge may need to be replaced.

## Hot Water Ink Cartridge Soak *(Integrated Ink Cartridges)*

If after following manufacturer printer/cartridge cleaning procedures the print quality remains poor or missing colors persist and resetting of the printer does not work, proceed to the “How Water Ink Cartridge Soak” method.

**Ink Cartridge Cleaning Video:** [http://inkjet411.com/?page\\_id=1519](http://inkjet411.com/?page_id=1519)

**NOTE:** This procedure assumes that the integrated ink cartridge has an adequate amount of ink inside and that the internal cartridge foam has not completely hardened due to cartridge age or prolonged exposure to the environment. This procedure is most effective on color integrated ink cartridge recovery (i.e. dye-based inks), but may also be used for black ink cartridge recovery (typically have pigment-based ink). Results may vary.

1. Obtain a flat bottomed container and water. Distilled or de-ionized water is suggested to prevent ink contamination.
2. Heat water until hot and carefully pour into container.
3. Immerse the bottom portion of the ink cartridge into the hot water for approximately 5 minutes.
4. The hot water will help loosen up the dried ink which has formed inside the cartridge nozzle plate holes.
5. Using a towel, gently blot nozzle plate to see if ink appears – this is commonly referred to as “stamping”.
  - a. For color cartridges, all 3 color bands should be vibrant and solid.
6. If not, repeat the cleaning process again until ink is visible on towel during cartridge blotting.
7. Once recovered, completely dry the outside of ink cartridge with a towel.
8. Re-install cartridge into the printer and test. As an example, here’s what a normal HP printer self-test may look like. If the cartridge fails to print then a new ink cartridge may need to be obtained.

## Hot Water Printhead Flush/Soak

If, after activating the ‘Clean Printhead’ routine 2 times in a row, along with manufacturer’s suggested printer cleaning procedures, blank pages are observed or output print quality is extremely poor (for example, you observe several missing colors in the Print Quality Diagnostic Report where otherwise all colors should normally be present with no visible streaking), then the printhead may have partially dried out and a hot water flush may be necessary to help recover the ink system.

**NOTE:** This procedure primarily applies to HP564 and HP920 ink-series printer models and should be considered “a last ditch effort” just prior to printhead replacement and assumes that there is an adequate amount of ink available for the ink system recovery. For example, at least 30% of ink is available within each ink cartridge. This procedure is only applicable to HP printers that feature a removable printhead assembly and should only be

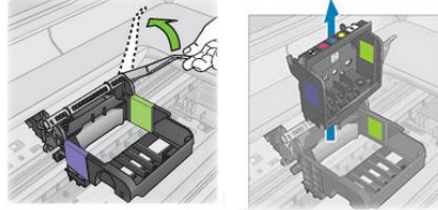
attempted after all other recovery suggestions (such as the activation of 'Clean Printhead' several times, along with printhead & carriage electrical contact cleaning), have been fully exhausted.

Refer to instructions and video procedures here: [http://inkjet411.com/?page\\_id=1451](http://inkjet411.com/?page_id=1451)

### PRINTHEAD FLUSHING Steps:

Refer to video procedure: [http://inkjet411.com/?page\\_id=2412](http://inkjet411.com/?page_id=2412)

1. Remove all ink cartridges from the printer.
2. Remove the printhead – in most cases you will need to pull up on the lever at right side of carriage assembly to unlock the printhead. Lift printhead straight up to remove.
3. Over a sink, gently run warm tap water directly into the upper ink ports for approximately 2 minutes – this will fully saturate the foam pads and help clean ink in and through the nozzle plate (at bottom of printhead).



4. Remove printhead from the water and wipe water from rear/bottom electrical contacts. Ensure printhead's electrical contacts/surfaces are completely dry.



5. Install the printhead and cartridges into the printer. You may observe a "Replace Printhead message" so you will need to cycle printer power by turning printer off and then on to clear the error.
6. You should observe a New PRINTHEAD alert message followed by an approx. 4-minute printer preparation countdown prompt.

**NOTE:** Re-seating or insertion of the printhead into the printer will consume up to approximately 8-10% of the ink and effectively re-prime all colors in the ink system.

7. Activate the 'Print Quality Report'. This can be done from the printer's control panel or software printer driver (for example, by selecting 'Tools' - 'Print Quality Report', or similar).
8. Verify all colors have recovered and no visible streaking or fade is present in print report. If you have reached this point of the troubleshooting and all the previous troubleshooting steps did not work, and printhead/ink system failure messages persist, then the printhead is likely damaged and/or at end of life\* and may need to be replaced.

\*Typically the average single/replaceable printhead should not reach it's end-of-life until after a minimum of 8 or more complete sets of cartridge changes; officejet models have much higher cartridge throughput averages.