How to print the printhead health status plot

For the HP Latex 700 and 800 Printer Series

The printhead health status plot consists of patterns designed to highlight printhead reliability problems. It helps to determine whether any printhead is experiencing clogging or other problems and can be used to diagnose IQ issues.
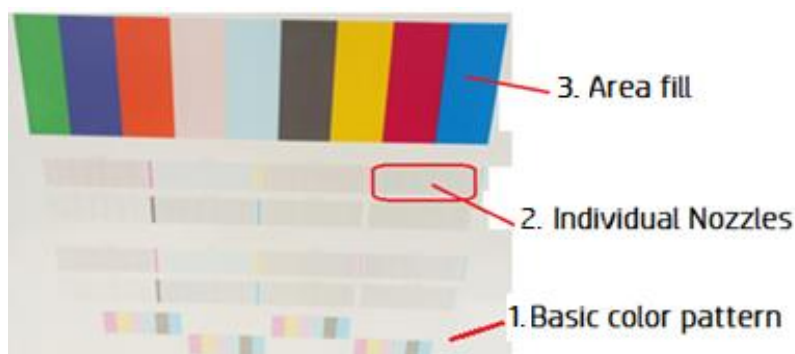
How to print the printhead health status plot

There are two ways to print the plot through the front panel menu:

- *Optimize Quality* 🖼️ *> Printhead Cleaning > Print Status Plot*

- *Optimize Quality* 🖼️ *> Advance Calibrations > Printheads Hard Cleaning > Print Status Plot*
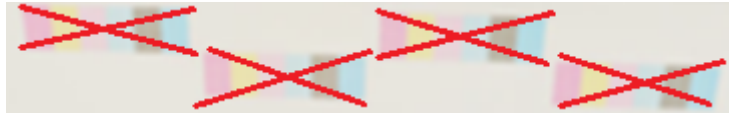
IMPORTANT: Print this plot with vinyl media, preferably gloss. Print at least 24 inches wide for maximum visibility. Other substrate types may not show enough detail to present the optimizer dashes clearly.
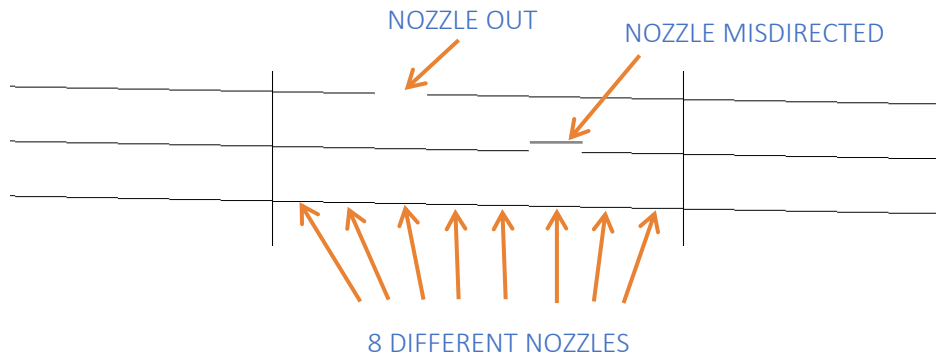
Printhead status plot description

The plot has three different areas: basic color pattern, individual nozzles, and area fill.

1. The basic color pattern sections should **not** be consulted for IQ troubleshooting; this section is used to warmup and prepare the printheads for the individual nozzles, firing ink to remove any dried ink or clogs on the printhead nozzle. As it is a warmup, there may be IQ issues, but these should not be considered.

2. The individual nozzle section consists of dashes printed individually for each nozzle. Each missing dash means that a particular nozzle is not firing ink.

The pattern was designed to make it easier to find the misdirected or out of place nozzle.

It is important to check for out of place or misdirected nozzles. Misdirected nozzles have a significant impact on image quality (banding, grain...).
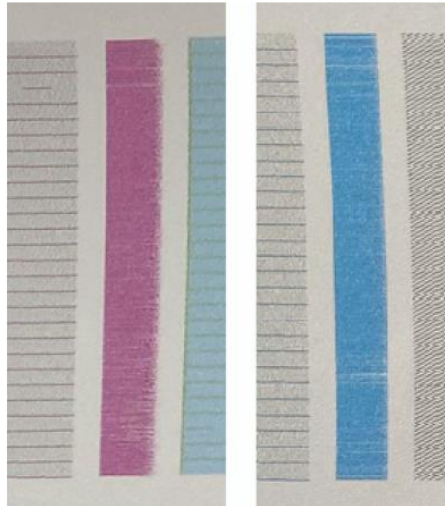
NOTE: The printer can continue printing with good quality while missing nozzles. The software compensates for the lack of a nozzle with the surrounding nozzles (adjacent nozzle replacement). Print quality does not only depend on the number of nozzles that are not firing, but also on their location.

If failing nozzles are randomly deployed, the system is easily able to compensate for them even if there is a significant number of out of place nozzles. If the number of out of place nozzles is concentrated in one area, the indicator will be worse.

IMPORTANT: Spit bars are not part of the check; these color columns are printed to fine-tune the printhead in order to print the next pattern of nozzles. If any of these columns has a printing defect, it should not be considered (as with the basic color pattern).

Spit bars

The marks on the spit bars are **not** issues.

3. The area fill is a .tiff image in which the printer applies error hiding and adjacent nozzle replacement.

    If there are some nozzles out but this area fill is printed correctly, the printhead status is OK.

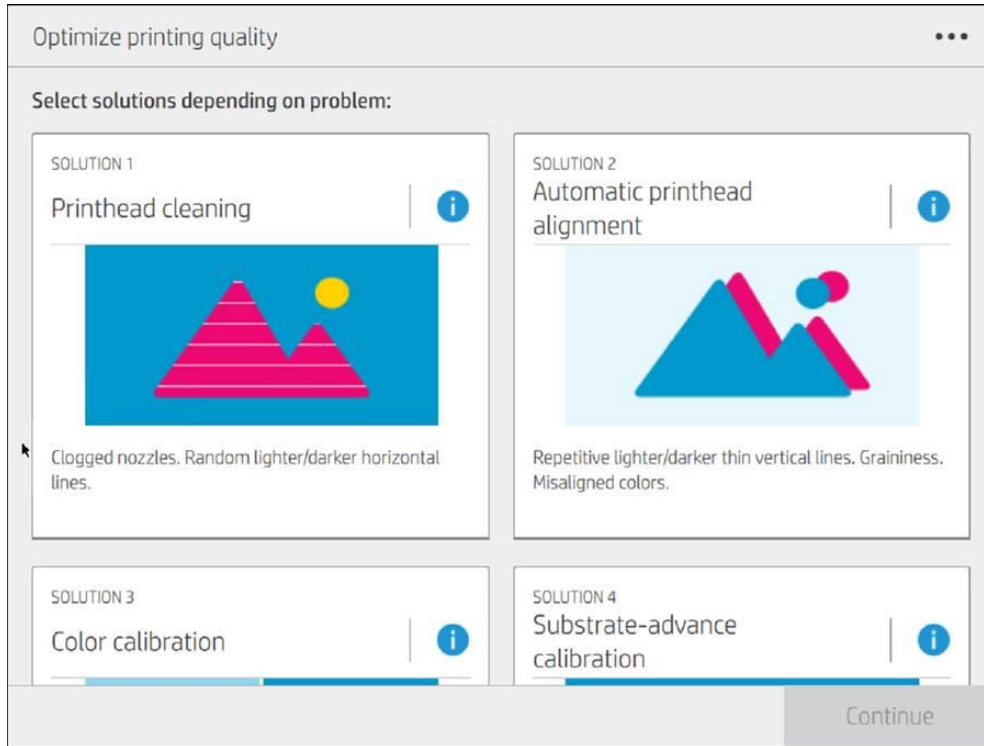|	Purpose	Can it be used to check printhead health?
Area fill	Check the current implication of the printhead	Yes
Individual nozzles	Check the health of the printhead	Yes
Spit bars	Warm up the printheads	No
Basic colors	Warm up the printheads	No

How to recover printheads and improve IQ

If you detect several affected printheads or you are not sure which printhead is affected, proceed with a **printhead cleaning** procedure, which will carry out a basic clean of all printheads.

If you detect a printhead with several out of place nozzles, the first step to recover the printhead nozzles is to clean the affected printhead using the **printheads hard cleaning** procedure.

The **printhead cleaning** procedure can be found through the front panel menu:

- *Optimize printing quality* *> Printhead cleaning > Continue*

After performing the printhead cleaning procedure, print the **print status plot** again to recheck printhead nozzles.

If you detect many out of place nozzles in the same area, there may be some fiber stuck to the printhead nozzle.
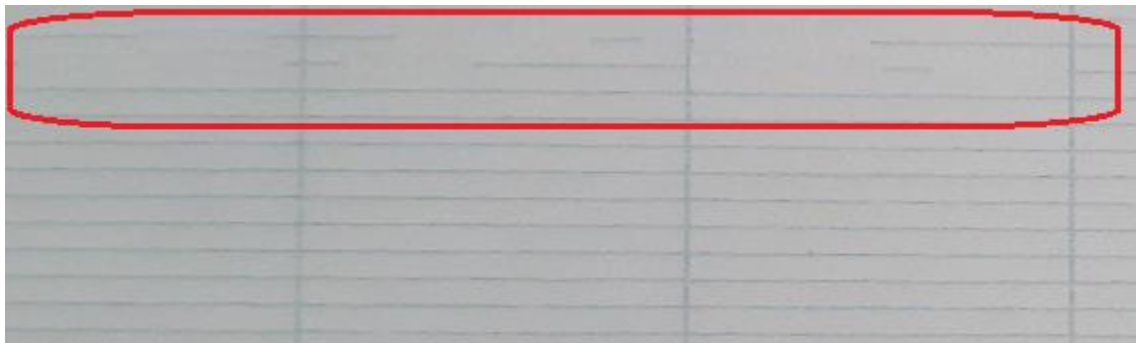

If this is the case, check the bottom of the affect printhead's nozzle area. If there is any ink dampen a soft, fiber-free cloth with distilled water and let the printhead sit on it for a couple of minutes.

Clean the rest of the printhead gently with a soft, fiber-free cloth dampened with distilled water, avoiding the electrical contact area.

IMPORTANT: Never put optimizer or pretreatment ink in contact with other printheads.

If you have many nozzles in the same raw there could have been cross contamination with pretreatment/optimizer caused by a carriage crash.
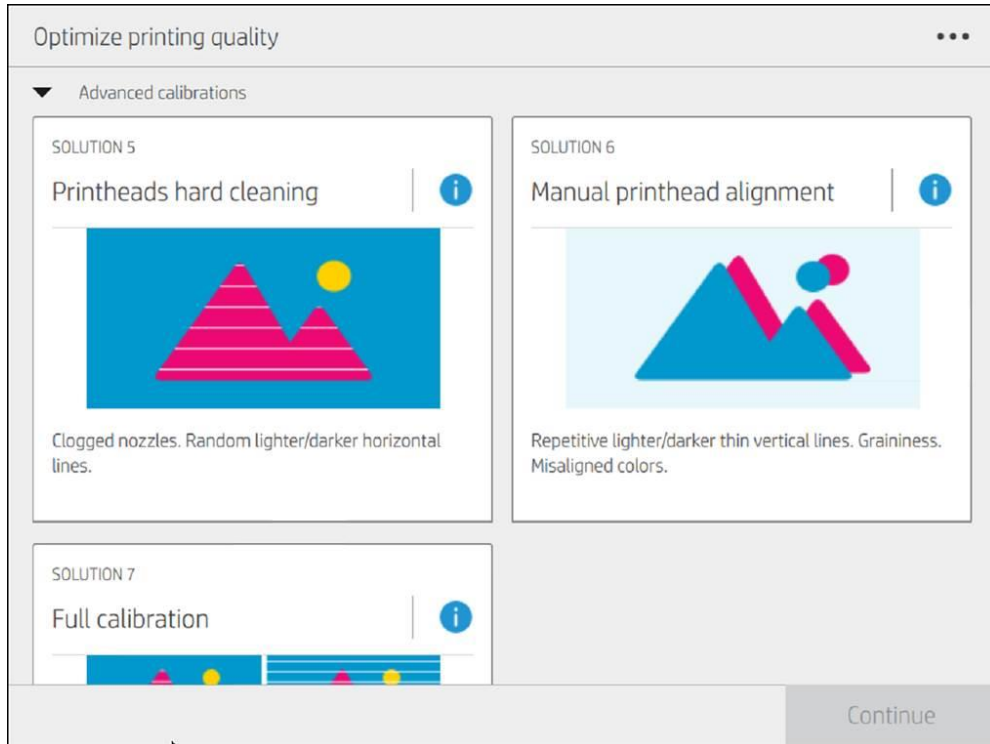

Check that the fabric of the maintenance cartridge is undamaged and does not have wrinkles. If it does, the fabric should be tensioned and passed a few millimeters.
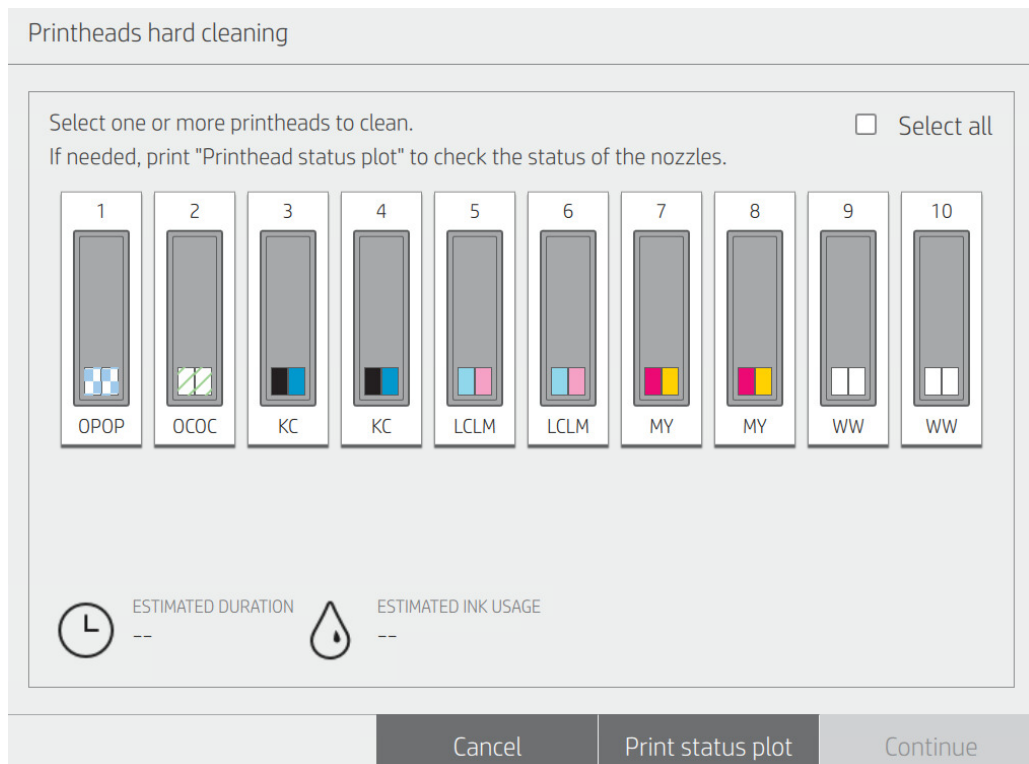
If the result is still unacceptable, carry out the **printheads hard cleaning** procedure.

The **printheads hard cleaning** procedure can be found through the front panel menu:

o *Optimize printing quality* *> Advanced Calibrations > Printheads hard cleaning > Continue*

At the following step, select the affected printheads and press **Continue** to perform the hard clean for the selected printheads.

After carrying out the printheads hard cleaning procedure, print the print status plot again to recheck the printhead nozzles. If the result is unacceptable, carry out the printheads hard cleaning procedure a second time.

If after a second printheads hard cleaning procedure the results are unacceptable, the affected printhead or printheads need to be replaced.