



HP MJF 500 3D Printer Series - Placing the printer in Away Mode for idle periods of longer than 2 weeks

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Contents

Away Mode description:	2
Recommendations for beginning an extended idle period.....	3
Recommendations upon returning from an idle period.....	4

Away Mode description:

When leaving the MJF series printers idle for extended periods of time (longer than ~2–3 weeks), there are a few things that happen to the printheads.

1. The fusing and detailing agents are quite different in their composition, to facilitate either heating or cooling during the MJF process. The fluids have different amounts of solvents, which means they have different partial, or vapor pressures. This has the effect that, when left idle for extended periods of time, it is possible for the fluids to mix together at the nozzles of the printhead.
2. The pigments inside the fusing and bright-fusing agents begin to settle over time, causing non-uniformity in the fluid.
3. Nozzles of all colors begin to dry out, which can lead to color differences or nozzle health defects in the printhead.

When the printer is in Away Mode, the unit will service the printhead once per week. Whenever the printhead is capped, the machine starts a timer to know how much time has elapsed since capping. When that timer hits one week, if the unit is in Away Mode, it will launch a servicing action. This event uses < 2 cc of each agent as well as small amounts of the cleaning roll.

The rest of the time, the unit remains in a low-power state with the doors closed and locked. When the servicing event takes place, it carries out several wipes of the printhead, as well as spitting to maintain the nozzles in a hydrated state. The process takes around 3 minutes, and then the printhead will be capped again and wait for another period of one week. This type of servicing will ensure that the printheads stay healthy, using similar technology and behaviors as home and office printers to maintain optimal performance.

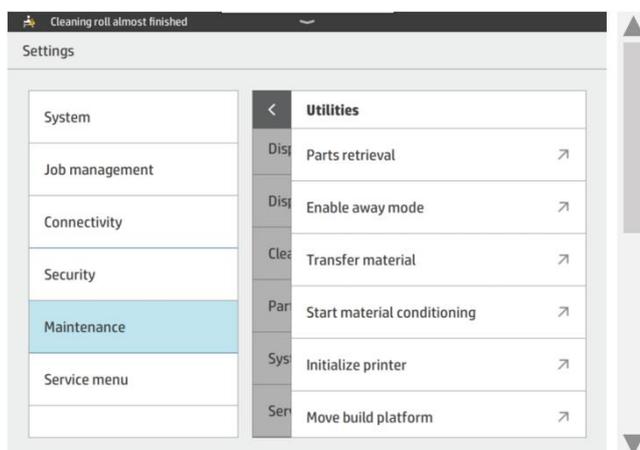
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Recommendations for beginning an extended idle period

Note: Away Mode can be enabled at any time, but HP recommends that the printer is put in Away Mode if the printer will be idle for 2 weeks or longer.

1. Ensure the build chamber is empty and cleaned by retrieving any parts and performing any vacuuming tasks.
2. Make sure there is agent in the intermediate tank. It is not necessary to have full supplies, although the printer will require some amount of fluid. It is, however, required that supplies are present, just as during a 3D job.
3. Close the front doors and top access door.
4. Enter Away Mode using the UI:
 - a. From **Settings** select **Maintenance > Utilities > Enable away mode**:



- b. The following screen will show in the control panel:

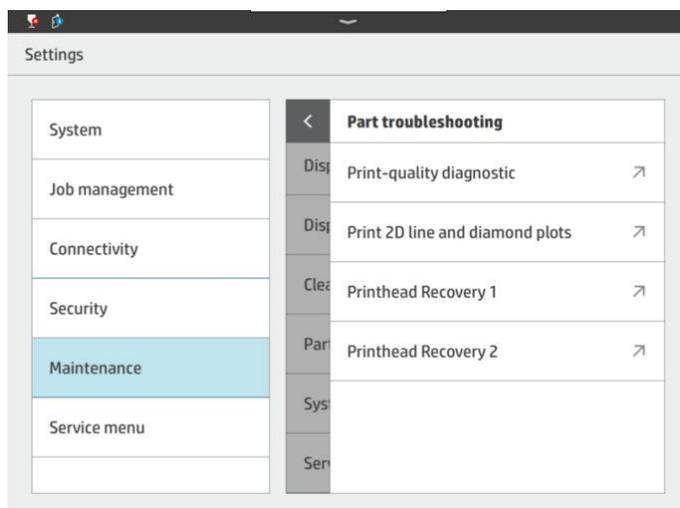


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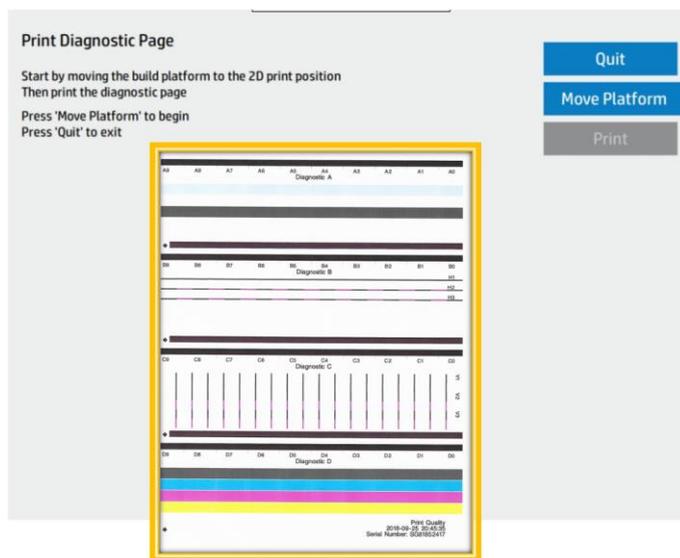
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Recommendations upon returning from an idle period

1. Select **Unlock Printer** from the control panel, then exit the **Utilities** menu.
2. From the **Maintenance** menu select **Part troubleshooting** > **Print-quality diagnostic**.



3. Print the diagnostic page to use as a reference.



4. Follow the 2D print PQ troubleshooting guide after printing the diagnostic page.

Inspection should be done on diagnostic area A & D primarily. If needed, recovery routines are available to run through the same **Part troubleshooting** menu. Examples of the types of mixing sometimes seen are shown below.

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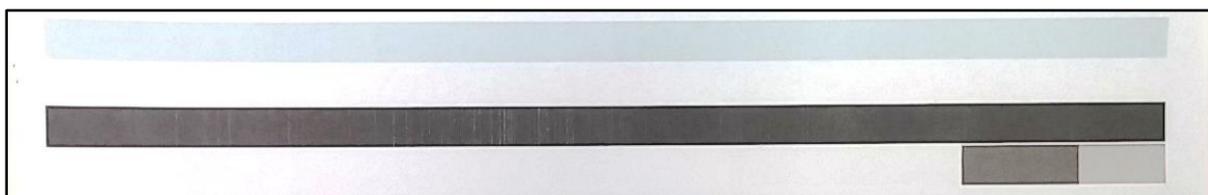
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Potential printhead issues:

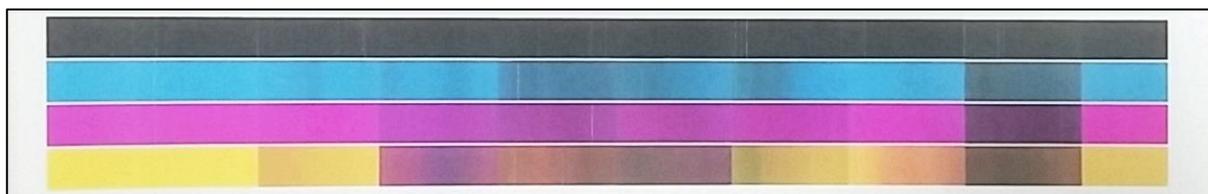
- Agent mixing

Problem description	Possible causes	Recommended actions
The color of the agent is wrong	<ul style="list-style-type: none"> - Printhead crashes into powder - Fiber particle on the die bridges 2 ink slots - Powder buildup inside the cap touches the printhead - Internal Printhead Failure 	<ol style="list-style-type: none"> 1. Clean the cap thoroughly 2. Run Printhead Recovery Routines to clear the color mixing 3. If the color mixing returns repeatedly at the exact same location, then the printhead has an internal defect and must be replaced

Diagnostic A defect sample:



Diagnostic D defect sample:



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