

Schedule of maintenance (Form 4L generation)

Proactive maintenance is key for keeping your Form 4L generation printer printing successfully. Review the table below for a schedule of suggested maintenance procedures and links to additional guides and resources.

Between prints

COMPONENT	INSPECTION	MAINTENANCE STEPS	EST. TIME
Build platform	Inspect the build platform for liquid resin, tackiness, or cured resin on the print surface.	Use isopropyl alcohol and paper towels to remove liquid resin or tackiness. Use a scraper to remove cured resin.	0.1 hours
Resin cartridge	Inspect the resin cartridge thoroughly for leakage, especially around the cartridge skirt and the rubber bite valve.	Do not use the resin cartridge if you notice resin leakage. Place the resin cartridge in a plastic bag and contact Formlabs Support or your authorized reseller .	0.1 hours
Resin cartridge	Check to see if the resin is past its shelf life (24 months for most resins). The production date is printed on a sticker on the bottom of the cartridge.	Dispose of liquid resin according to environmental regulations.	0.1 hours
Resin tank	Check for any cured resin or other debris in the resin tank.	Use the plastic tank scraper included with the printer to carefully inspect the tank film and remove any debris .	0.1 hours

When changing resin types

COMPONENT	INSPECTION	MAINTENANCE STEPS	EST. TIME
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COMPONENT	INSPECTION	MAINTENANCE STEPS	EST. TIME
Mixer	If you are reusing the same mixer with multiple resin types, fully clean the mixer when you change to a new resin.	Unlatch and remove the mixer from the printer. Clean the mixer with a solvent such as IPA or TPM. Allow the mixer to dry fully before reinserting it. If you cleaned the mixer with a solvent that does not readily evaporate, such as TPM, you may need to manually dry the mixer.	0.2 hours

Incidental (as needed)

COMPONENT	INSPECTION	MAINTENANCE STEPS	EST. TIME
PreForm	Open PreForm and check for version updates. Select Help > About PreForm from the menu bar to check for PreForm updates.	If PreForm is unable to connect to the internet, PreForm versions can be downloaded manually .	0.1 hours
Printer firmware	Open PreForm. Expand the right panel by clicking the button. Click the Printer Name to open the Job Setup window. Select the appropriate printer from the list to open the Printer Details window. Click Firmware Update .	If the printer is unable to connect to the internet, firmware versions can be downloaded to your computer . Manually downloaded files can be loaded via PreForm in the Firmware Update window.	0.1 hours
Print failure	The print fails to adhere to the build platform or parts of the raft are curling off the build platform.	• Inspect the Light Processing Unit (LPU) for dust or debris. • Test the function of the Backlight Unit and LPU. • Starting a print before it reaches the correct temperature can result in poor adhesion to the build platform. Ensure that the printer has reached the correct temperature before printing. • In PreForm, using the Slicer tool, check the first layer to ensure your part has good contact with the build platform. In some cases, the raft may be small or narrow for adequate adhesion.	0.5 hours

COMPONENT	INSPECTION	MAINTENANCE STEPS	EST. TIME
Resin cartridge	The printer has been in the Filling stage for a prolonged period of time but is not dispensing resin.	• Check that the vent cap on the resin cartridge is open. • Put on a pair of nitrile gloves, close the vent cap on the resin cartridge, and remove it from the printer. Turn the cartridge over and locate the black rubber bite valve on the bottom of the cartridge. Squeeze the bite valve several times against the hard shell of the cartridge until it unseals and fully opens. If unable to open the bite valve in this way, please contact Formlabs Support or your authorized reseller.	0.1 hours
Resin tank	A resin tank is inserted but the touchscreen displays Error 1.6.9: Tank missing alert or Error 1.6.12: Tank not locked .	• <u>Check that both tank latches are fully closed</u> and that the resin tank is secured. • Test a different resin tank to determine if the issue is related to the original resin tank or the printer.	0.1 hours
Resin tank	<u>Inspect the resin tank for damage and wear</u> after a print failure. Form 4 and Form 4L generation resin tanks have an estimated lifetime of 75,000+ layers with any Formlabs material.	Replace the resin tank if you notice: • Punctures, cuts, wrinkles, or gouges in the film • Film wear that begins to affect print quality • Unexpected print failures that occur only when using this resin tank Formlabs recommends replacing your Form 4 or Form 4L generation mixer whenever you replace the resin tank.	0.2 h
Light Processing Unit (LPU)	Remove the build platform, mixer, resin tank, and resin cartridge. Inspect the release texture on the LPU for dust or debris.	<u>Remove any contamination</u> using a dry photographic wipe (PEC*PAD) and a rubber bulb blower. If the contamination is difficult to remove, a small amount of isopropyl alcohol (IPA) may be applied to the photographic wipe to aid removal. Clean the release texture in a slow, straight wipe from one side to the other. Repeat until all contamination is removed.	0.2 hours
Z-axis lead screw	Remove the build platform, mixer, resin tank, and resin cartridge. Unplug the printer. With a gloved hand, rotate the Z-axis lead screw.	As the build platform mount moves up and down along the Z-axis, check for areas that emit noise or where the build platform carriage sticks or moves less smoothly. Visually inspect the lead screw to ensure that no debris or foreign objects obstruct it or its motion. If needed, clean the lead screw and relubricate with a light layer of lithium grease specifically intended for use with ball bearings.	0.3 hours

COMPONENT	INSPECTION	MAINTENANCE STEPS	EST. TIME
Mesh filter	- When the printer indicates that the mesh filter should be cleaned. - When the printer indicates that the heater or resin has exceeded its target temperature.	If necessary, move the printer to be able to access the right side of the machine. Locate the mesh filter and remove it from the printer. <u>Vacuum the mesh filter</u> until it is clean and free from dust or debris. If the mesh filter cannot be cleaned, replace it. Reattach the mesh filter to the printer, ensuring that it is aligned with the air intake vents.	0.1 hours
Door window	Inspect the door window for smudges and contamination that may make it difficult to see into the printer.	Clean both sides of the printer door window using lens cleaner spray and a microfiber cloth.	0.1 hours

Contacting Formlabs Support

If the troubleshooting steps above do not resolve the print failure, contact [Formlabs Support](#) or your [authorized reseller](#).

To help us provide the fastest and most effective response to your issue, please provide the following information:

1. [Upload diagnostic logs](#)
2. Serial name of the printer
 - [The serial name is on the back panel of the printer](#) in the format **Form4L-AdjectiveAnimal**.
 - Tap the printer icon on the **Home** screen.
3. Troubleshooting steps attempted
 - Example: "I reoriented the model in PreForm. I inspected the resin tank and did not notice any damage, clouding, or debris."
4. Resin formulation and lot number
 - The lot number is inside [the skirt of the resin cartridge](#).
5. Layer thickness
 - Tap **Queue** on the **Home** screen.

6. Relevant FORM files

- If available, attach FORM files of the model to the support request.

7. Previous attempts to print the part and any successful prints

- Example: "I printed the file part2.form three times previously. The first and second were successful. The third one failed."