

Pro3 Series - Advanced Preventive Maintenance - V1.0

Regular printer maintenance is the key to maintaining consistently high-quality 3D printing results and keeping your 3D printer in good condition.

Perform advanced preventive maintenance on the basis of the basic preventive maintenance to further maintain the long-term and stable use of your printer. Refer to [Basic Preventive Maintenance](#) for basic maintenance.

The table below includes specific checkpoints, repair steps, and related resources.



Caution!

Before starting any repair or maintenance work, make sure that:

- 1) The printing task is complete.
- 2) The filaments have been unloaded from the printer.
- 3) The printer is off and the extruders, nozzles and build plate are at room temperature.
- 3) Always wear protective glasses and safety gloves.

Daily

1. Build Plate

COMPONENT	INSPECTION	MAINTENANCE STEPS	EST TIME	FREQUENCY	RESOURCE
Build Plate	Check whether the build plate is damaged.	If the build plate is intact, it can be used during printing. If the print plate is badly damaged, replace the build surface.	0.1 h	Perform this check for each print.	
	Check the build plate for any remaining filament.	Use a spatula to remove hard-to-remove solidified filament.	0.1 h	Perform this check for each print.	
	Clean the build plate.	After removing the build plate from the printer, use a clean towel and isopropyl alcohol to clean the build surface. Note: Do not clean the build plate directly on the printer or while the printer is on. Either of these actions may result in short-circuiting.	0.1 h	Perform this check for each print.	How to Clean the Build Plate

2. Interchangeable Hotend

COMPONENT	INSPECTION	MAINTENANCE STEPS	EST TIME	FREQUENCY	RESOURCE
Interchangeable Hotend	Check if the interchangeable hotend is installed correctly.	If the interchangeable hot end is not installed correctly, the indicator light will show an error.	0.1 h	Perform this check for each print.	How to Install and Disassemble the Interchangeable Hot End
	Check if the model cooling fan or the side fan are working properly.	Install the interchangeable hotend correctly according to the relevant tutorial.	0.1 h	Perform this check for each print.	

3. Nozzle

COMPONENT	INSPECTION	MAINTENANCE STEPS	EST TIME	FREQUENC E	RESOURCE
Nozzle	Check for any residual filament in the nozzle.	Use tweezers to remove any residual filament in the nozzle while heating.	0.1 h	Perform this check for each print.	
	Check if the filament loading process is smooth.	If the filament loading process is not smooth, it could be caused by filament jamming. Check the “How to Remove the Jam” resource.	0.1 h	Perform this check for each print.	How to Remove the Jam

4. X/Y axis

COMPONENT	INSPECTION	MAINTENANCE STEPS	EST TIME	FREQUENCY	RESOURCE
X/Y axis	Move the print head to check if it moves smoothly.	If the print head does not move smoothly, use a clean towel to wipe the residual lubricating oil on the X/Y axes, and then apply new lubricating oil.	0.5 h	Perform this check for each print.	How to Lubricate the Axes

5. Z-axis

COMPONENT	INSPECTION	MAINTENANCE STEPS	EST TIME	FREQUENCY	RESOURCE
Z-axis	Move the build plate to check if the Z-axis moves smoothly.	If the Z-axis does not move smoothly, use a clean towel to wipe the residual oil on the Z-axis, and then apply new lubricating oil.	0.5 h	Perform this check for each print.	
	Check for residual filaments jamming Z-axis screws and rods.	Remove residual filaments.	0.5 h	Perform this check for each print.	

After every 400 hours of printing:

Further maintenance may be necessary on some parts after 400 hours of printing.

1. Nozzle

COMPONENT	INSPECTION	MAINTENANCE STEPS	EST TIME	FREQUENCY	RESOURCE
Nozzle	Clean the nozzle or replace the nozzle.	Remove any residual filament from the nozzle when it is heated state. The frequency of nozzle replacement is determined by the wear caused by different filaments. If the effect of the printed model deteriorates or the nozzle is too jammed to be cleaned, it is recommended to replace the nozzle.	1h	After every 400 hours of printing.	Contact Raise3D after-sales support.

2. X/Y axis

COMPONENT	INSPECTION	MAINTENANCE STEPS	EST TIME	FREQUENCY	RESOURCE
X/Y axis	Check the belt tension on the X/Y axis.	Adjust the tension of the belt on the X/Y axis.	1.5 h	After every 400 hours of printing.	Contact Raise3D after-sales support.
	Check that the screws on the X/Y axis and motor pulley are tight.	Tighten the screws on the X/Y axis and motor pulley.	1.5 h	After every 400 hours of printing.	Contact Raise3D after-sales support.
	Move the print head to check if it moves smoothly.	Clean the dust and oil on the X/Y optical axis and screws, and lubricate the X/Y axis.	1.5 h	After every 400 hours of printing or when the print head does not move smoothly.	Contact Raise3D after-sales support.

3. Z-axis

COMPONENT	INSPECTION	MAINTENANCE STEPS	EST TIME	FREQUENCY	RESOURCE
Z-axis	Check the Z-axis and screw for dust and oil.	Clean and lubricate the Z-axis and screws.	1 h	After every 400 hours of printing.	

4. Extruders

COMPONENT	INSPECTION	MAINTENANCE STEPS	EST TIME	FREQUENCY	RESOURCE
Extruders	Check whether the extruder is jammed when filament jamming occurs during printing.	Open the front cover of the extruder, remove the gear and clean the residential filament.	1.5 h	After every 400 hours of printing.	How to Remove the Jam

5. Others

COMPONENT	INSPECTION	MAINTENANCE STEPS	EST TIME	FREQUENCY	RESOURCE
Printer	Clean the printer.	Clean the printer body, internal and external parts. Clean the build plate.	2 h	After every 400 hours of printing.	
Other Parts	Check for residual filaments near probes, nozzles, and fan covers.	Remove residual filaments.	1h	After every 400 hours of printing.	

After the printer prints for more than 600 hours:

For the printer to operate for a longer time, the following maintenance needs to be added on the basis of the basic maintenance when the printer prints for more than 600 hours:

1. Interchangeable Hotend

COMPONENT	INSPECTION	MAINTENANCE STEPS	EST TIME	FREQUENCY	RESOURCE
Interchangeable Hotend	Check whether the screws fixing the heating block and the thermocouple are tight.	Tighten the screws fixing the heating block and the thermocouple.	1 h	After every 600 hours of printing.	Contact Raise3D after-sales support.
	Check if the model cooling fan or the side fan are working properly.	If a fan fails or is not functioning properly, troubleshoot the fan. Note: The front model cooling fan runs automatically after the printer is powered on. Even though you can control the side model cooling fan on the touch screen and in the ideaMaker, pay attention to the difference between the two fans.	1 h	After every 600 hours of printing.	Contact Raise3D after-sales support.
	Check whether the screws for fixing the hot end are tight.	Remove the interchangeable hot end from the printer, remove the 4 fixing screws on the front model cooling fan, and then tighten the 2 hot end fixing screws.	1 h	After every 600 hours of printing.	Contact Raise3D after-sales support.

2. Filament Run-out Sensor

COMPONENT	INSPECTION	MAINTENANCE STEPS	EST TIME	FREQUENCY	RESOURCE
Filament Run-out Sensor	Check if the feeding holes of the filament run-out sensor is clean.	Use a vacuum cleaner to clean dust from the feeding holes in the filament run-out sensor.	1 h	After every 600 hours of printing.	How to Replace the Filament Run-out Sensor Assembly
	Check if the filament run-out sensor works properly.	Check whether the filament run-out sensor is functioning normally.	1h	After every 600 hours of printing.	Contact Raise3D after-sales support.

3. Air Flow Manager

COMPONENT	INSPECTION	MAINTENANCE STEPS	EST TIME	FREQUENCY	RESOURCE
Air Filter	Check if the filter element is black and invalid.	Replace the filter element.	1 h	After every 600 hours of printing.	How to Replace the Air Filter
Air Filter Fan	Clean the air filter fan.	Remove the air filter fan and clean the dust from the air filter fan.	1 h	After every 600 hours of printing.	How to Replace the Air Filter Fan
Cooling Fan	Clean the cooling fan.	Remove the cooling fan and clean the dust from the cooling fan.	1h	After every 600 hours of printing.	How to Replace the Cooling Fan

The above maintenance regulations are a reference for performing printer maintenance. If performing maintenance does not resolve the problem, contact Raise3D after-sales support.



America | Asia | Europe
Sales & Business: sales@raise3d.com
Technical Support: help.raise3d.com
For any other inquiries: inquiry@raise3d.com