


3D Printing Problems and Solutions

A Work In Progress. Please add your symptoms and photos below.

	Problem	Solution	Comments
blocked URL	First Layer Adhesion - poor adhesion on your first layer, characterized by blobs of hot plastic and cursing	<ol style="list-style-type: none">1. See 3D Printing Material - FDM for the ideal bed surface for your filament.2. (re)Apply hair spray or glue stick3. Increase the height of your first layer only4. Add structure to your print to enhance adhesion, such as brim5. Check the nozzle clearance when homed on the z-axis. Most printers should be between 0.006 and 0.010 inches.	Please request assistance if the printer must be adjusted.
blocked URL	Adhesion - Print comes loose from the print bed	<ol style="list-style-type: none">1. See 3D Printing Material - FDM for the ideal bed surface for your filament.2. (re)Apply hair spray or glue stick3. Add structure to your print to enhance adhesion, such as brim4. For some materials, like ABS, you may need to disable the parts cooling fan in your slicer settings	Please request assistance if the printer must be adjusted.
blocked URL	Elephant foot - print lifts at the corners	See Adhesion	
 Broken image	Underextrusion - parts are printing with too little plastic	<ol style="list-style-type: none">1. Double-check your extrusion settings in your slicer2. Do a "cold pull" to clear the nozzle	Please request assistance if a cold pull does not clear the blockage.
blocked URL	How to Remove Z-Seam	https://3dprintguides.com/2020/06/how-to-remove-z-seam-3d-print/	
blocked URL	Adjust Retraction Speed and Distance	https://3dprintguides.com/2020/02/best-retraction-settings-to-avoid-stringing/	

Cold Pull

A cold pull works by pulling semi-soft material back through the nozzle, along with any debris clogging the nozzle. It works best with slipper, soft materials like nylon. Special cleaning filament can be used to clean the nozzles on a regular basis.

1. Heat the hotend up to the working temperature of the filament to be used
2. Push the filament through the hot end until the previous material is cleaned out
3. Let the hotend cool
4. Heat it again to 110°C and pull on the filament while holding the extruder release until the filament comes out.
5. Cut off the melted end and repeat until it comes out clean and the nozzle is clear
6. Typically only a couple of cycles are needed

Resources

See the following links for more help.

[PrintaGuide](#) - one of the best 3D print quality guides on the interwebs.