TROUBLESHOOTING COMMON PRINT FAILURES

A Practical Visual Guide for Engineers & Technicians

3D printing is powerful - but when things go wrong, it can cost time, money, and momentum. This guide helps you diagnose and fix the most common print failures in FDM printing so you can get back on track quickly.

Issue	Common Symptoms	Likely Causes	Quick Fixes
Warping	Corners lifting, first layer curling	Low bed temp, poor adhesion, ambient cooling	Heated bed, adhesion aids, brim/raft
Stringing / Oozing	Fine hairs, messy small details	Low retraction, high temp, slow travel	Increase retraction, lower temp, dry filament
Layer Shifting	Layers misaligned, skewed parts	Loose belts, skipped steps, obstructions	Tighten belts, reduce speed, check firmware
Under-Extrusion	Gaps in layers, thin walls, weak parts	Clogged nozzle, low temp, filament feed	Clean nozzle, raise temp, calibrate extruder
Over-Extrusion	Blobby edges, excess material, stringing	High flow rate, wrong filament size, high temp	Adjust flow, correct diameter, lower temp
Layer Delamination	Splitting along layers, weak strength	Low temp, cooling too strong, wrong settings	Raise temp, reduce fan, print in enclosure

Bonus Tip: Diagnosing from the First Layer

Your first layer tells you a lot. Watch out for:

- Too far from bed: Loose, scattered lines → lower Z-offset or bed
- Too close to bed: Squished, elephant-foot edges → raise Z slightly
- Inconsistent lines: Level your bed and clean the surface

If you're still seeing issues, we're happy to review your STL, settings, or material.
Just send us a message at **hello@the3dprinters.co.uk** or upload files via our enquiry form.
We'll help you get it sorted - fast.