

Logo gear strength, clearance, and surface-quality tuning

3DP-022 / REV A / 2026.09.01

The gear record keeps the mechanical questions visible: finished clearance, free motion, first-layer stringing, small lettering, shell strength, top-surface quality, and whether the assembly remains usable after printing.

STATUS	Needs Retest
CLASSIFICATION	3DP
MATERIAL	3D PRINT / MAKER
DISPOSITION	PUBLIC / NEEDS RETEST
CATEGORY	3D Printing
RECORD TYPE	project

TECHNICAL NOTES

Moving logo-gear study balancing strength, clearance, lettering, and surface quality.

GOAL

Produce a strong moving gear assembly that is free rather than fused or sloppy.

EQUIPMENT

- Creator 5 Pro
- 0.4 mm nozzle
- Calipers

MATERIALS

- PLA

METHOD / STEPS

1. Measure the intended clearance in the model.
2. Print a small clearance coupon.
3. Check free motion after cooling.

4. Record actual finished clearance and surface quality.
5. Adjust one dimension or process variable per revision.

RESULT / WHERE THIS STANDS

Needs retest; an observed print moved but was slightly loose.

TROUBLESHOOTING

- Do not judge clearance while the part is still warm.
- Separate first-layer artifacts from model clearance.

SPECIFICATION

PRINTER	FDM printer / slicer
MATERIAL	Material requires confirmation
FOCUS	First layer, dimensions, surface, and function
VALIDATION	Small test print before release

DEVELOPMENT HISTORY

2026.09.01 / Rev A

Imported as an independent manifest record; public copy keeps uncertainty visible.

RELEASED MATERIAL / SOURCE LINKS

3dp-022-public-summary.txt

PUBLIC SUMMARY / RECOVERED NOTES

<https://u225x.com/downloads/manifest-records/3dp-022-public-summary.txt>

RETURN TO THE LIVING RECORD

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This PDF preserves the public notes at this revision. Visit the record for updates and attached images.

<https://u225x.com/record/3DP-022>