



Fully 3D Printed Bike Chain Gear Fidget Toy/Spinner



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Summary

This is an easy to print, easy to assembly fidget toy featuring a working chain, sprockets with print in place bearings.

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This is my take on a fidget toy I saw online. It is easy to print, even with bad printers, requires no support and works without lubrication.

Parts list:

- 15 chain links (can be printed together or individually)
- A 10-tooth sprocket with rotating bearing (print-in-place)
- A 7-tooth sprocket with rotating bearing (print-in-place)
- 2 chain spinner arms
- 2 large caps
- 2 small caps

Print Instructions:

Every part should be printed without supports.

There are TWO different clearances for the sprockets, 0.225 in and 0.15 inches. The large clearance should work for all printers.

The arms have a slight raised edges around the holes on one side so make sure that it is printed in the correct orientation.

Post- Processing and Assembly:

Note: The chains may require some light sanding to get it to move freely

Assemble the sprockets first. Line up the arms with the corresponding sprockets. Use the Caps to snap the pieces together. Then wrap the chain around and connect the ends together.

Other Notes:

- It can be printed at .28mm layer height
- I have had success down to 85% scale

Model files



large tolerance sprockets

2 files

10-tooth-sprocket-225-tolerance.stl



7-tooth-sprocket-225-tolerance.stl



small tolerance sprockets

2 files



7-tooth-sprocket-15-tolerance.stl



10-tooth-sprocket-15-tolerance.stl



chain-spinner-arm.stl



single-link-chain.stl



chain-spinner-large-cap.stl



chain-spinner-small-cap.stl



15-link-print-in-place-chain.stl

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