



Toilet-Bolt Cover



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[VIEW IN BROWSER](#)

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Summary

Frustrated by frequently displaced bolt covers I 3D printed bolt caps that screw onto the bolts with embedded nuts.

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The clips under the nuts never did hold on to the plastic covers, so I 3D-printed a toilet-bolt cover with an embedded 5/16ths inch nut. The cover is half a hollow, elongated sphere with its end flattened. In the interior is a short cylinder with a hex-shaped chamber capped by a 1 mm thick nut-retaining ring. The trick is to pause the printer at the very top of the hex chamber to manually insert the nut. So now the covers thread onto the toilet bolts and stay in place.

I include both the OpenSCAD source and its .stl output. World-wide there are many variables at play in determining the configuration of the covers, so it is likely you will need to modify a parameter or two. If the .stl file is useless to you, you can modify the cover using the OpenSCAD source.

To insert the nut, program the g-code to pause printing at the top of the nut chamber. Using the Prusa Slicer for example, step through the print until the first layer that covers the nut. In other words, step up as long as you see the nut's hex chamber. Stop at the first (lowest) layer that covers the hex chamber with a ring. In my case with 0.2 mm layers, it was at Layer 60 or a height of 12.00 mm. There you can program a request to pause printing. The printer will stop at the highest layer with an open hex

chamber, and the print head will move out of the way, allowing you to drop a nut into the chamber. Asking for a colour change will also work but it requires you unload and reload filament. If you needed to adjust any of the parameters, then the pause might have to be programmed at a different height or layer number.

Model files



toilet_bolt_cap.scad

toilet_bolt_cap.stl

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