



Metal axle with bearings for M416 trailer

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Summary

I have printed M416 trailer <https://www.thingiverse.com/thing:2055193> but I did not like design of axle without...

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I have printed M416 trailer <https://www.thingiverse.com/thing:2055193> but I did not like design of axle without bearings and both wheels sturdily connected with axle. Also axle will be hitting stones so i would like to see axle from stronger material.

After my search I have end up with 4pcs of MR84ZZ (10x4x3mm) ball bearings, Ø10x1mm aluminium extrusion for axle, Ø8x1mm aluminium extrusion for spacer between pairs of ball bearings. Other materials I have used are 2pcs M4 screws with length 50mm, 4pcs M4 nuts, 2pcs M3 worm screws length 4mm, 4pcs M3 nuts and piece of M3 threaded rod.

After I cut extrusions to lenght and drilled holes, i filled edges of Ø8mm bearing spacers in stand drill to be sure that edges are square and bearing are not crooked. After that I could start with assembly. I used wise to press bearings and spacer on one side and secured with worm screw. Worm screws are in just 2mm and rest is used as locating pin fore leaf spring. After that you have put screws inside axle. I had to filed down to Ø6-7mm

heads of screws as they were too large. After that you can carefully pressed in second side.

Warning! Be sure, that screws are in bearings on both sides. Screws are long enough that they can stuck in middle between bearings and you can damage bearings or bent screws during assembly.

After that just add two M4 on each screw, adjust them so screws rotate freely i bearings and tight nuts together. Faces on nuts have to be corresponding so you can put HEX adapters over them.

Now you have completed axle.

To secure axle to leaf spring I used M3 threaded rod bent to U shape with help of heat and secured with M3 nuts. Or you can just use zip tie.

Print Settings

Printer Brand:

Anet

Printer:

E12

Rafts:

No

Supports:

No

Resolution:

0.3

Infill:

80

Filament: Pruša PETG Galaxy Black

Category: R/C Vehicles

Model files



m416_trailer_metal_axle.stp



leaf_spring.stl



hex_spacer.stl

Other files



m416_trailer_metal_axle.pdf

[Find source .stl files on Thingiverse.com](#)

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