



How to assembly FatBoy Mini Urethane Gear Drive

A small guide how to assembly the FatBoy Mini Urethane Gear Drive

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 **TOOLS:**

- [3mm Hex Key \(or Bit\)](#) (1)
- [2.5 mm Hex Key](#) (1)
- [Skateboard tool](#) (1)

 **PARTS:**

- [FatBoy Mini Urethane Gear Drive](#) (1)
- [Blue Loctite](#) (1)
- [MOLYKOTE G-67 Grease](#) (1)

Step 1 — Assembly Hanger Mounting hub



- Install 4 x M3 grub screws to the hanger hub.
- ⓘ Don't forget to use Loctite on grub screw thread

Step 2 — Attach hanger hub to the baseplate



- Install 4 x M2.5 bolts through the baseplate to hanger hub.
- ⓘ Don't forget to use Loctite on threads

Step 3 — Shorten motor shaft for motor gear mounting



- Cut the motor axle to the 18mm length from the baseplate.
- ⚠ Make sure to cover motor, motor wholes and whole motor with something to prevent metal dust getting into the motor. Magnets easily attracts metal particles inside and can cause shortening.

Step 4 — Prepare motor for mounting to baseplate



- ⓘ It is only useful when motor has open areas in the baseplate it minimize grease getting into the motor.
 - Attach stainless steel plate to the motor
- ⓘ Apply this step only if motor has keyway
 - Apply retaining compound like (Loctite 648) to keyway and install in the keyway

Step 5 — Attach motor to baseplate



- Use 3xM3 bolts to attach motor to the baseplate
- ⓘ Don't forget to use Loctite on threads

Step 6 — Attach motor gear to motor axle



- Tighten M2 grub screws on motor gear to secure motor gear on axle.
- ⓘ Don't forget to use Loctite on grub screw thread

Step 7 — Mount assembly on hanger



- Mount assembly to hanger
- Tighten grub screws to lock assembly in place.
- ⚠ Make sure the assemblies are parallel to the wheel.

Step 8 — Mount wheel gear assembly to axle



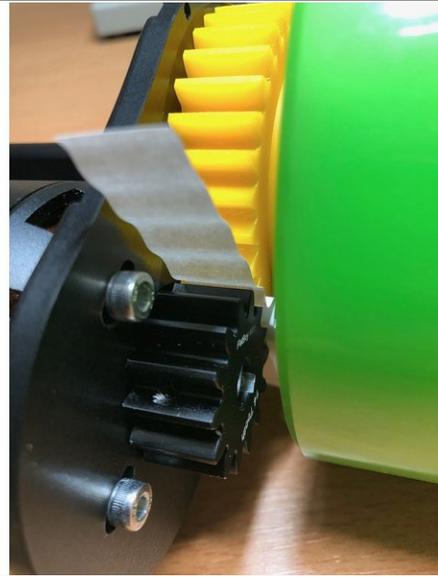
- Add brass washer to axle before mounting wheel hub.
- Attach wheel hub assembly to axle
- ⚠ Baseplate should be parallel to the wheel gear assembly otherwise wheel gear will mesh on angle and will cause negative effects.

Step 9 — Add wheel spacer



-  Add wheel spacer on axle which helps to keep tension between bearings

Step 10 — Mesh Gears



- Attach wheel to the wheel gear assembly
- ☒ Motor gear and Wheel gear assembly should be always parallel to each in all wheel position. If gears not parallel and at angle it can cause negative effects and product more noise than necessary.
- Loosen up motor bolts so that motor gear would press wheel gear.
- Use sheet of paper to drive it through wheel gear and motor gear. Spin wheel to push paper through the gears
- After meshing is good tighten motor bolts

Step 11 — Prepare final assembly



- Remove wheel from wheel gear assembly
- Put wheel gear into the cover and attach V-ring on the wheel gear.
 - ⓘ Use some grease on v-ring to make it easier to slide on the cover.
- It is good time to apply grease to the gears
- Use 7xM2 bolts to attach motor cover to baseplate

Step 12 — Mount cover to baseplate



- Use 6xM2.5 bolts to attach motor cover to baseplate

Step 13 — Repeat same for other side



- Use same instructions for assembling another side

Step 14 — Test spin



- Do a test spin on the bench to make sure everything is fine and sounds okay
- On the first test ride start by slowly accelerating and slowly braking to make sure everything is working fine.
- If there is some minor vibration happening at specific RPM it can be some misbalance in wheel/gears which should disappear after gears sit down in their place.

To reassemble your device, follow these instructions in reverse order.