

UPDATE – 11/17/2016 – Version 2.1 Major Update – The following improvements have been made with this new release:

- The RH version has been reworked so that the Hotend Sub-Assembly is identical between the LH version and the RH versions. The Hotend Sub-Assembly now has a standard interface that will be used across many different upcoming Toranado Extruders. **No changes have been made to the hardware kits at this time.**
- The 40mm Bed Cooling Fan has been updated to a Delta **AFB0412SHB** 40x40x15 (I bought mine on Newegg). The airflow and bed cooling capabilities with this fan are outstanding. The extra 5mm of depth on the fan profile necessitated the removal of the 40mm fan cover that has been used on previous Toranado versions. Build Instructions have been updated.
- The 30mm fan cover is now exclusively the low-noise version. This will likely be updated with the winning fan from the **Toranado 30mm Fan Grille Contest**.
- All of the .STL files were saved with tighter tolerances and should look slightly better when printed.
- Print settings have been updated.

UPDATE - 11/16/2016 - I am still waiting on some shiny-new 94T Main gears from my gear supplier. I am expecting them in 7-10 days. I am sorry about the delay, but will post the updated kit links as soon as I get them.

UPDATE - 11/1/2016 - MAKER jakep_82 has posted a comment in the comments section, please take the time to read it and by way of reminder - it is very important that you carefully adjust your stepper drivers and monitor the heat from your NEMA-14 motor. Too much heat on your NEMA-14 can cause the bearing fit in the bearing holder to relax and loosen over time, leading to drive gear slippage and a failed print.

UPDATE - 10/18/2016 - New 40mm fan duct is now released. [Download Now](#)

UPDATE - 10/10/2016 - I updated the 40mm fan duct to get the airflow closer and directly onto the nozzle tip. I'd recommend that you [print the new fan duct](#), it is an excellent upgrade.

I have also updated the BOM at the bottom of this details page with a new 40mm fan that I recommend.

Note: If you upgrade to this fan you will have to remove your 40mm fan cover, as this fan is a 40x40x15.

UPDATE 9-9-2016 – I uploaded a 3D-printable shaft collar for those who do not desire to buy a metal one. Just download/print tpgc-shaftcollar.stl and install it using an m3x4 grub screw. This file is also now included in the LH/RH download .ZIP files.

UPDATE 8-26-2016 - I have released a minor v2.01 update. Three of the .STL files have been modified:

- idler-LH/RH.stl
- idlertensioner-LH/RH.stl
- bearingholder-LH/RH.stl
 - The bearing holder has a slightly tightened fit to both the bearing and mounting screws - this helps keep the bearing holder from floating when force is applied to the drive gear.
 - The idler and idler tensioner have been modified to make the neck area of the idler more robust. This was done to ensure that under a load it does not warp or bend. This helps to ensure a proper distance between the idler and extruder base (To ensure force is directly applied to the drive gear, you should always have a gap between the idler and the extruder base).

I have also updated the recommended infill on these parts in the print settings.

I recommend that you download and install these three upgraded parts ASAP.
