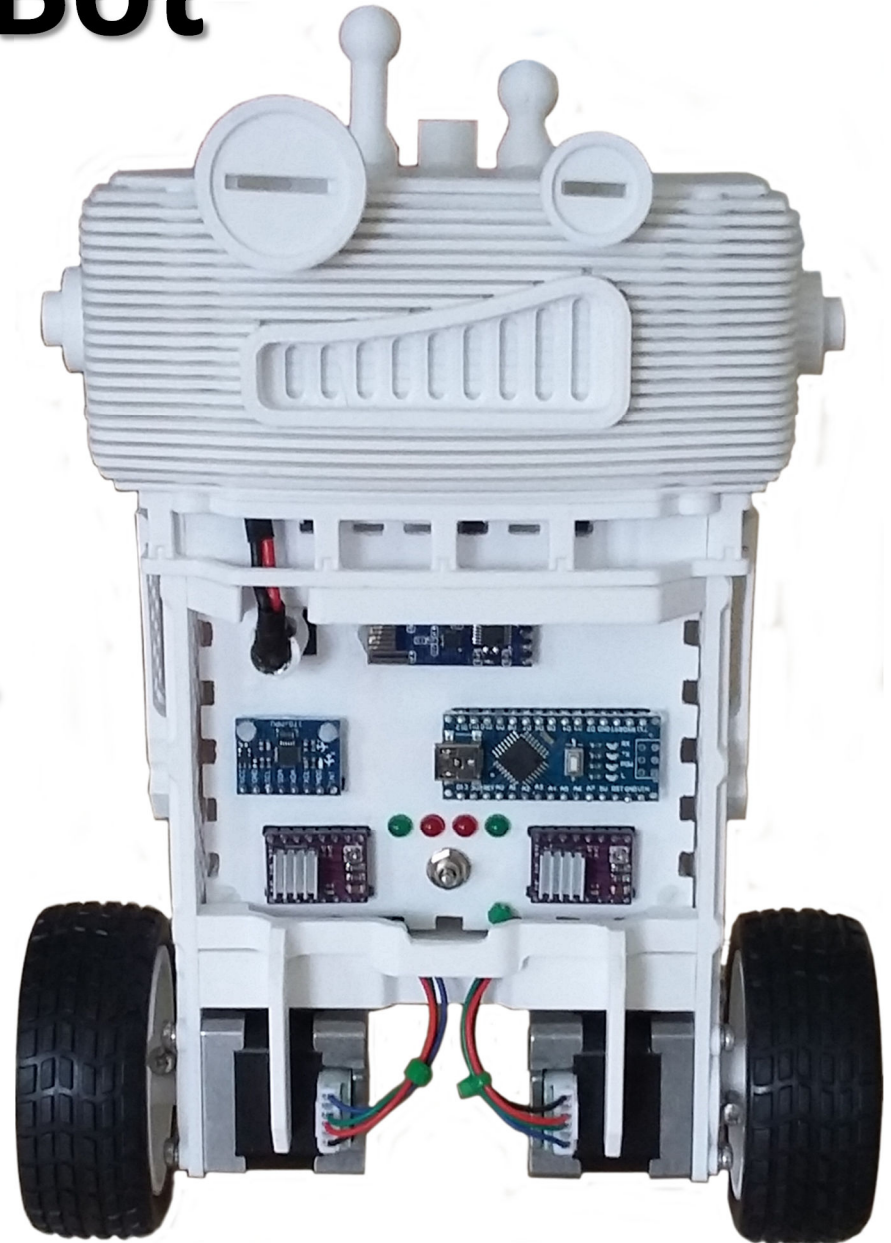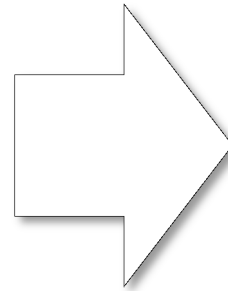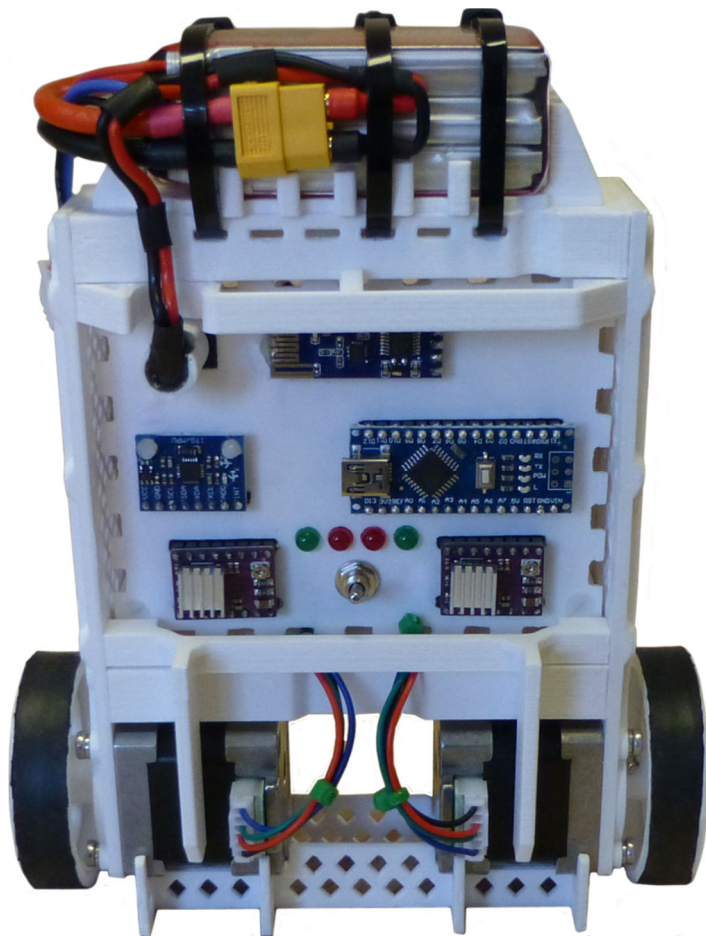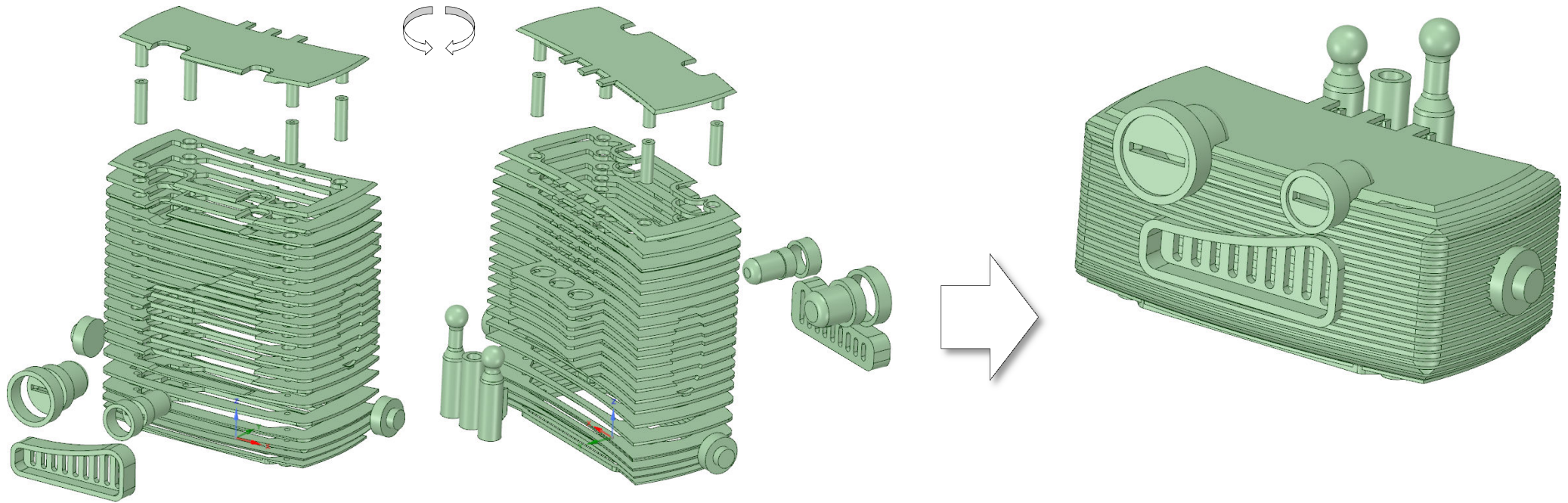# BalanceBot
Update

BalanceBot Update - requested by Andrea in Italy

This update provides you with all of the 3-D model files needed to make the robot shown in my video. The head was added to make the robot look more appealing, and is detachable in order to gain access to the battery for charging. Or even for replacement if you want to fit different head designs of your own.

There are 23 plates in this design, gained from sectioning a solid shape, and it is essentially hollow, so it doesn't use too much plastic. This is to allow for the battery, which sits on the top of the robot, but also means that you could add more electronics to the head if you so wished. You could add sensors and flashing LEDs to make it much more interesting.

The upper part of the head is assembled and glued together, as parts like the mouth, eyes, ears and antenna are glued to it too. Where as the plates in the lower half are simply pulled together with screws, which also attach the head to a neck component, that in turn clips into place over the battery.

In addition to the 3-D models I have attached a model for a wheel hub, which accepts robot car tyres, as these look much better than ones made from rubber tubing. As these wheels are bigger the gain values in the PID controller need to be changed, so I have provided the latest Arduino .ino files too. The stand for the robot also needs to be higher for increased ground clearance.

# BalanceBot Update – 3-D Parts

I decided to attach the head to the robot body using a neck component, that would sit on top of the top bounce rail, and be held in place by two side clamps. These side clamps are permanently glued to the side plates of the robot, and the neck component is made out of two parts, which are held together with twelve 6x2mm steel screws.

I would suggest that you make these parts first and fit them in place, to ensure that they fit well, or adjust if necessary.
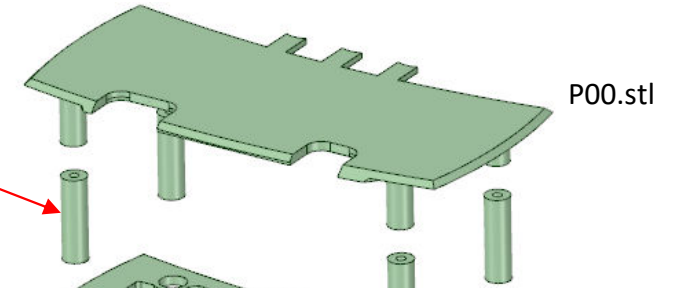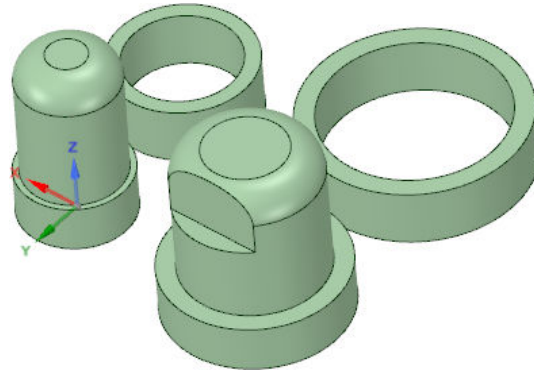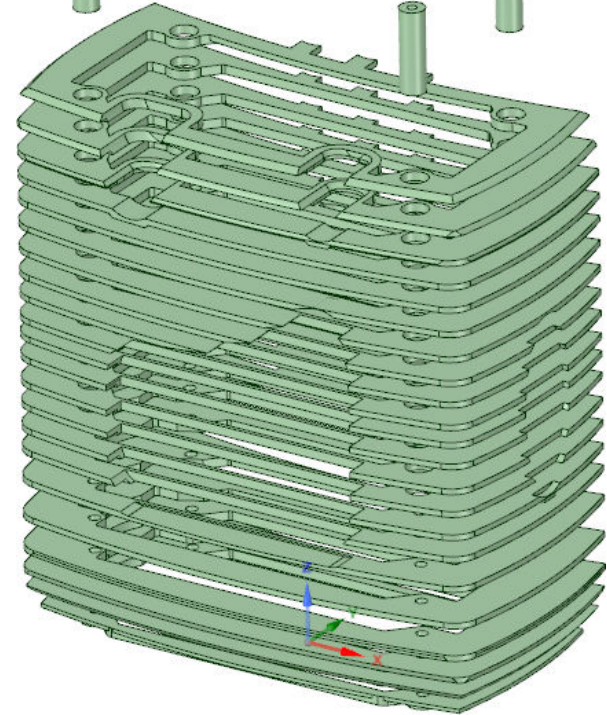
2 x Side Clamp 00.stl

Lower

Upper

Head Neck 01.stl
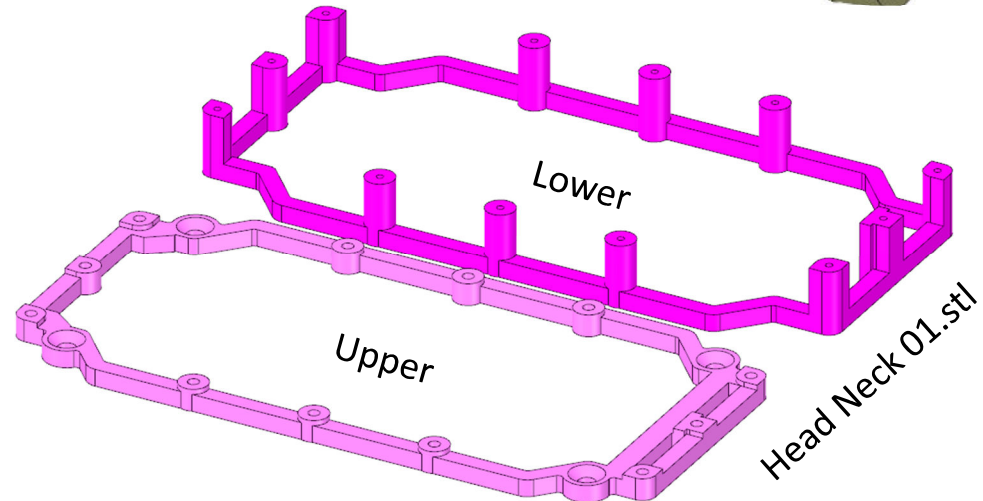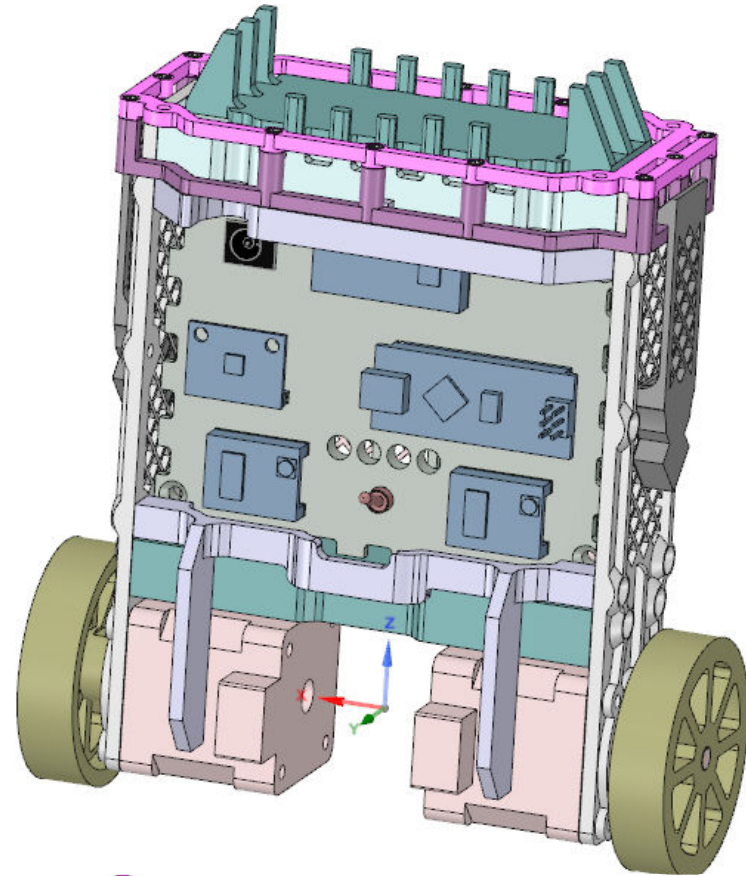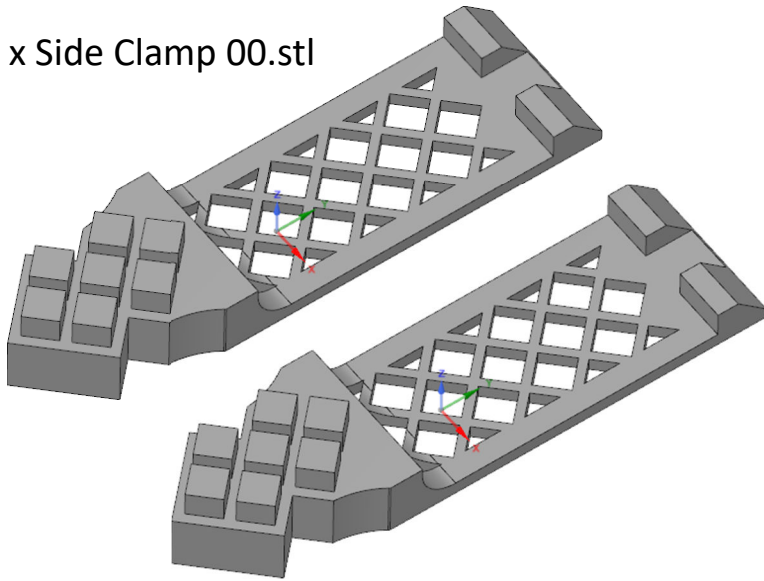
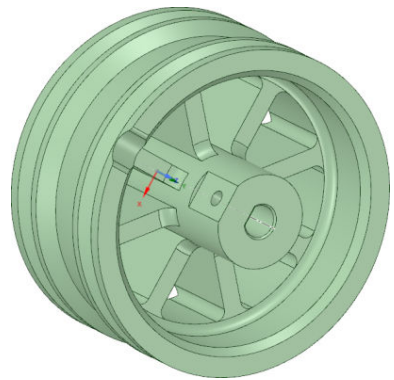# BalanceBot Update – 3-D Parts
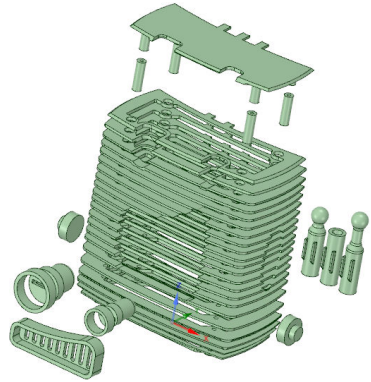
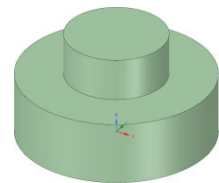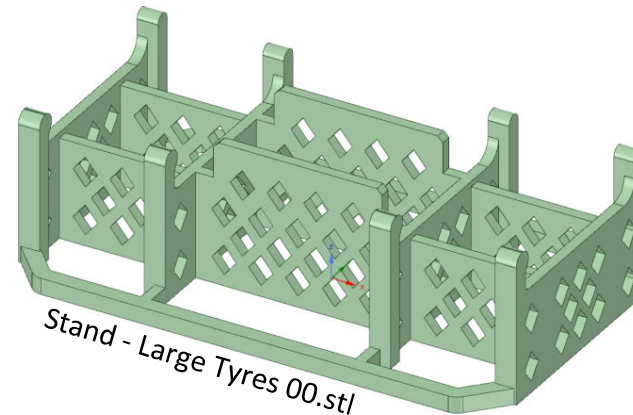4 x Head Spacer 00.stl

P00.stl

P01.stl

P22.stl
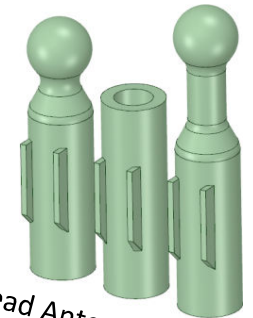
Head Eyes 00.stl
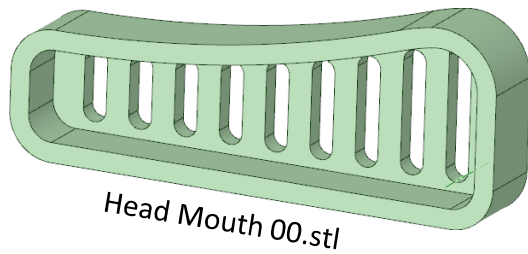
Head Mouth 00.stl

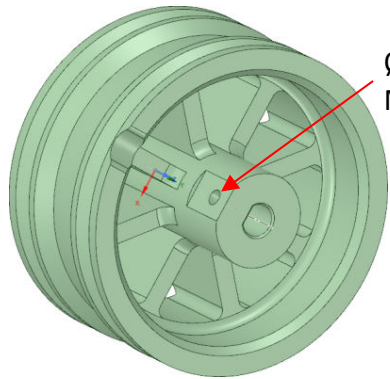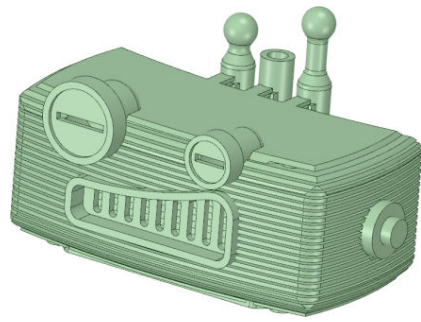2 x Wheel - Robo Car Tyre 01.stl
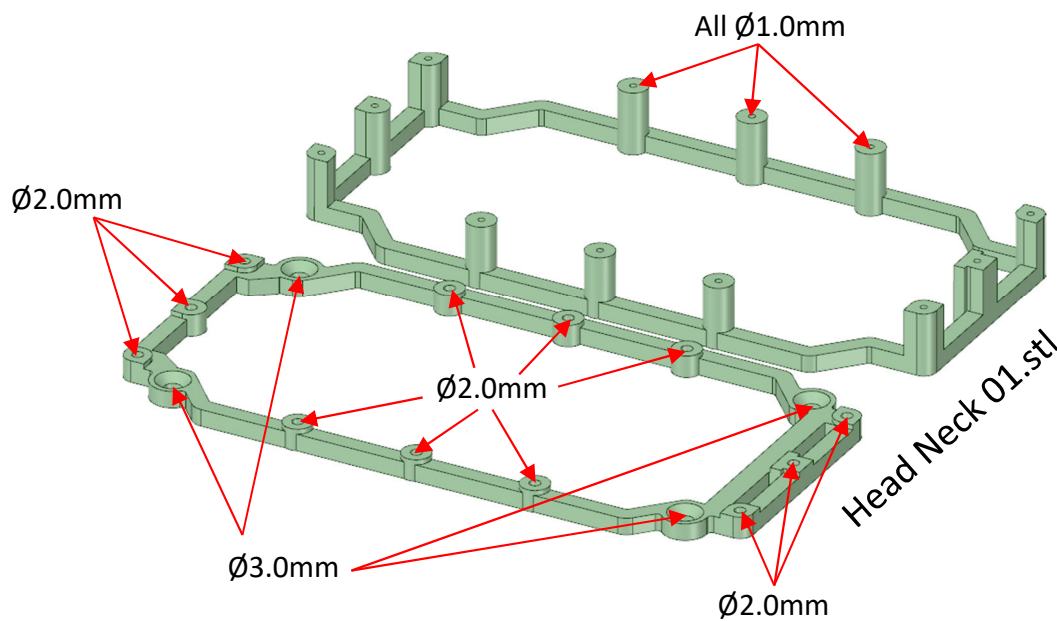
2 x Head Ear 00.stl

Stand - Large Tyres 00.stl

Head Antenna 00.stl

Drill & Tap Sizes

Holes may not print to correct size. Pilot hole sizes are required as a foundation for tapping.

Ø2.5mm
M3 Tap

Ø2.5mm
M3 Tap

2 x Wheel - Robo Car Tyre 01.stl
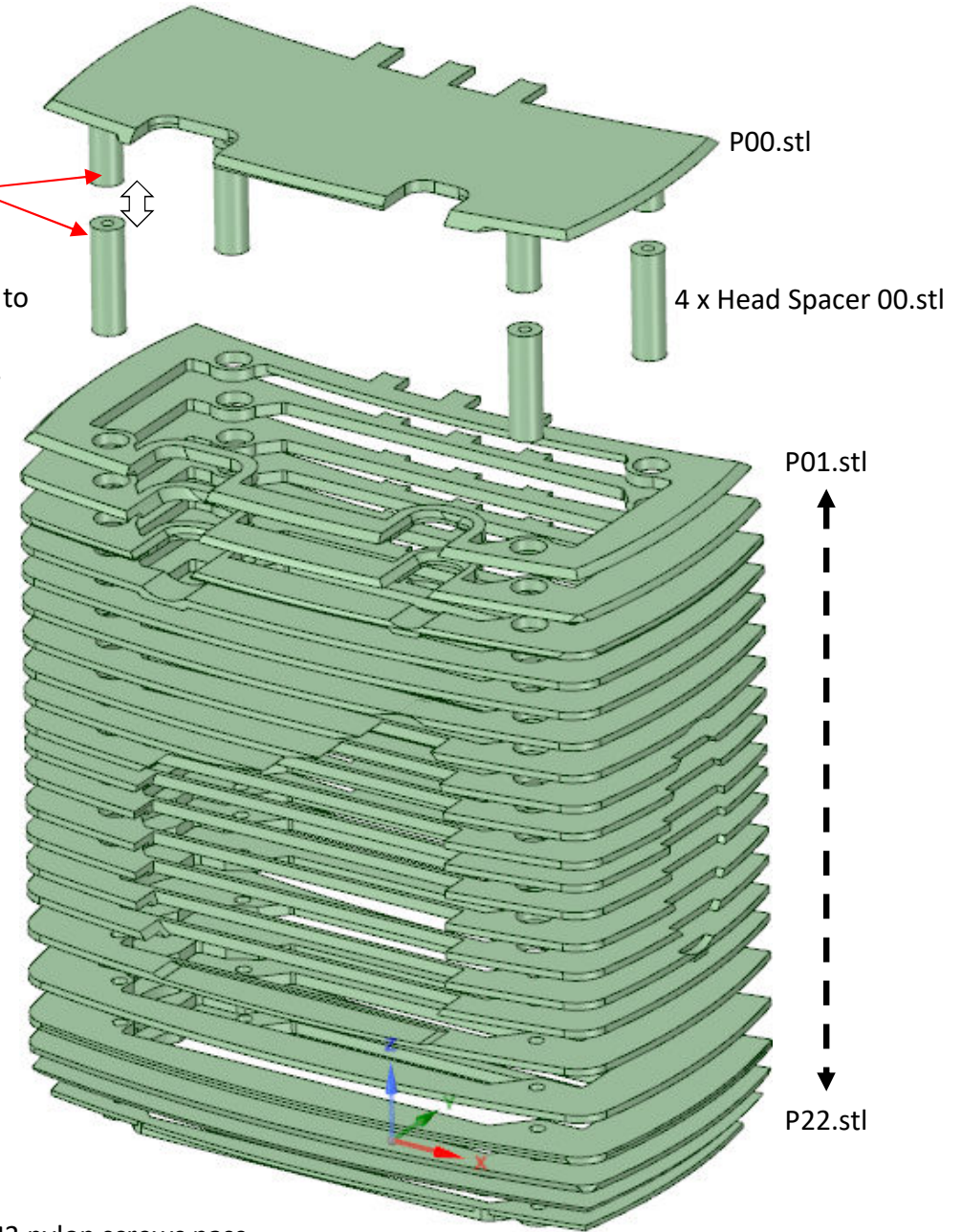
Attach Head Spacers to P00 with M3 nylon threaded screw bars.

Plates P00 – P14 are glued together before the eyes, mouth and ears are glued into position.

P00.stl

4 x Head Spacer 00.stl

P01.stl

P22.stl

All Ø1.0mm

Ø2.0mm

Ø2.0mm

Ø3.0mm

Ø2.0mm

Head Neck 01.stl

M3 nylon screws pass through the upper neck and head plates P15 – P22, into the Head Spacers..

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