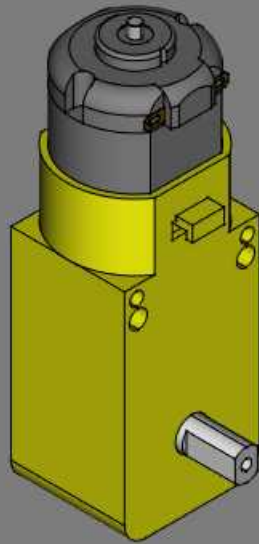
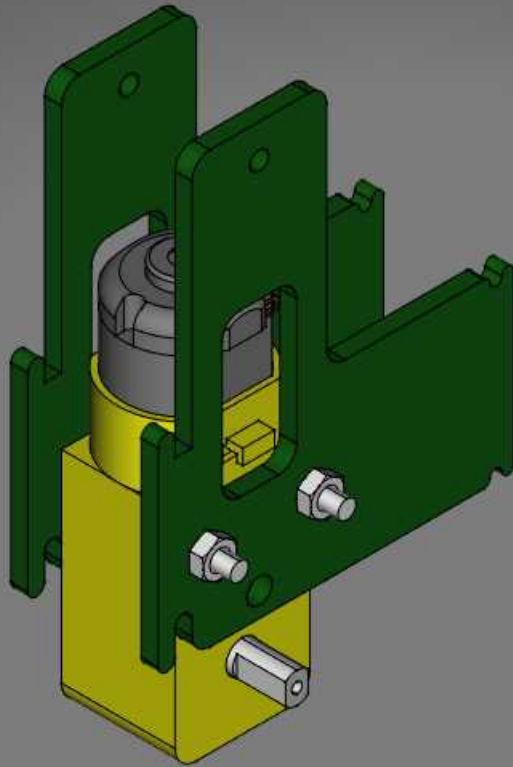
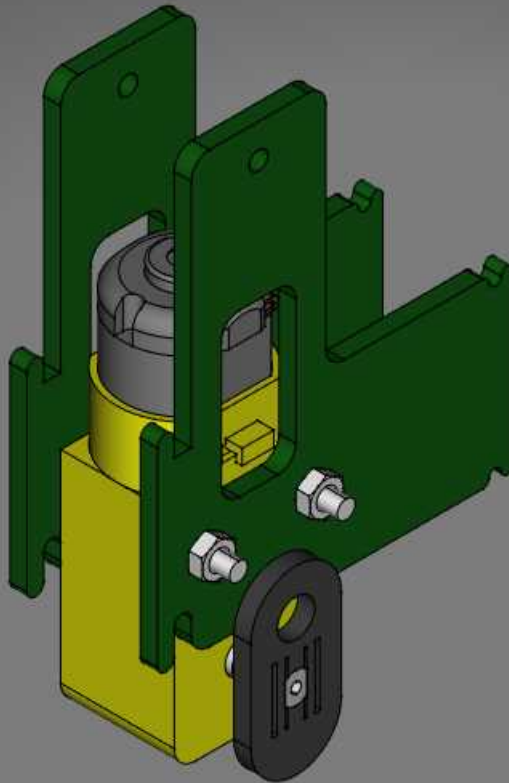


Geared Motor



Fix two side body pieces
using 30mm screws and nuts



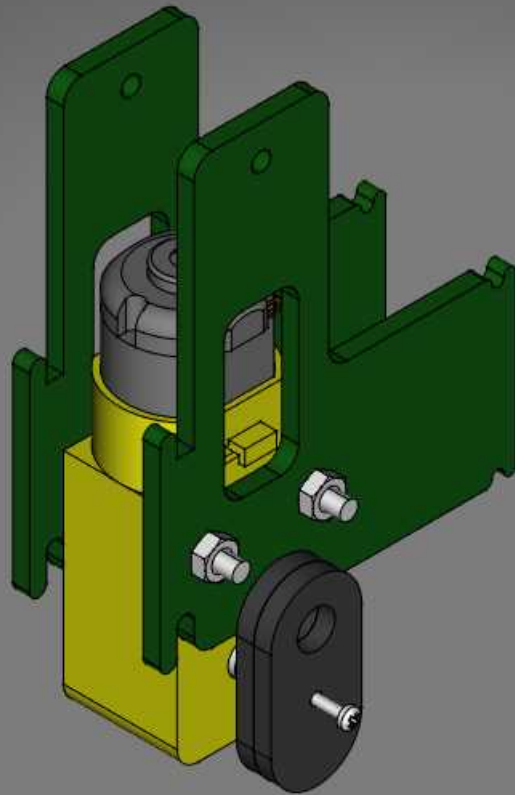


Press fit the first part
of the Cam

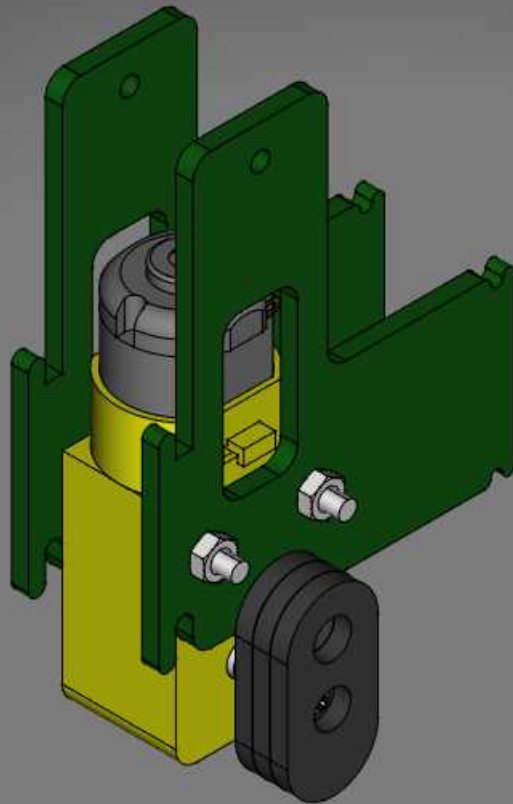
IMPORTANT

Identifying kerf / cutting direction
will make things easier.

It may be easier to insert from one
direction than from the other.



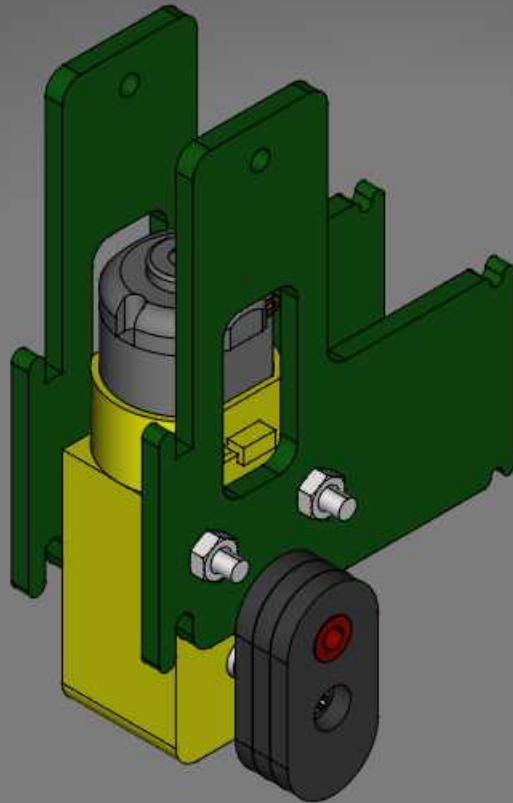
Screw fit the second part
of the Cam.
Make sure both cam pieces
are aligned



Place the third part
of the Cam.

NOTE :

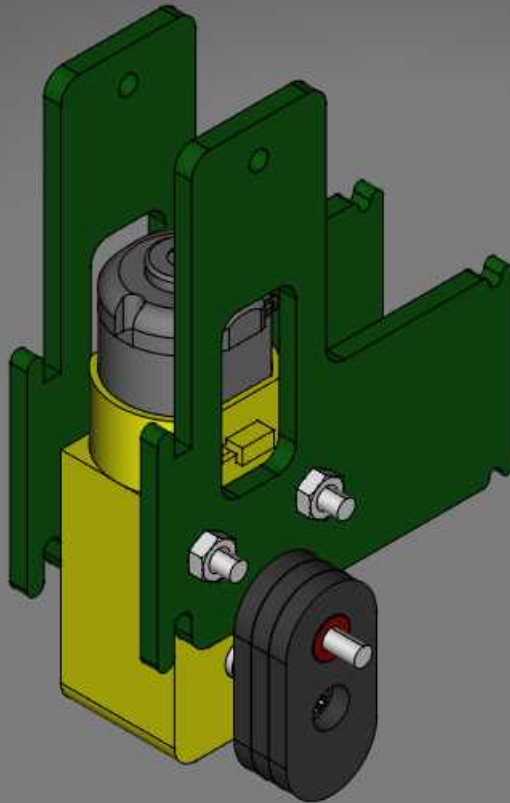
- It will help if the three cam pieces are first assembled together as one part before installing.
- Stick them together using scotch/cello tape around the oval periphery of the cams.
- Then insert on the motor shaft to fix the first cam.
- Next fix the screw on motor shaft to fix the second cam.
- Finally, fill the central hole in the third piece with hot glue to fix the third cam.
- Make sure the hot melt is flush with the surface of the cam.
Cut off excess with a knife.



Insert the 3D printed spacer through the 3 cam pieces.

IMPORTANT

The length of the 3D printed spacer is slightly longer than the total thickness of the three cam pieces. (at least 0.5mm more)



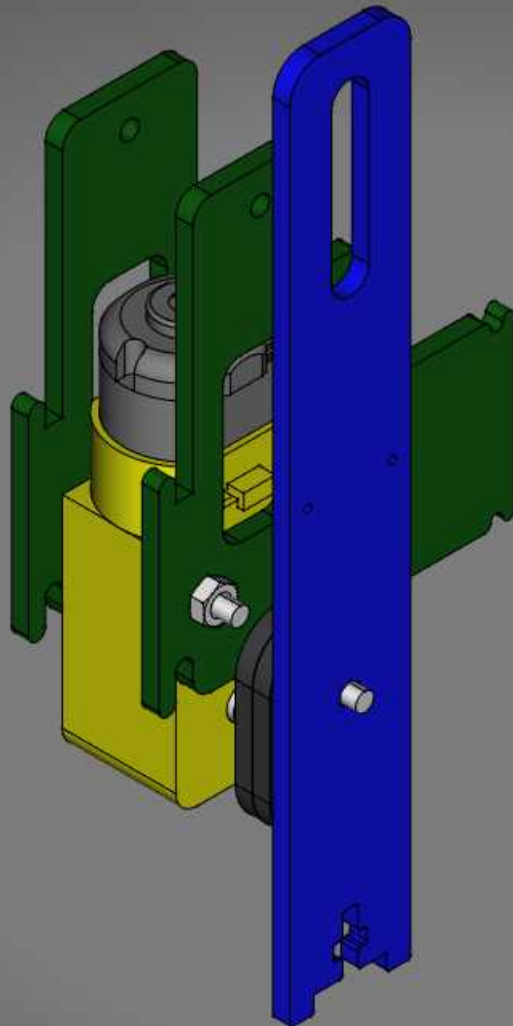
Insert the M3x14 mm screw with its head facing the motor.

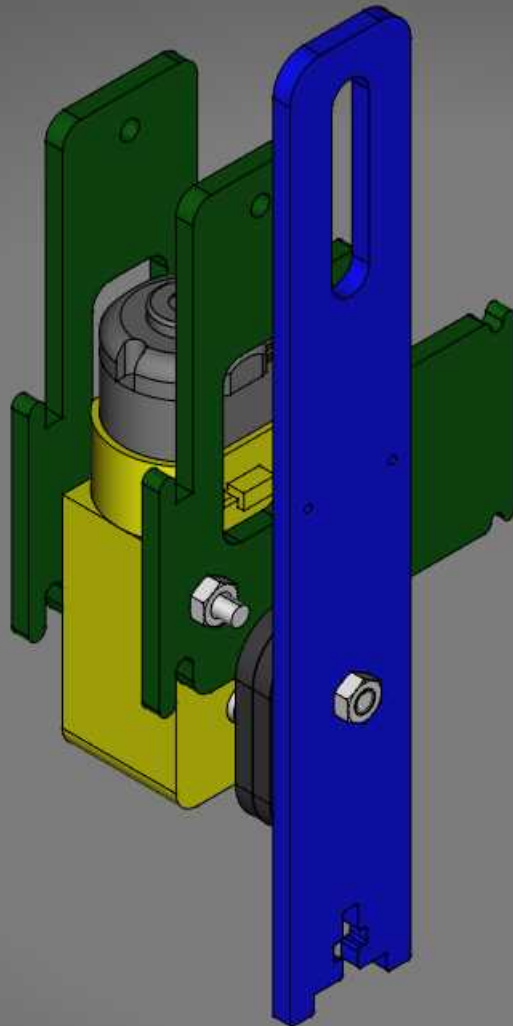
IMPORTANT

Use M3 screw with collar head. Else place a washer between screw and spacer.

Diameter of screw head collar / washer must be wider than diameter of spacer.

Insert the leg





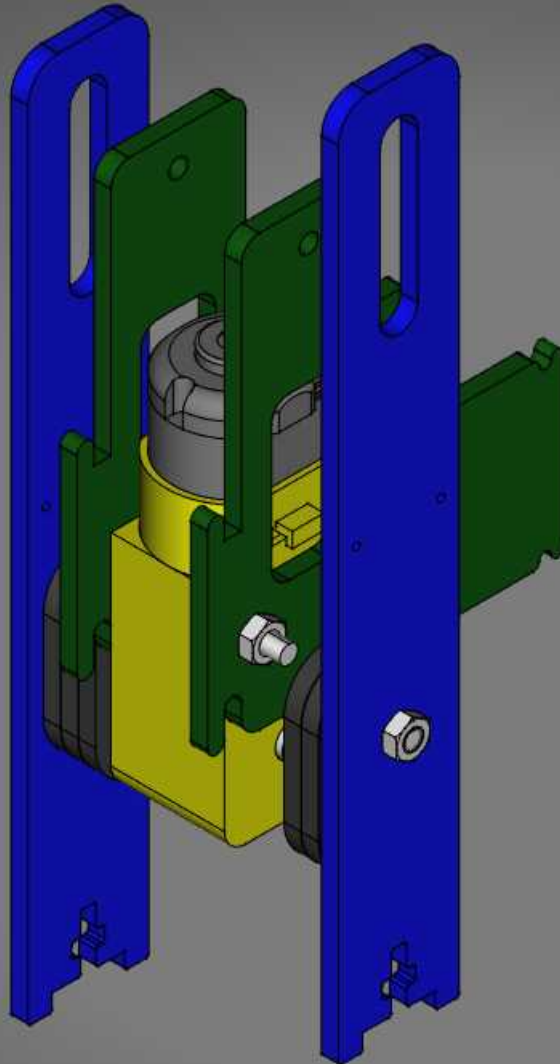
Insert the M3 nut and tighten.

A nyloc or similar locking nut is highly recommended since this is a moving piece and the nut can come loose and fall off.

A M3 spacer is recommended but not necessary. If locking nut is not used, then at least a lock washer is highly recommended.

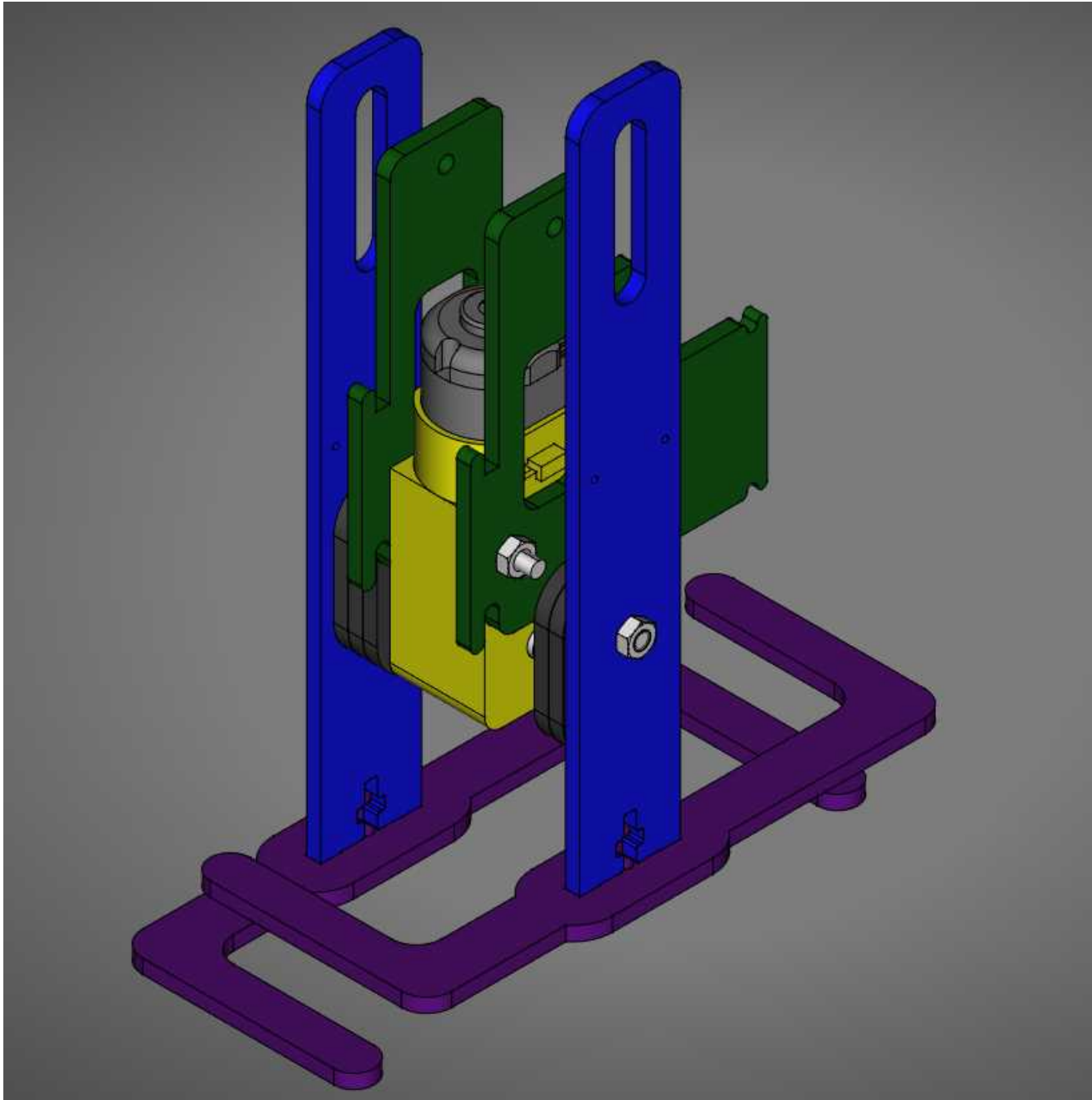
The nut is fully tightened against the screw.

If installed correctly, the screw assembly with spacer and leg are free to rotate around the cam.



Repeat on the other side.

Parts on both sides are identical so not necessary to differentiate between right and left.

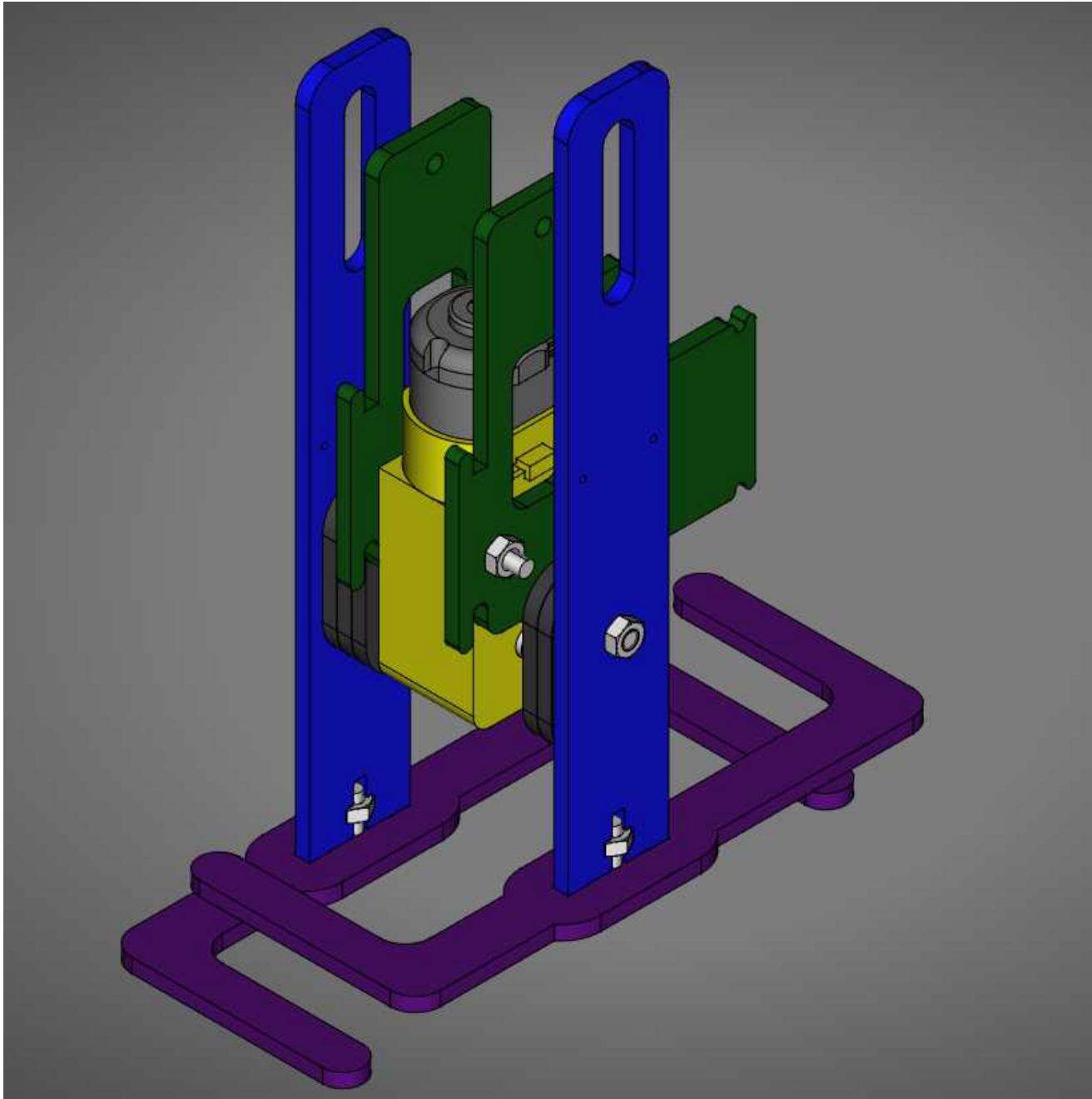


Insert the two feet in the two legs.

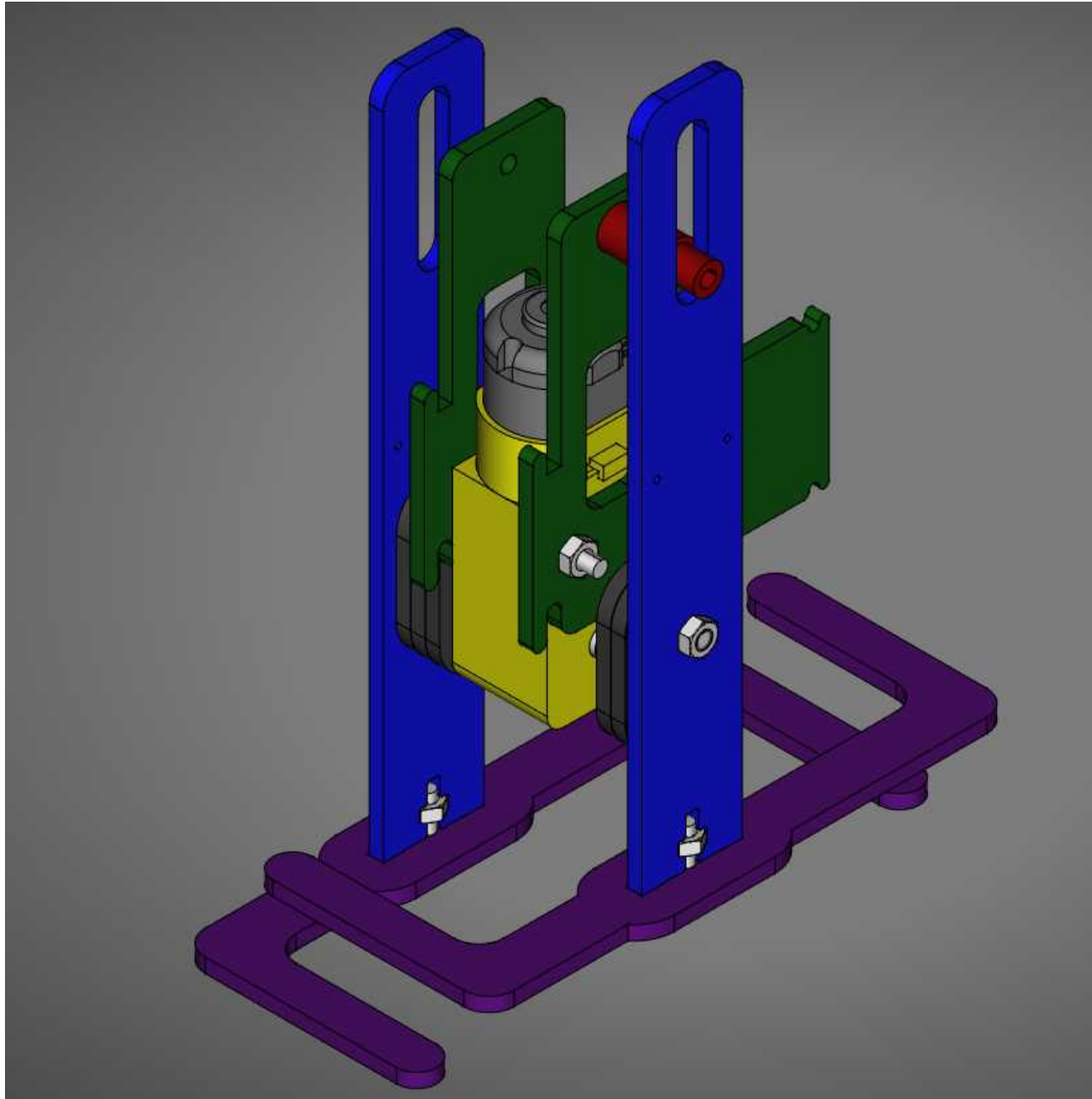
IMPORTANT

Identifying kerf / cutting direction will make things easier.

It may be easier to insert from one direction than from the other.

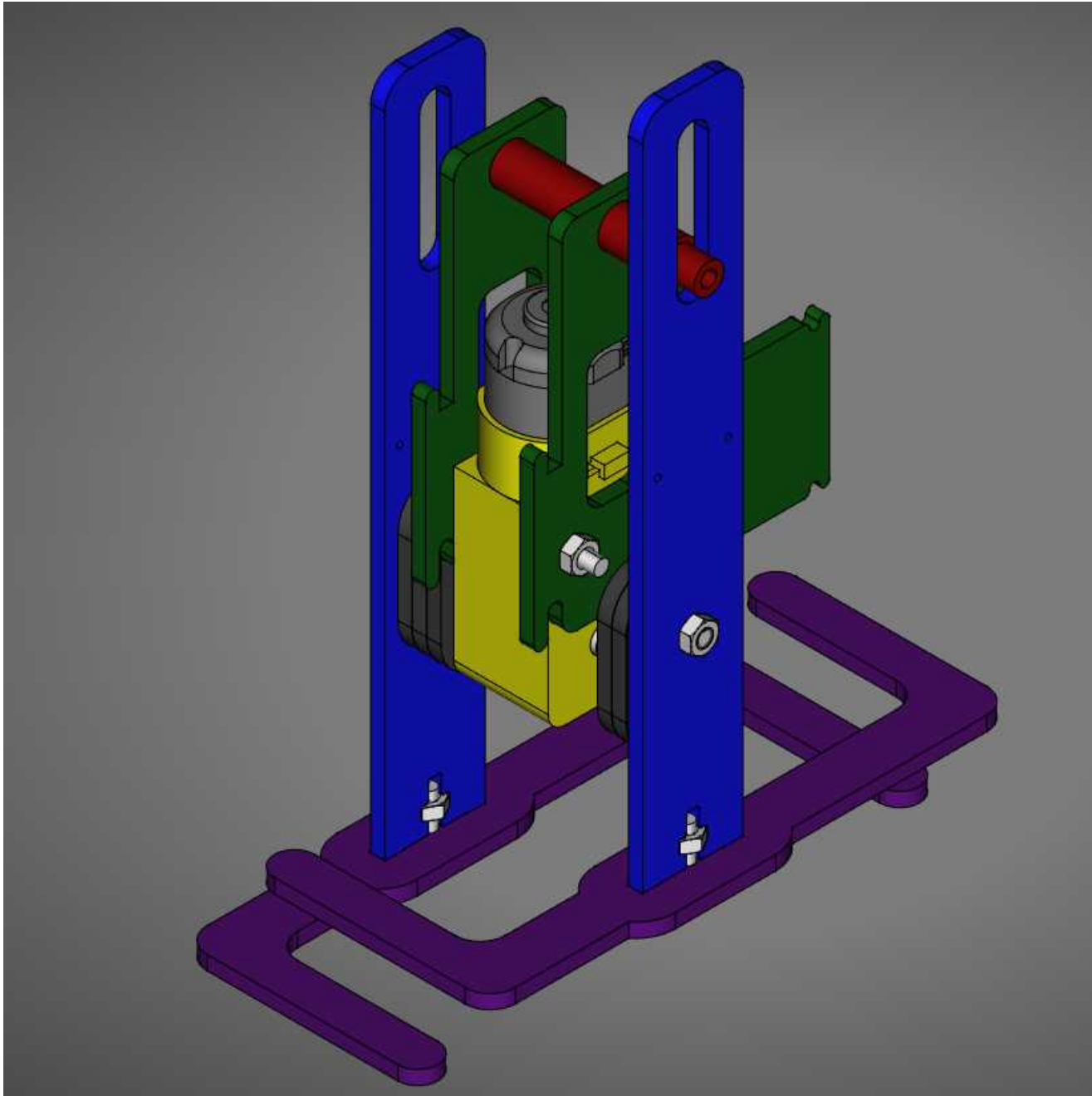


Fix the feet to the legs using
M3 x 14mm screws and nuts

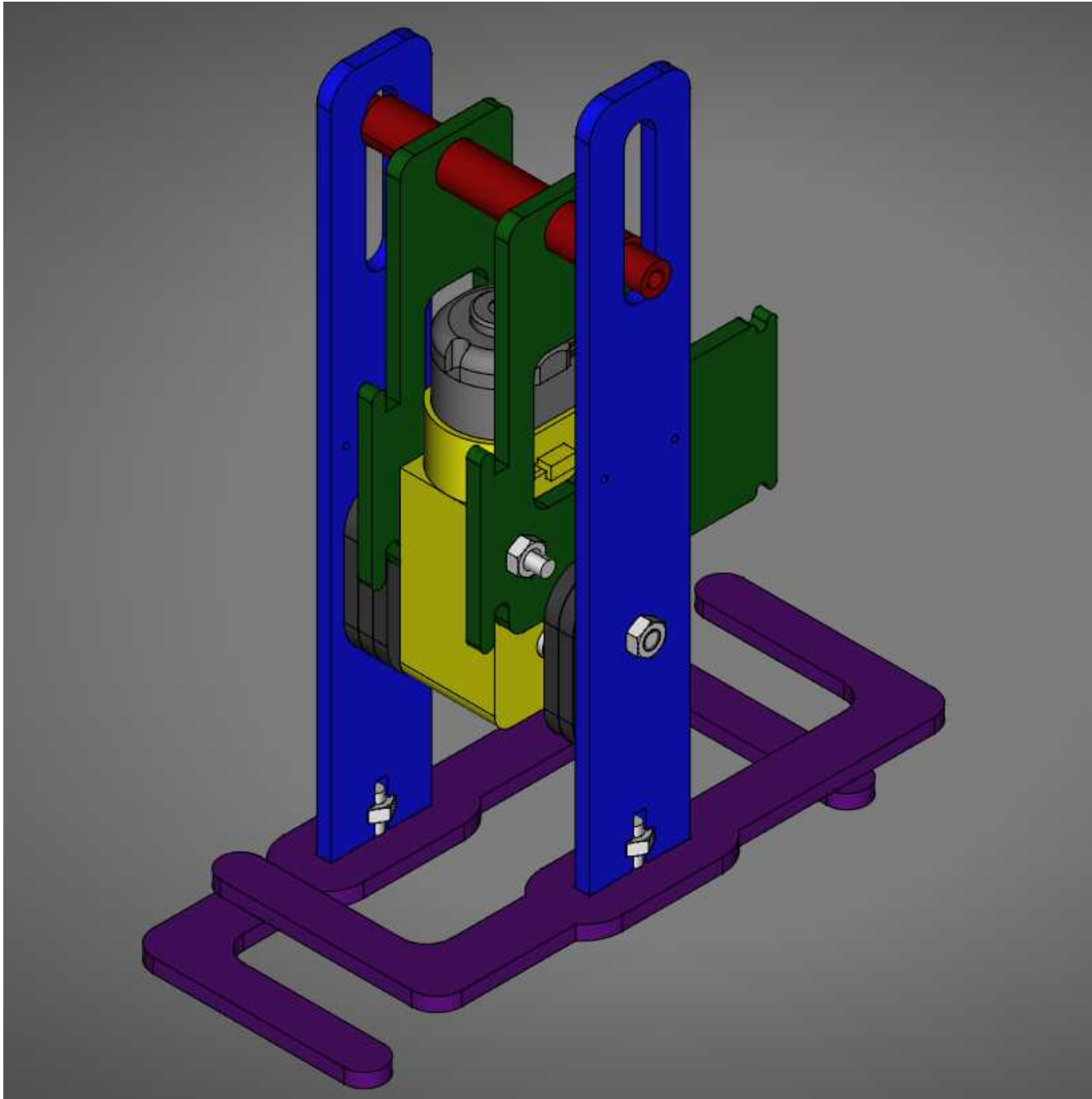


Start assembly of top parts.

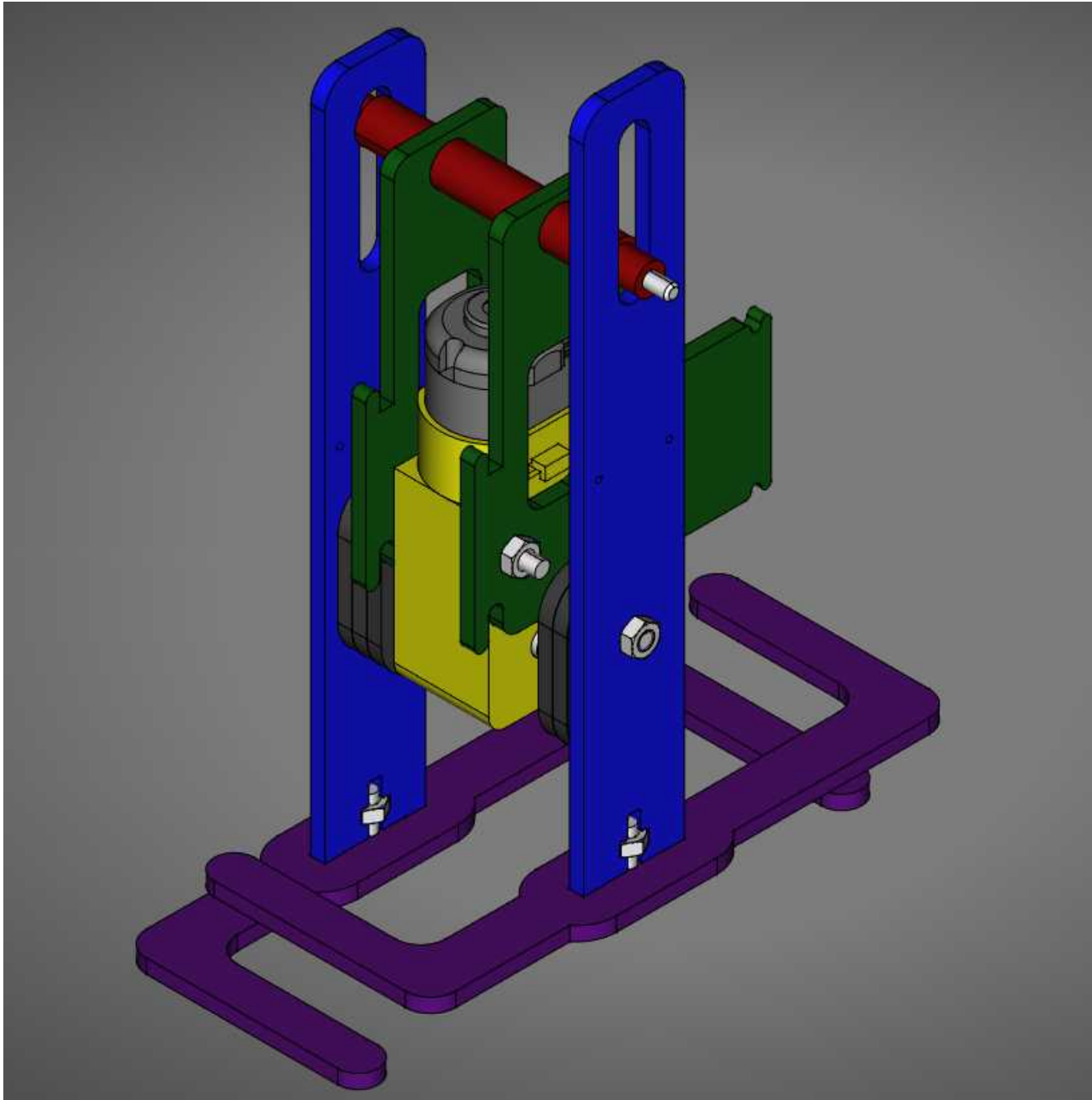
Insert one 3D printed spacer -
the one with the collar.



Insert the middle 3D printed spacer

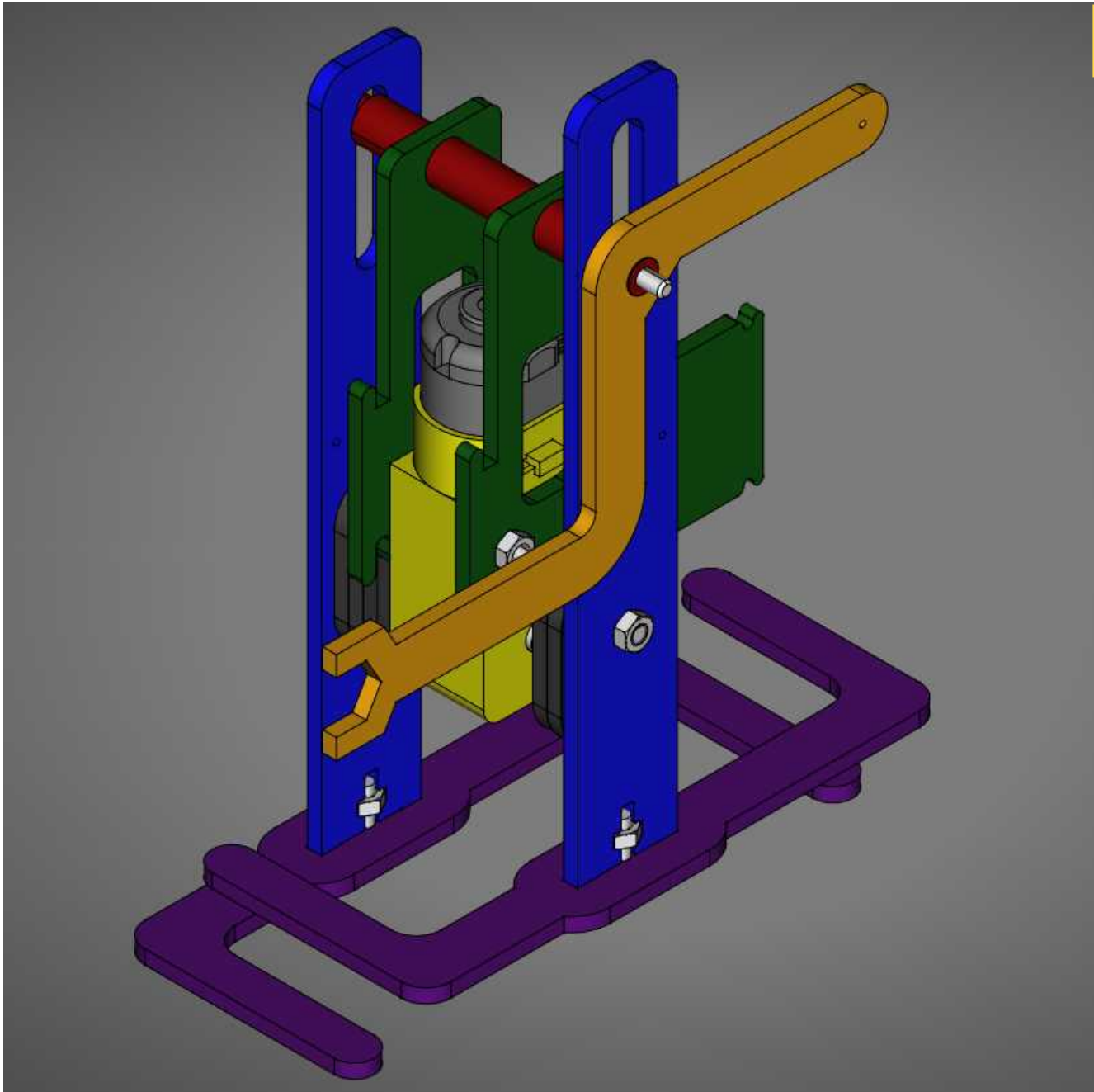


Insert the third 3D printed spacer

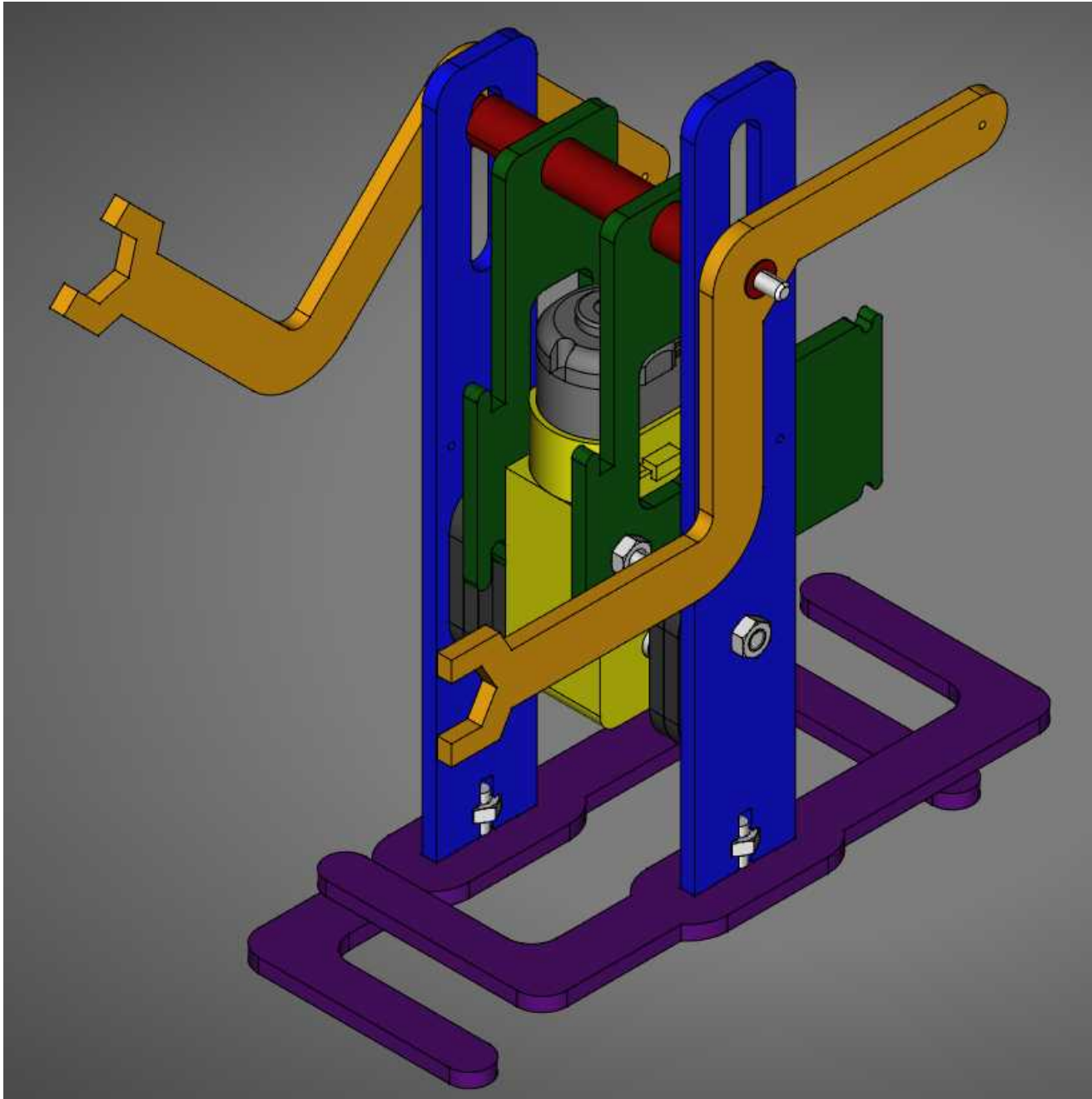


Insert the M3 threaded rod or screw through all the acrylic parts and spacers.

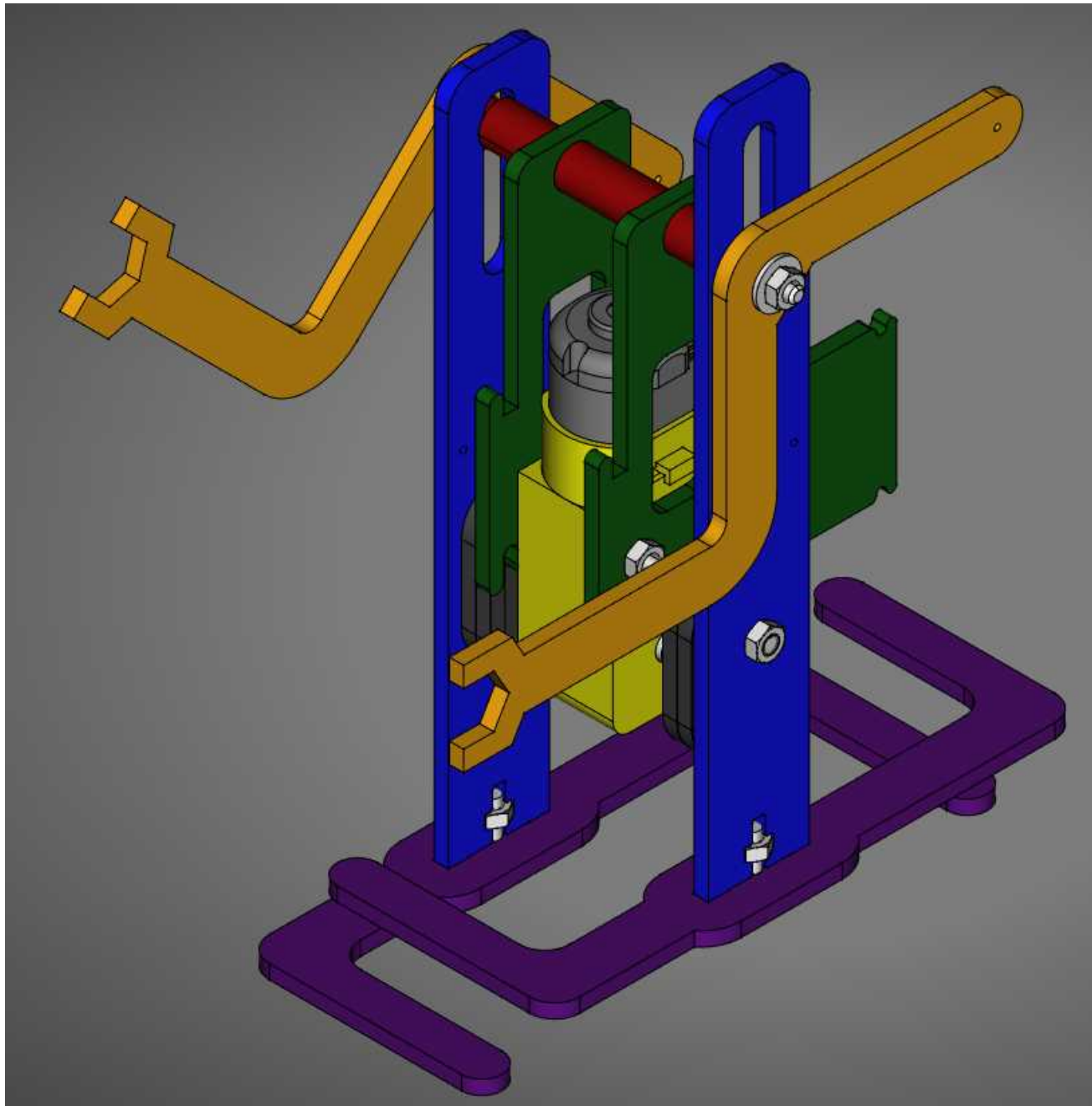
It will be easier to combine this step with the previous three -
> right spacer > push screw
> middle spacer > push screw
> left spacer > push screw



Insert right side arm



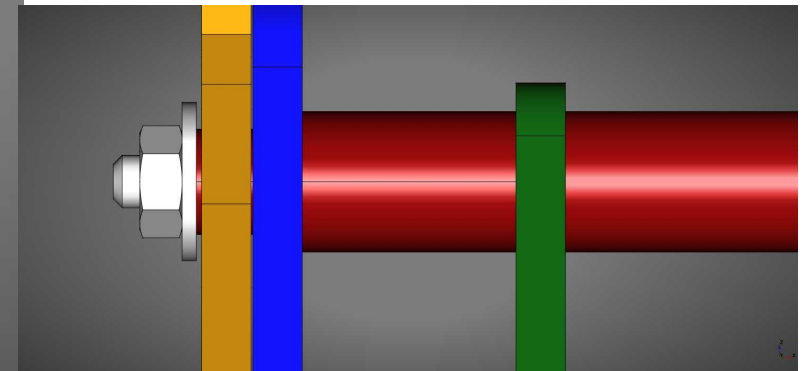
Insert left side arm

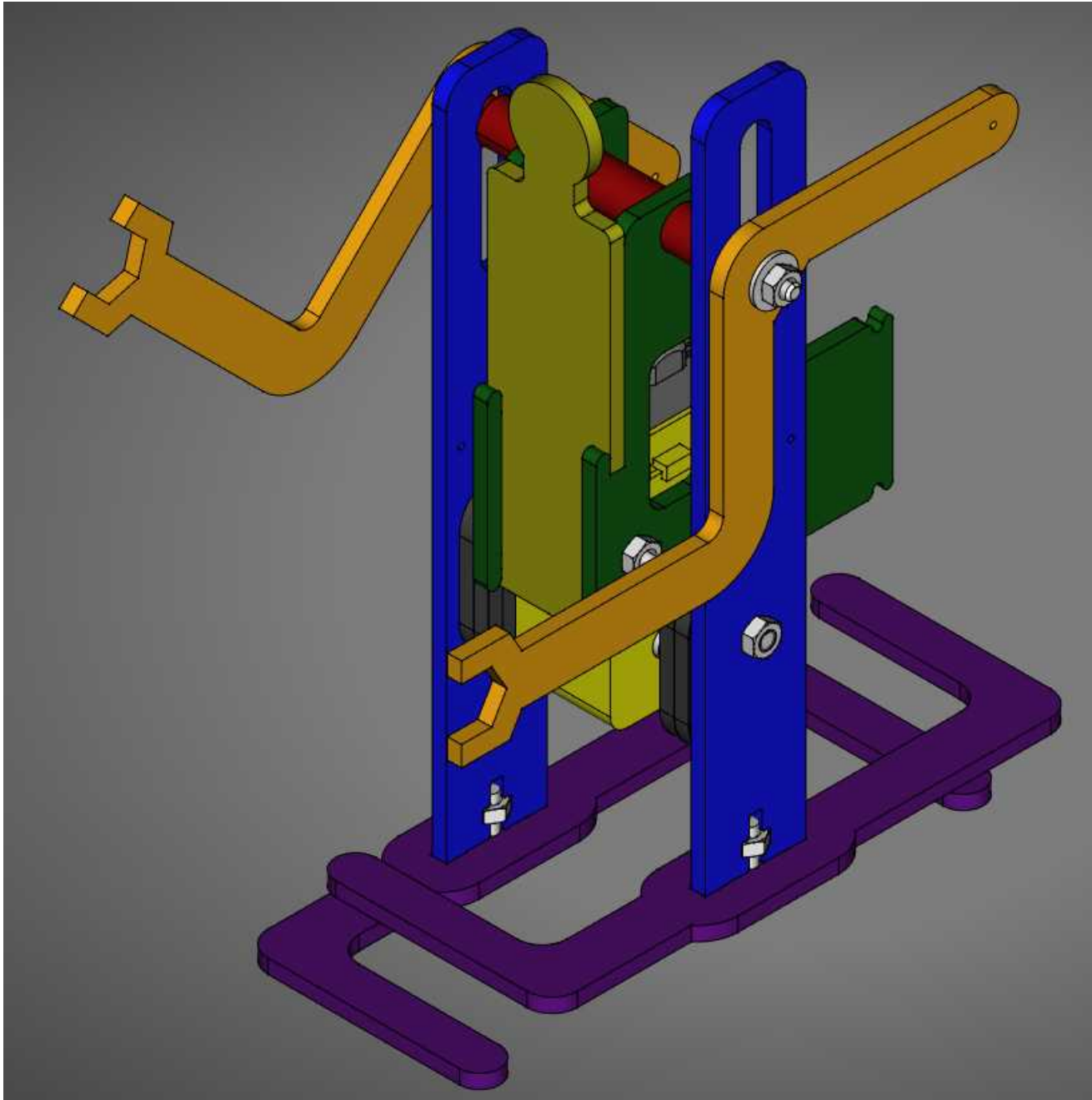


Insert washers on both sides and fix M3 nuts on both sides.

The two nuts are fully tightened against the 3D printed spacers.

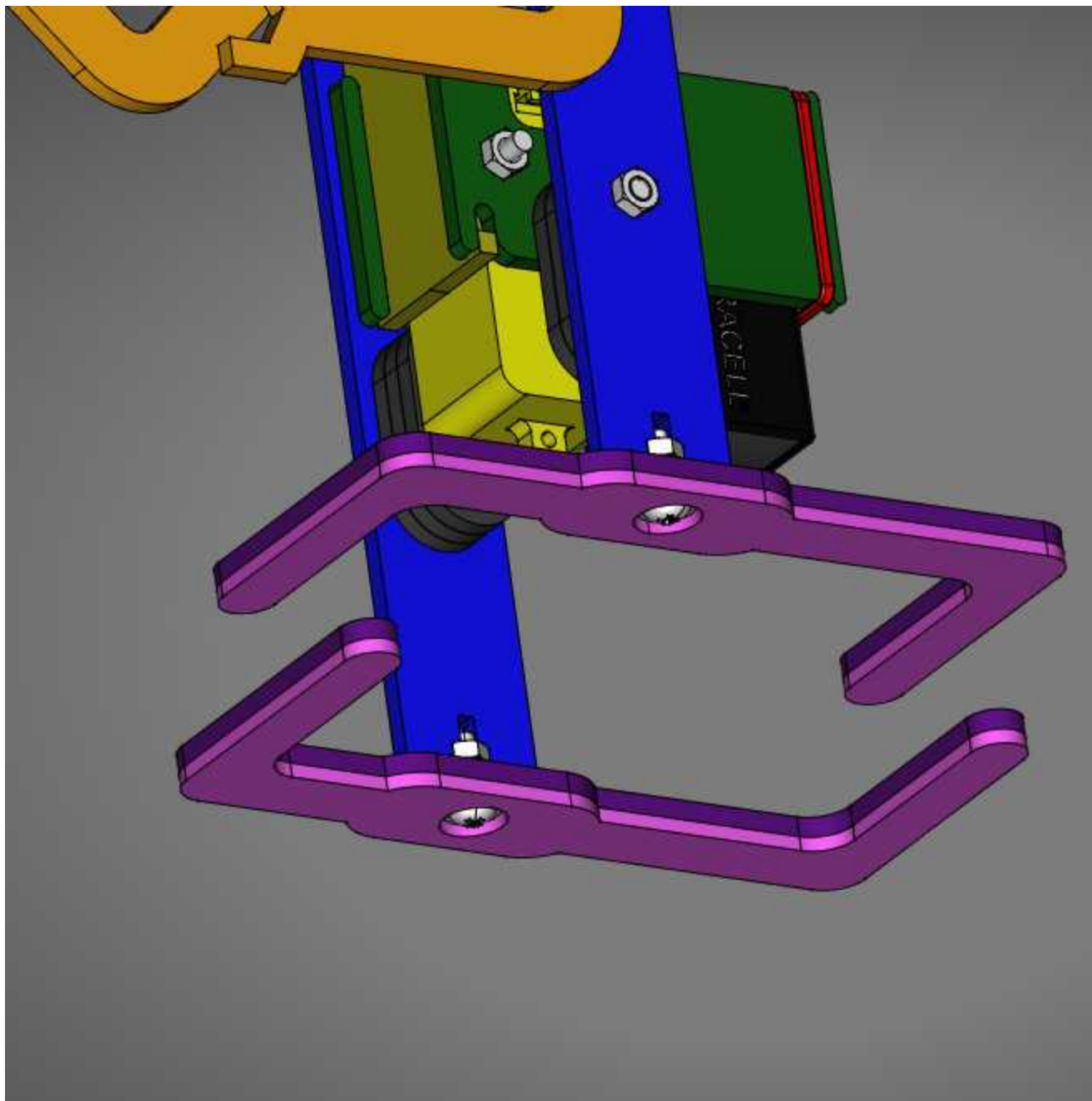
When done correctly, the red and green parts are rigid with the motor body, and the blue and yellow parts are free to rotate. All parts must be parallel and aligned.





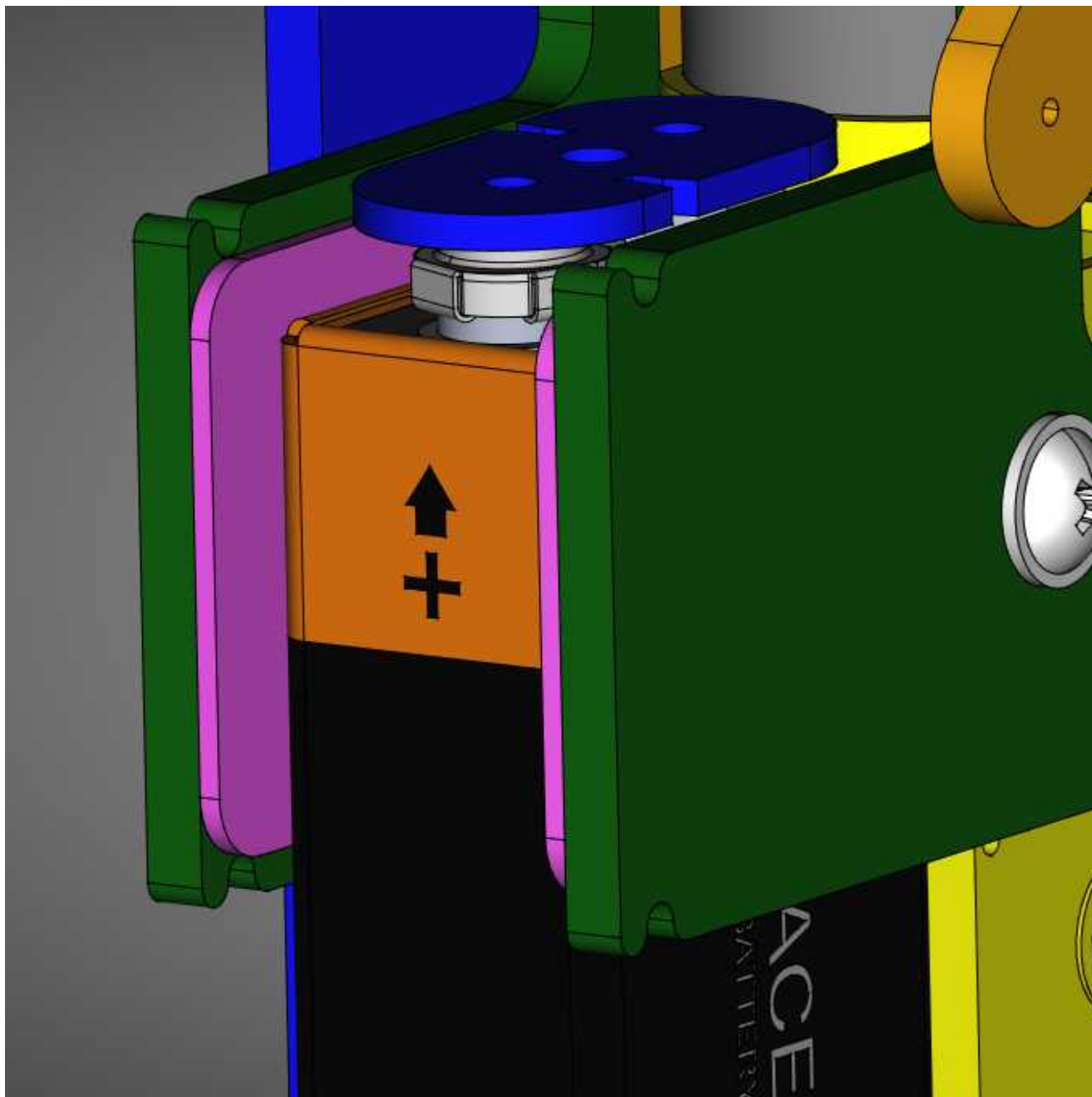
Install the head / body part.

This part is slide fit, but it is recommended to use a small piece of thin double sided tape to retain it in place



Stick the foam pieces below the feet.

This step can also be done before installation of the feet to the legs.

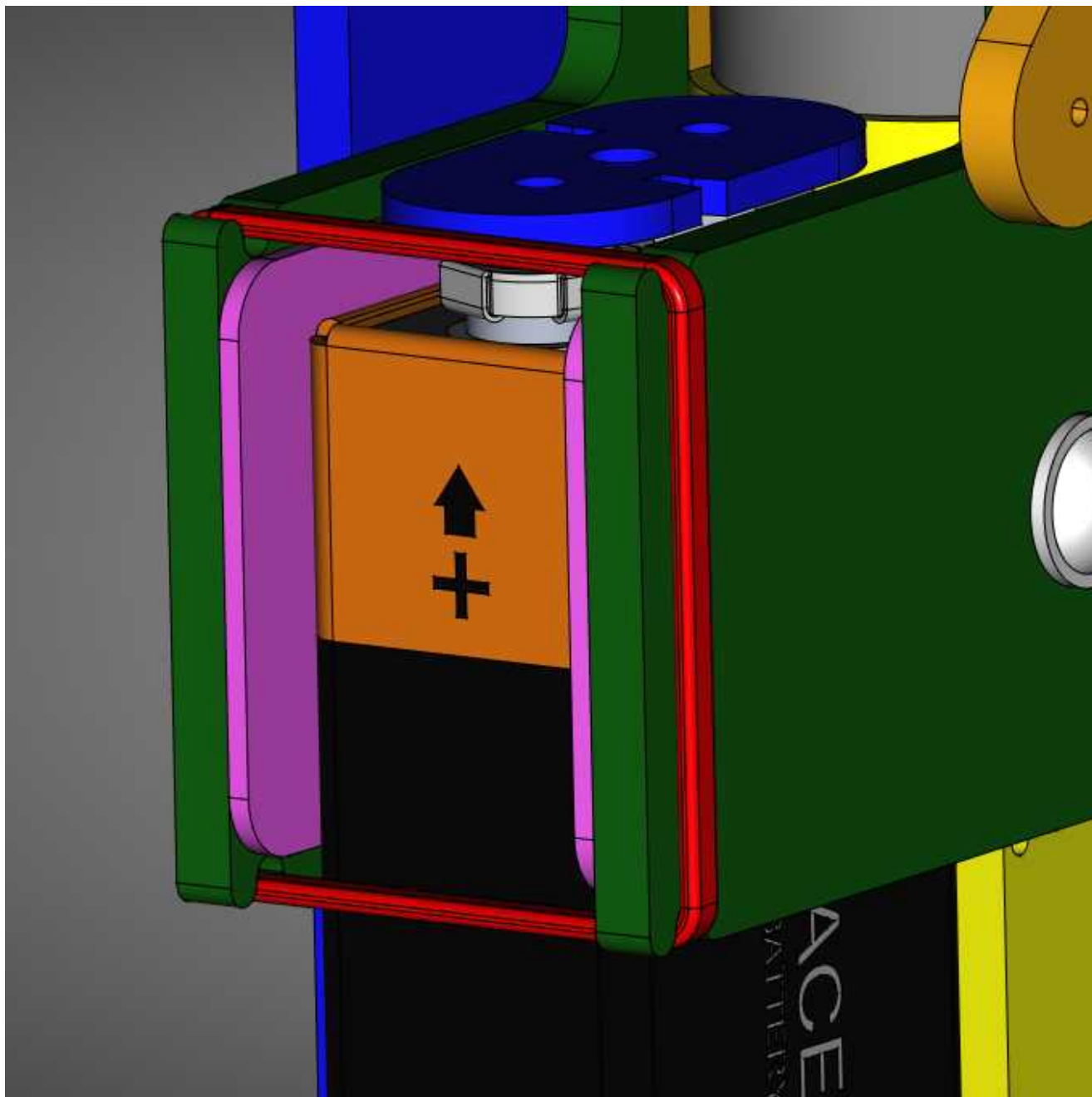


Stick the two foam pads on the body pieces where the battery will be placed.

This step can be done before fixing the two green body pieces to the motor.

Use 1mm thick foam on each side.

Or a single 2mm thick foam on just one side



Fix an elastic band in the notches provided in the green body parts.

This will compress the body parts against the battery and keep it in place.

(or you can attach an elastic band directly to hold battery against the body parts)