K-Bot Assembly Rough Guide
组转指南

Arms 手臂

Install RS03

KD-C-251F M4x12mm

Plug in RS02

Install arm roll motor, aligning wire connector with arrow and ensuring 3 holes visible in gap.

KD C 255 F M3x8

Plug in wire, Mount hardstop, routing wire underneath.

KD C 256F M3x12

Install Pins into bicep drive piece

Mount the bicep piece into actuator

Secure KD C 353F M4x20

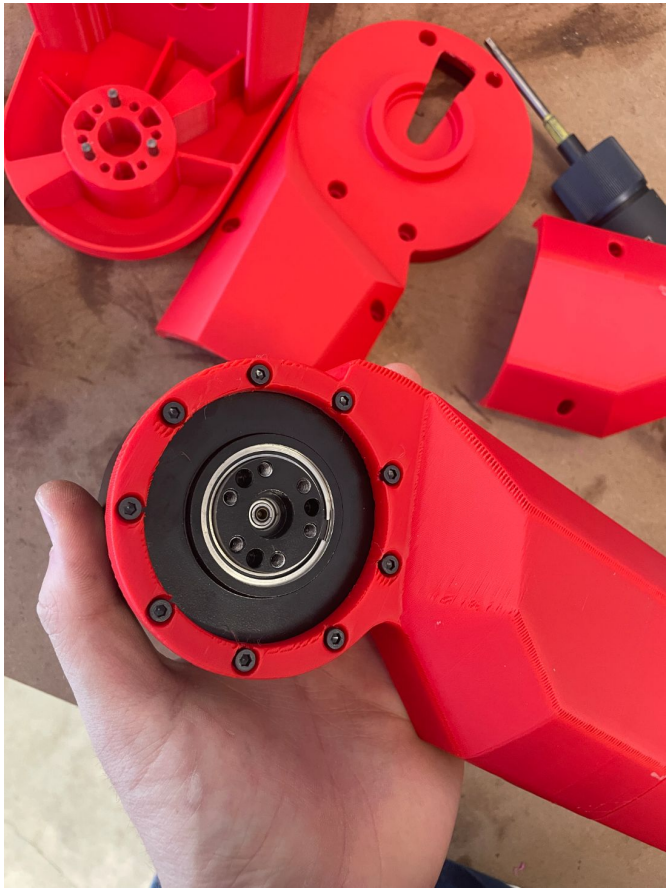
Install elbow motor RS02

Lay on the bicep idle clamshell side to position the actuator with the plug at the cutout

Install elbow motor

KD C 354 F

M3x12mm



Plug in elbow motor
from the above actuator

Secure in the clamshell side

Install Dowel pin into the clamshell KD C 351 F 3mm x 10mm

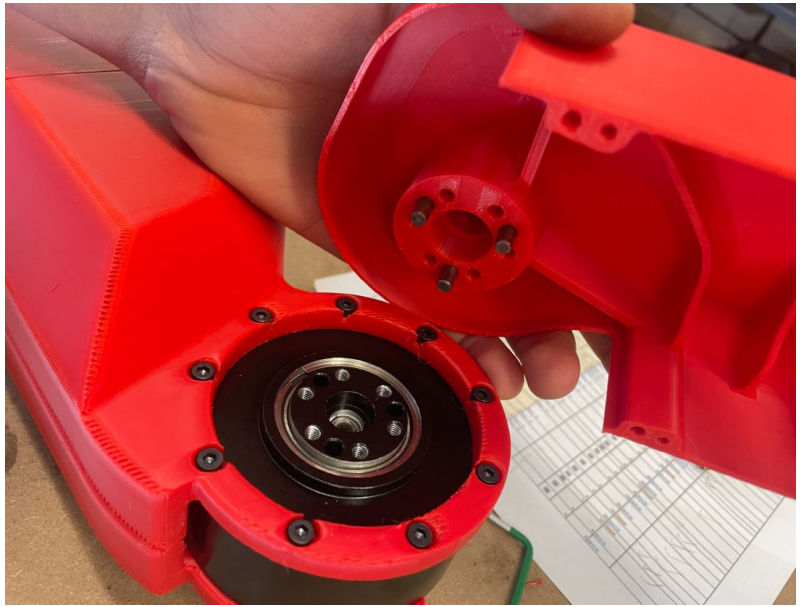
Screw the clamshell sides together

KD C 352 F M4x20 on sides

KD C 355 F M3x12 to back of elbow motor

Install dowel pins into forearm piece

KD C 452 F 4mm x 10mm



Install forearm into elbow motor

KD C 451F

M4x20mm

Plug in new elbow to wrist motor wire into RS00

Install wrist motor

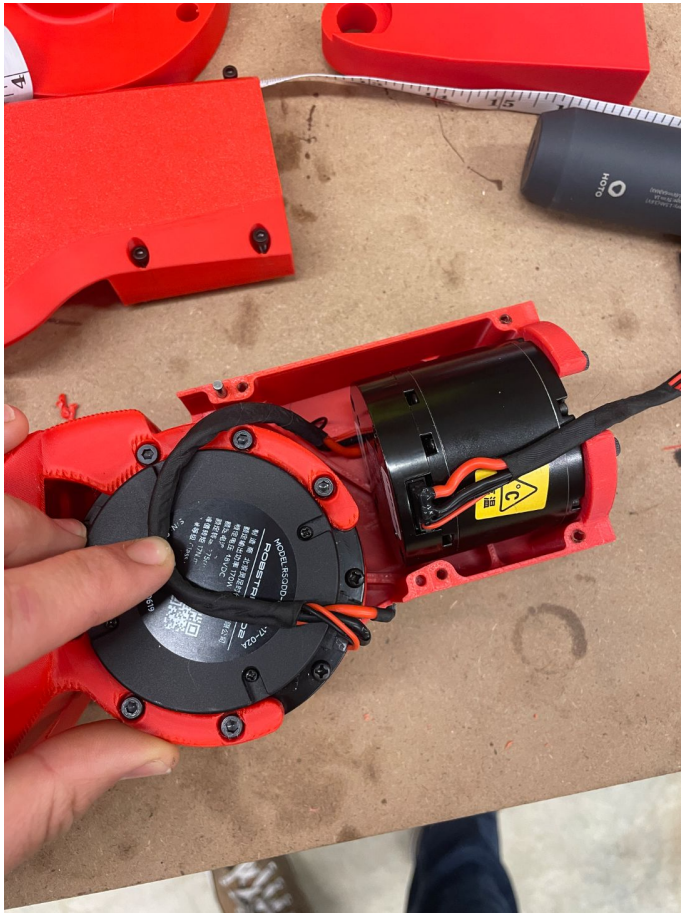
Align the motor’s plug with the arrow on the Aluminium piece

KD C 455F M3x8mm

KD C 456F M3x12mm

Plug in other side of wire

Plug in wrist wire



Add idle side of forearm

KD C 453

M3x20

Install dowel pin into bottom motor

Mount wrist piece, routing wire through center.

KD C 551F M3 x 20

KD C 552F 3mm x 10mm

Assemble wrist end attachment piece

KD C 553 F

M3x8mm

Assemble wrist, aligning grooves and routing wire through center

Assemble Clamp

KD C 554F

M4x20mm

The rest of the arm is assembled in later steps, after torso
手臂的其余部分在躯干完成后，在后续步骤中组装

Legs 腿

Mount screws for RS03
on drive shell

KD D 251F

M4x8mm

Connect Wire between the actuators

Orient actuator with plug to arrow

Secure hip yaw actuator

KD D 255 F

M4x8

Install hip yaw hardstop

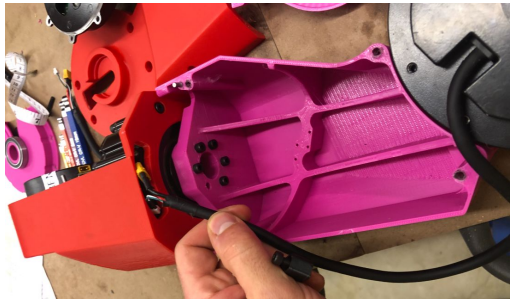
M4x16

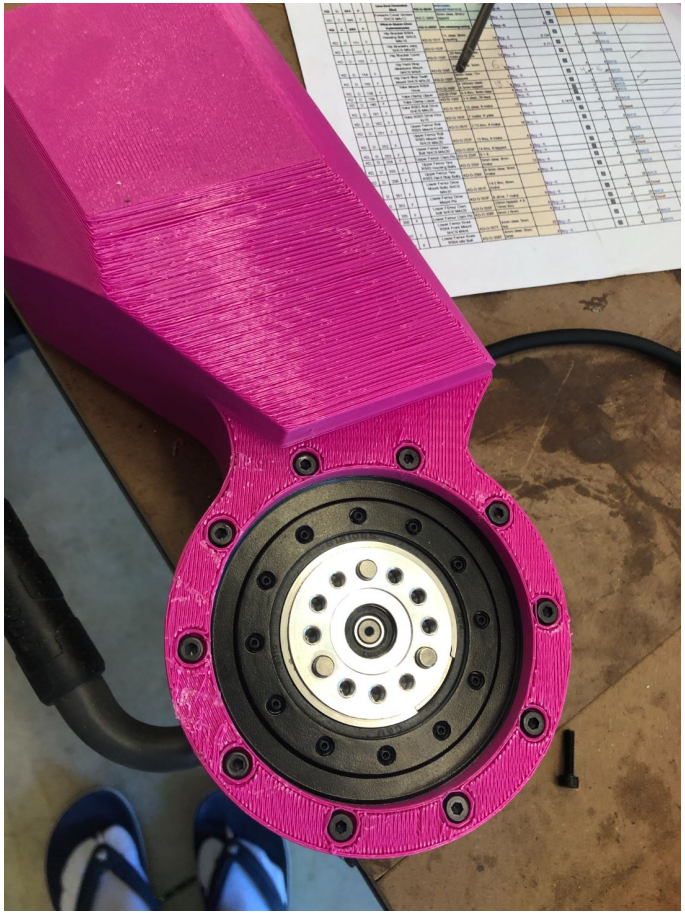
KD D 256F

On the drive side of the lower thigh/ femur,
Install knee RS04

M4x8

KD D 357F





Add dowel pins to lower femur

4mm x 10mm

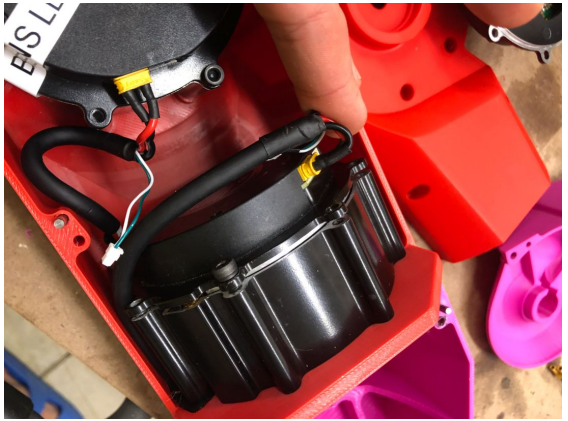
KD D 353F

Install lower femur to upper femur

M4x20

KD D 351 F

Route wire before hard stop



Add in dowel pins

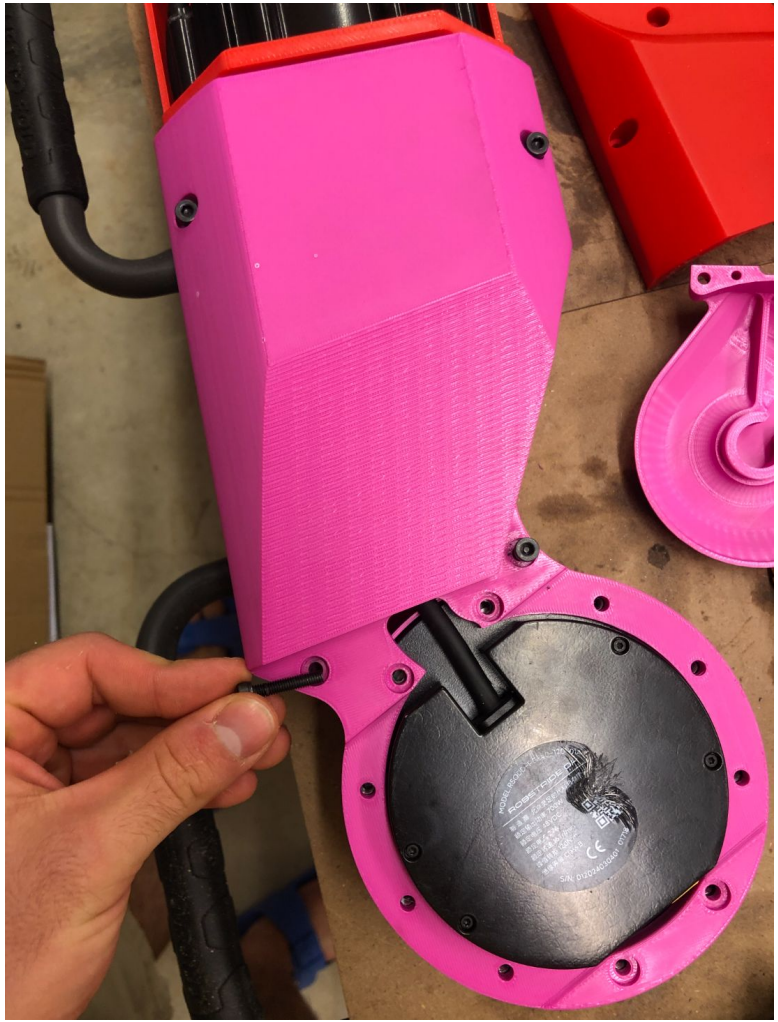
KD D 254F

3mm x 10mm

Secure other side of lower thigh

KD-D-355F

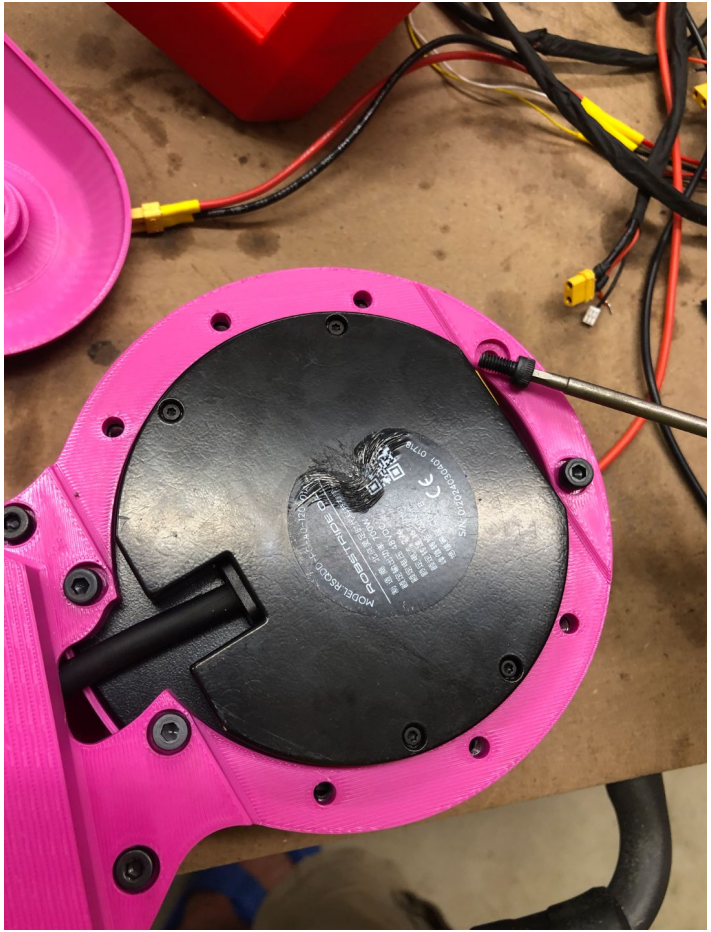
M4x20mm



Secure the motor

KD-D-358F

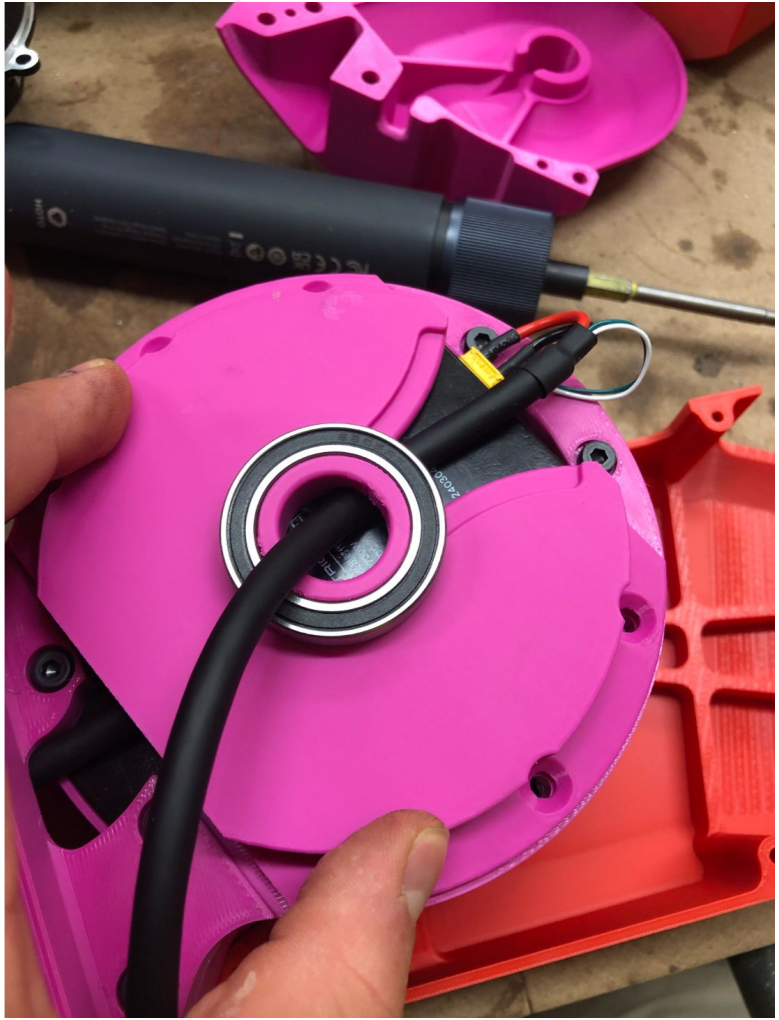
M4x8mm



Route wire for knee as shown. Make sure the bearing is pressed onto the plate

KD D 491F

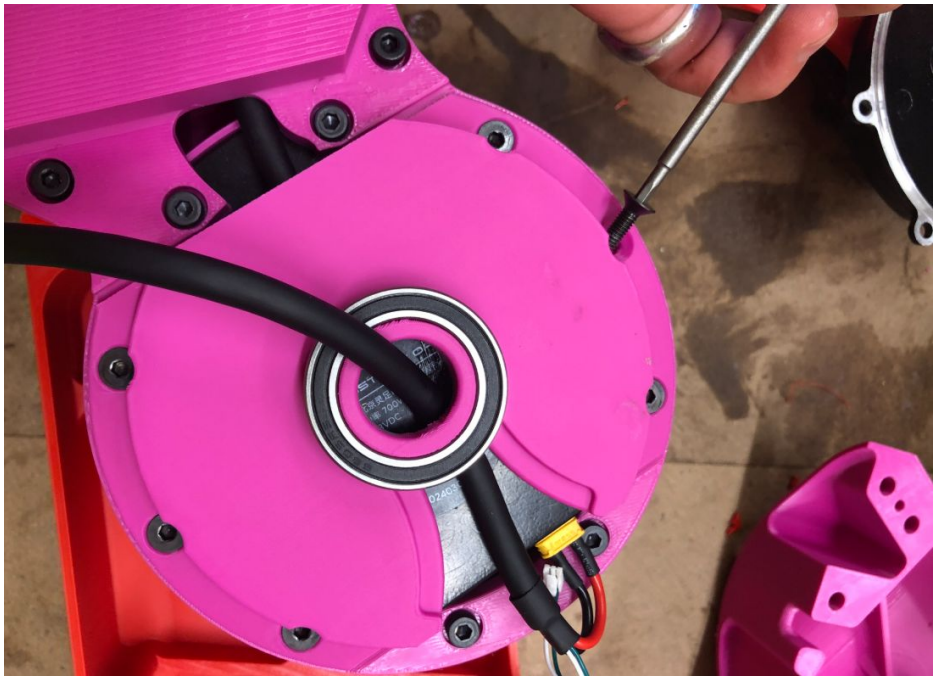
SKF 61805



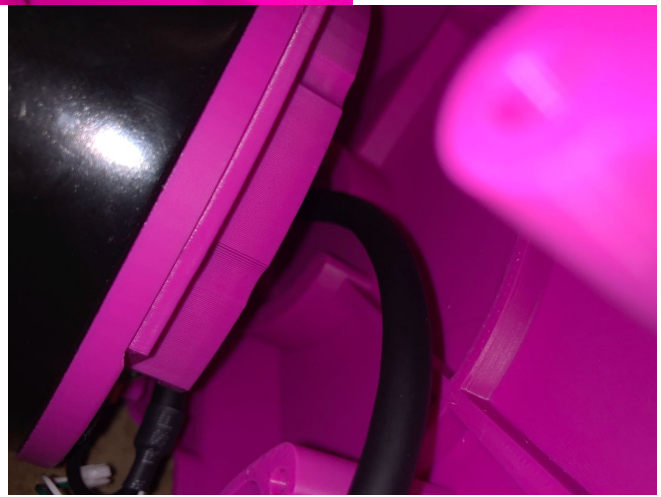
Secure in the cap

KD D 359F

M4x12 Countersunk



Put on this part while making sure the wire follows the routing as shown

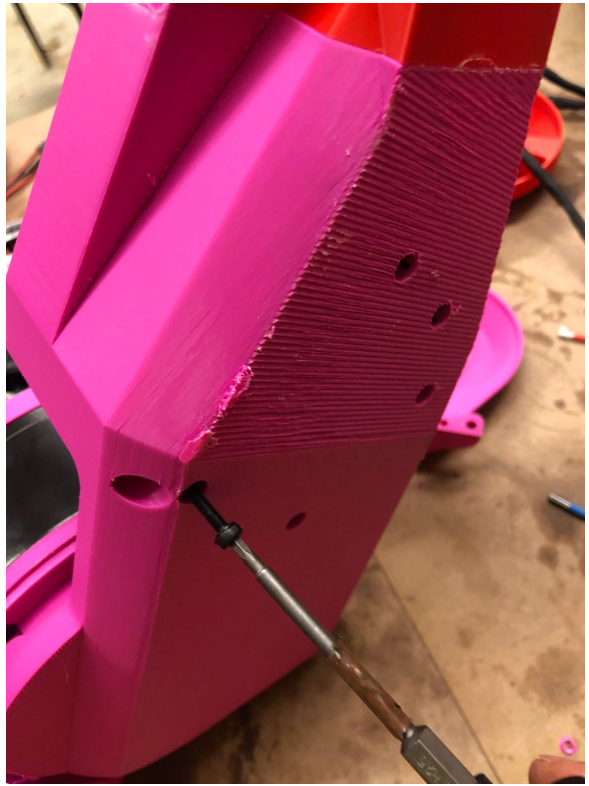


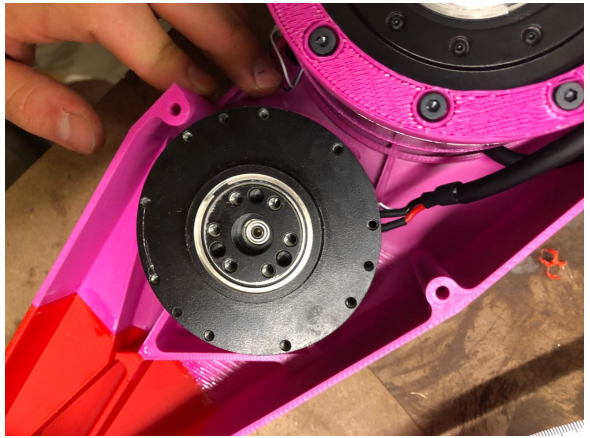
Plug in ankle actuator
RS02

Secure the ankle motor

KD D 454F

M3x20mm



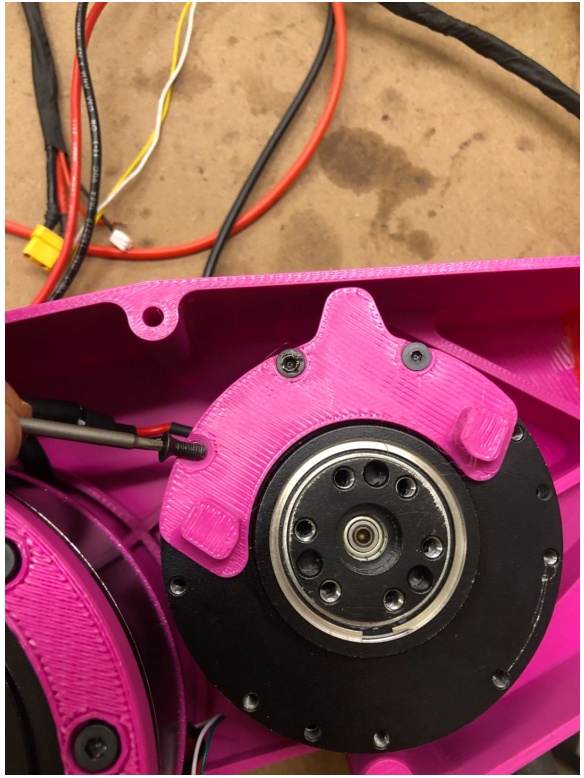


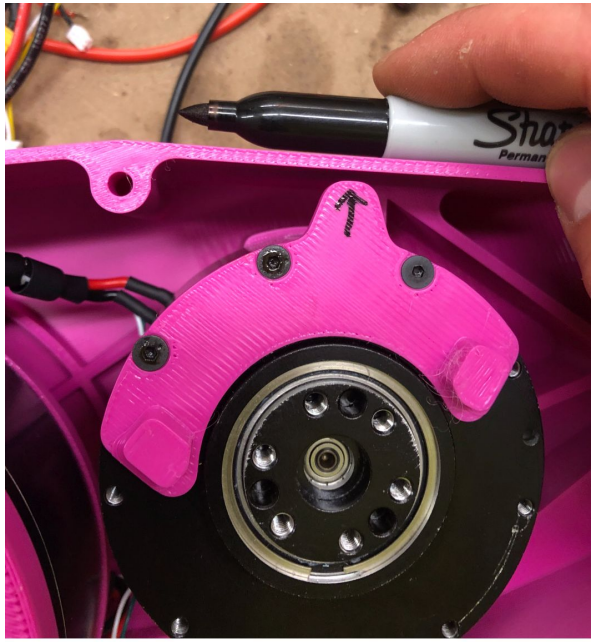
Secure the hardstop

The tooth of the hard stop piece is to be at right angle to the outer shin profile

KD D-556F

M3x8mm Countersunk





Go to hip of robot.

Secure hip yoke on both sides

KD D 157F

M5x12mm

Go to hip of robot.

Install dowel pin

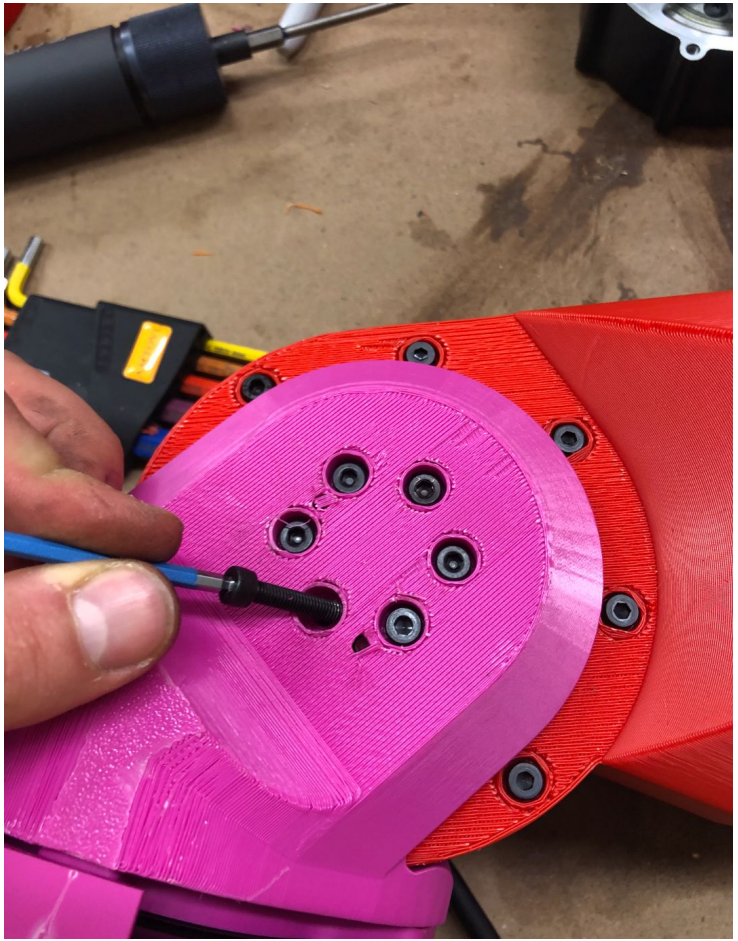
KD D 162

4mm x 10mm

Put the upper thigh onto the yoke

KD-D-161F

M4x20



Before attaching the wire fully, Move the leg all the way to the end backwards

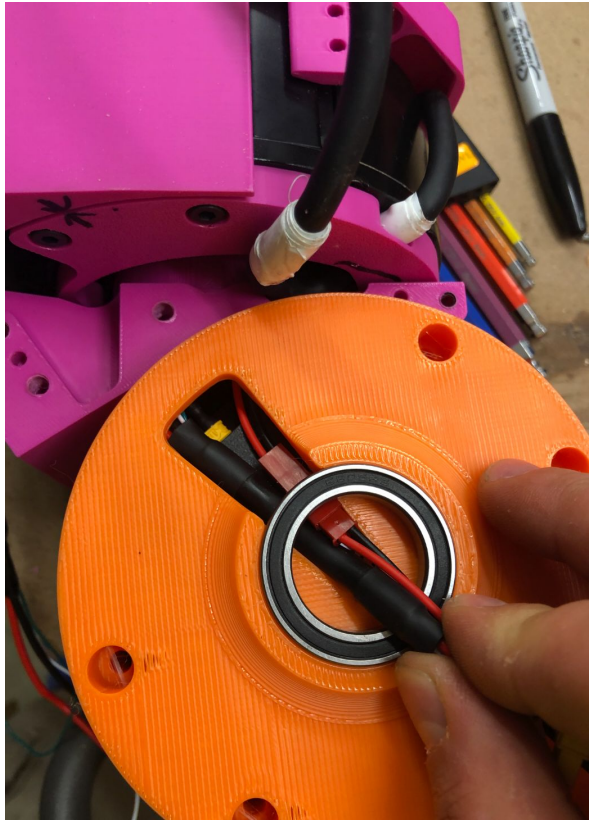
This will pull the wire length tight.

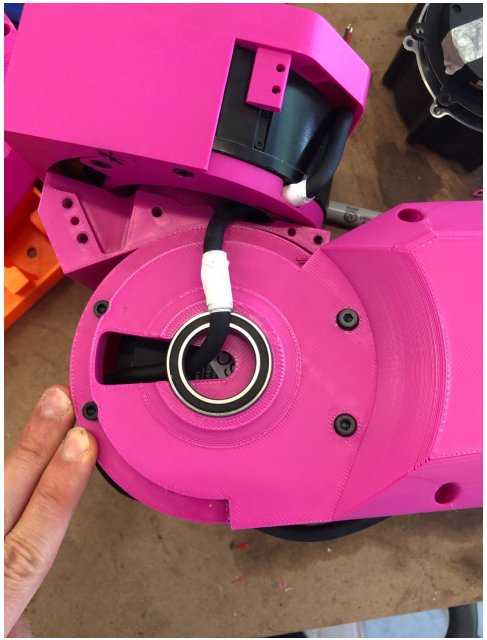
在完全连接电线之前，将支腿一直向后移动到末端。

这将拉紧电线的长度。

Put on the other side of the thigh

Route the wire front he hip through the hole and position the CAN data line under bearing





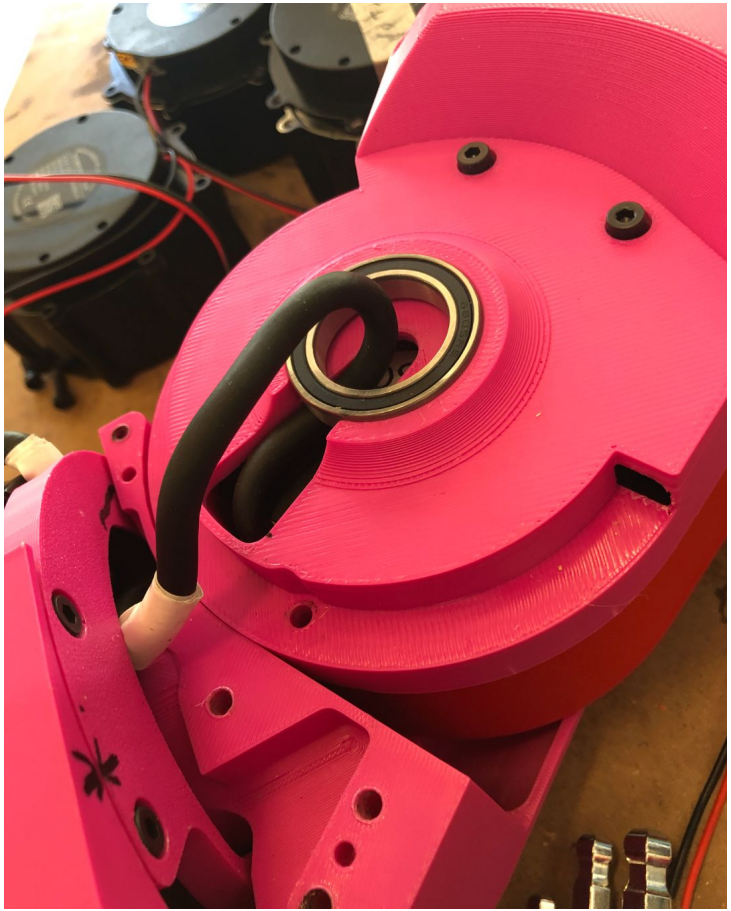
Secure on the idle side

KD D 159F

M5x12mm

KD D 160F

M4x20mm



Install the idle side of the clamp

KD D 158F

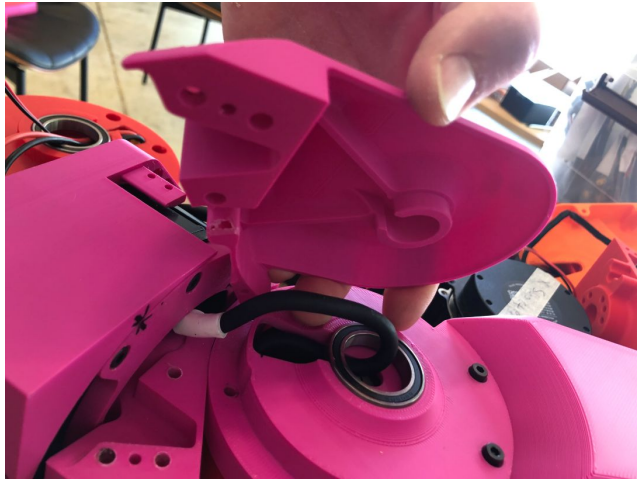
3mm x 10mm Dowel pins

KD D 159F

M5x12

KD D 160F

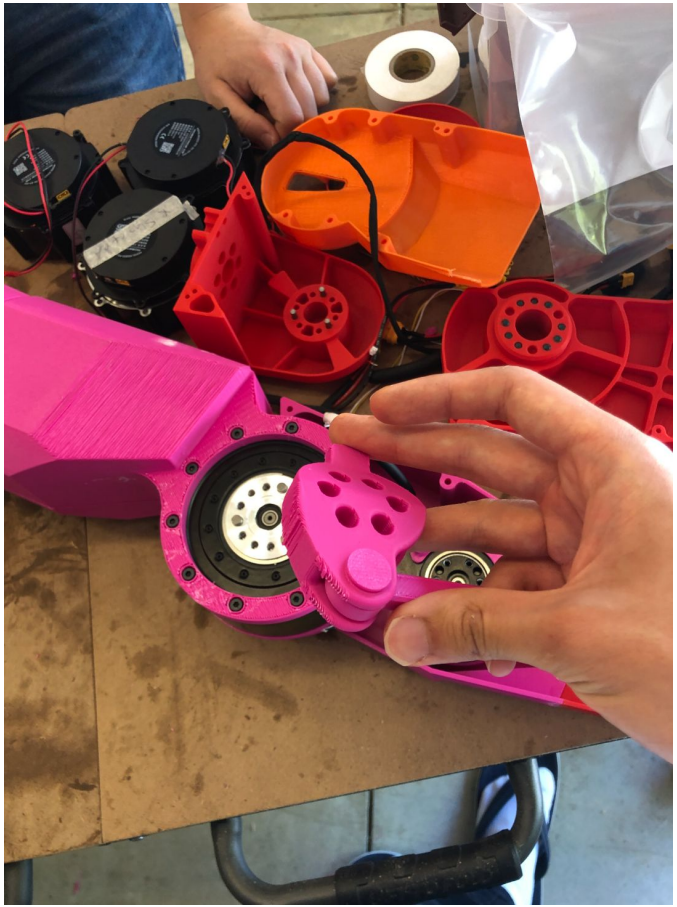
M4x20



Install bushing

KD D 592F

Install the pin and the circlip to secure in



Secure in the cap

KD D 359F

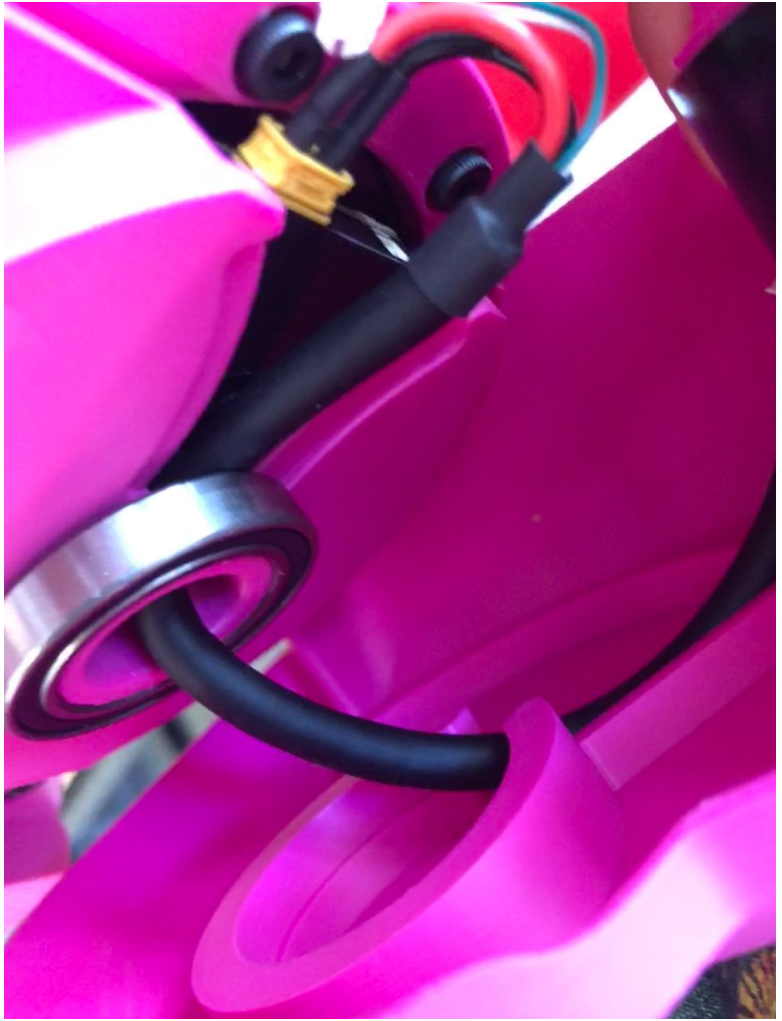
M4x12 Countersunk

Install dowel pin

KD D 453F

3mm x 10

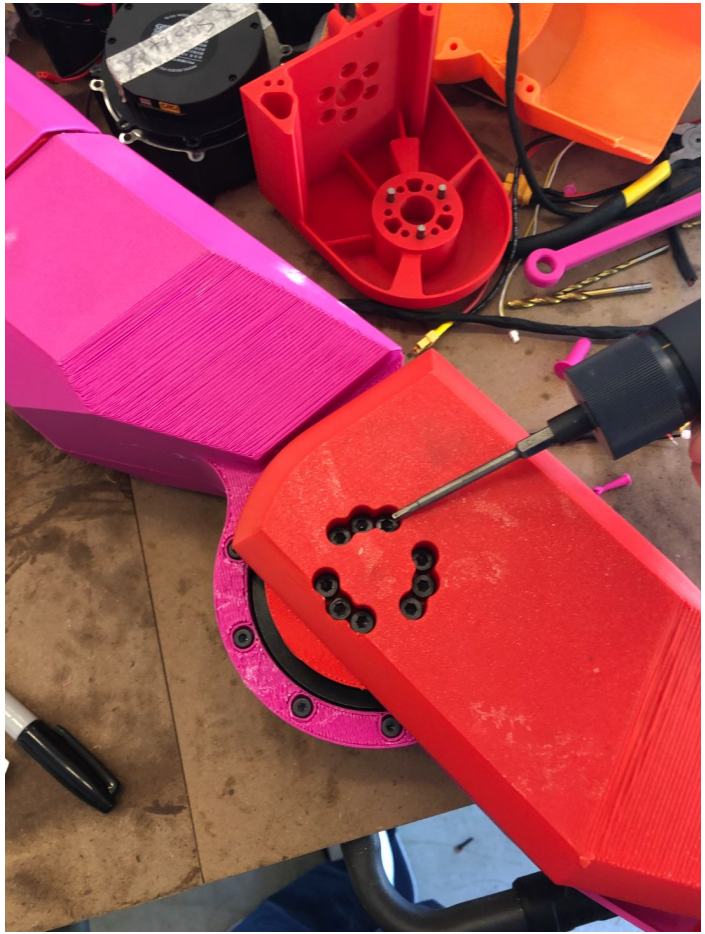
Route wire through center of bearing



Secure load bearing side to actuator

KD D 451 F

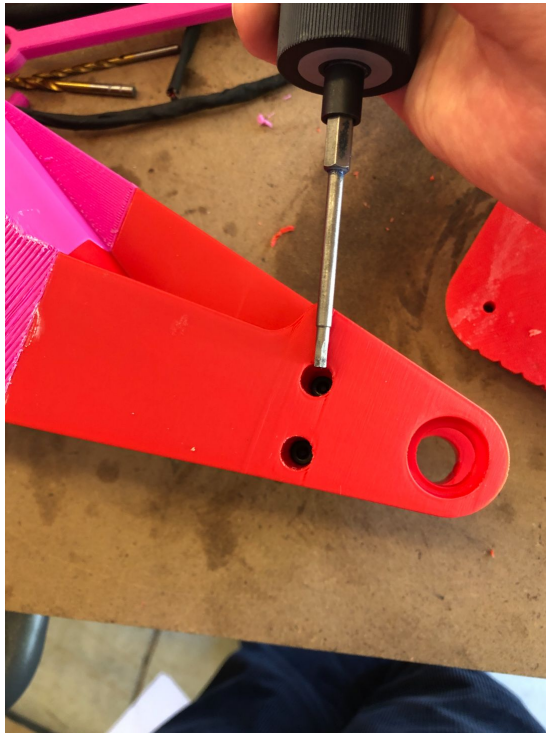
M5x20mm

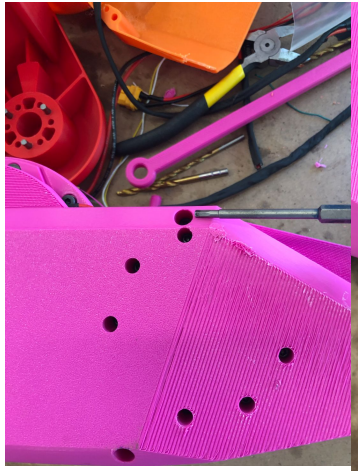


Flip around leg and install

KD D 452 F

M4x20





KD D 651

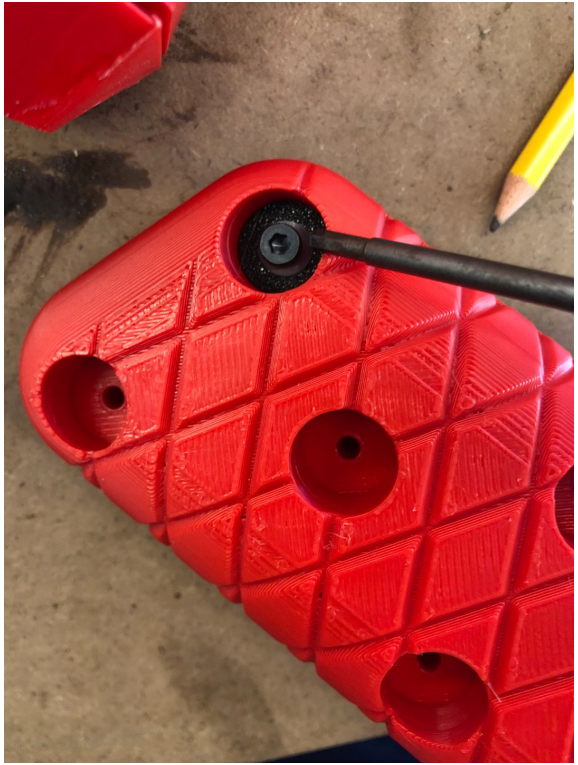
M4x16

KD D 652

M4 washers

KD D 653

M8 washers



Add the bushings to both sides of the hole

KD D 591F

Insert the pin and secure it with nut

KD D 552F

Secure in pin and add Circrlip on the other side

KD D 554F

Torso 身

Remove the Torso
RS03 screws

Install the motor into the torso side for both sides

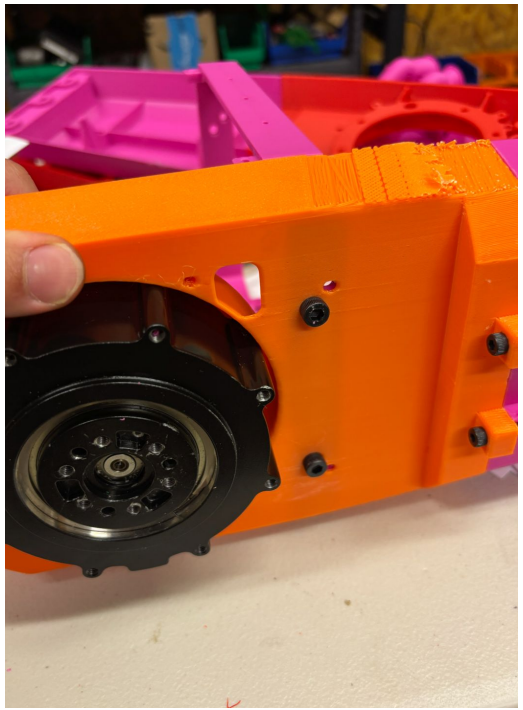
KD-B-157F

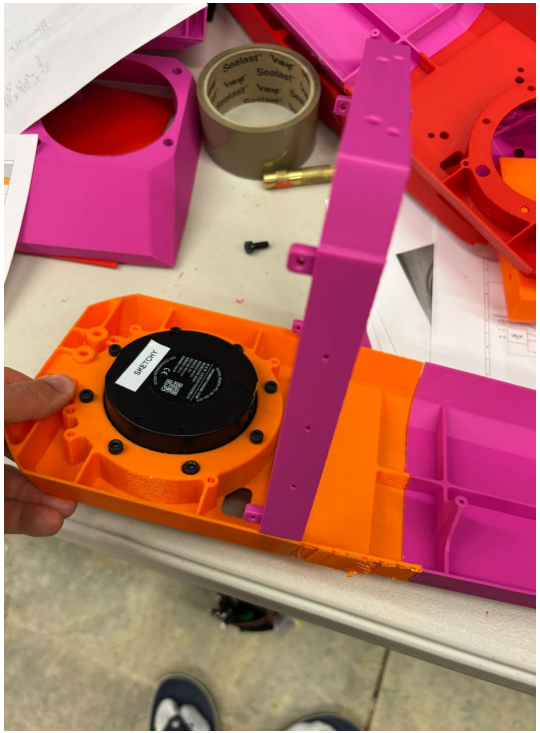
M4x8

Install cross brace, make sure the side without tabs is facing the back

KD-B-208F

M5x12





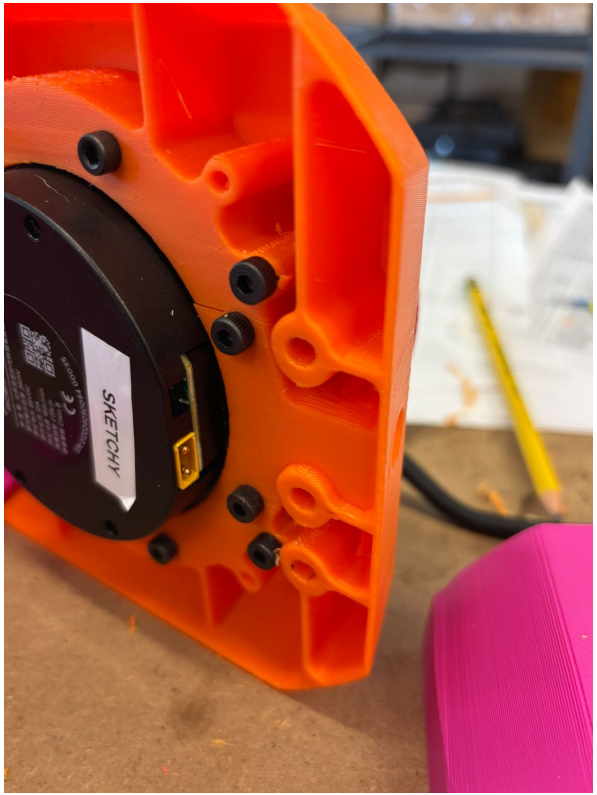
Install front hardstop, secure on front and rear

KD C 160F

M4x20

KD C 161F

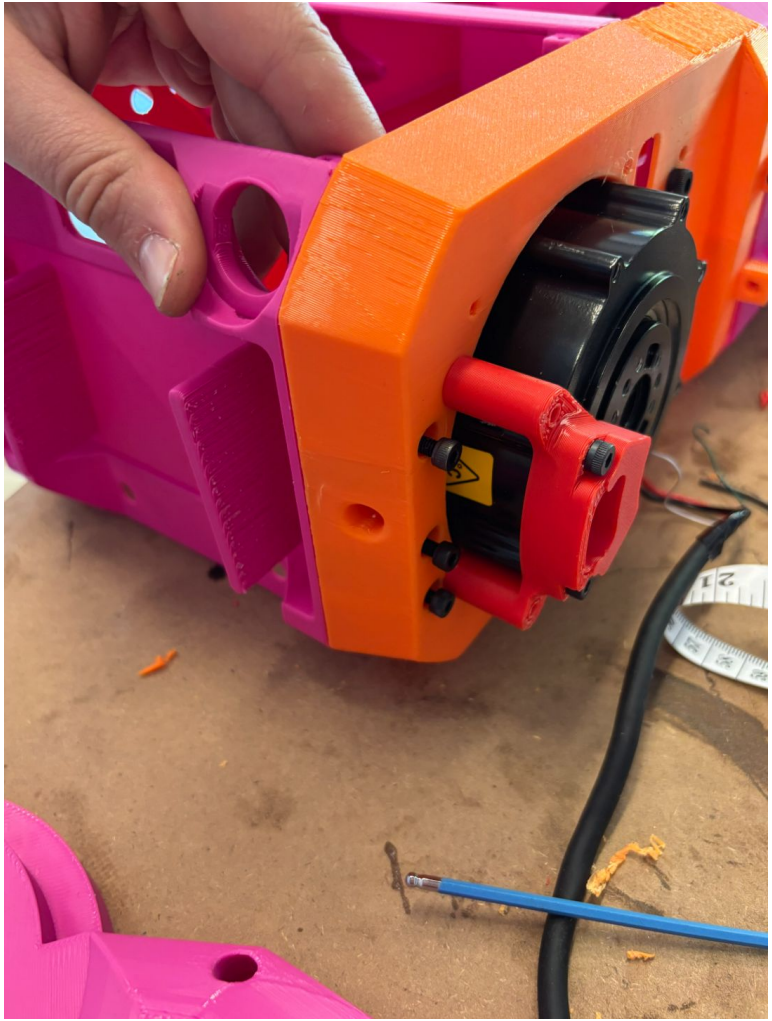
M4x20



Install top of torso onto side to just one side. The other side of the torso is still not connected

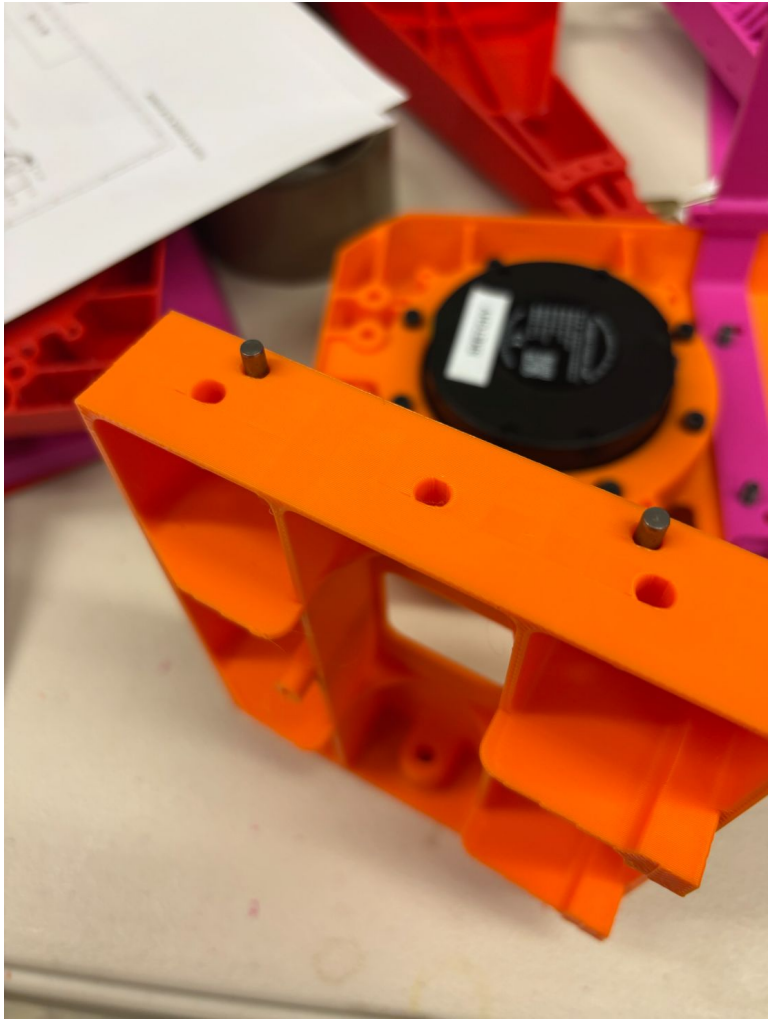
KD B 159F

M4x20



Install the pin on the bottom of the torso

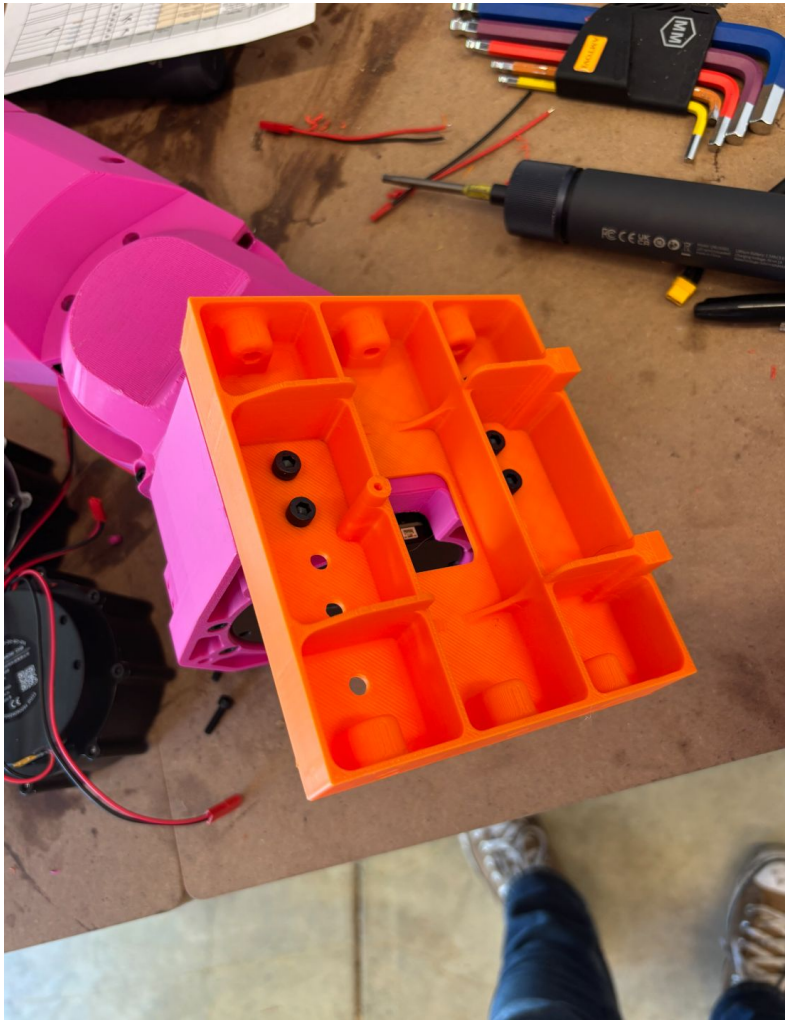
4mmx10mm



Secure the bottom to both legs

KD B 151F

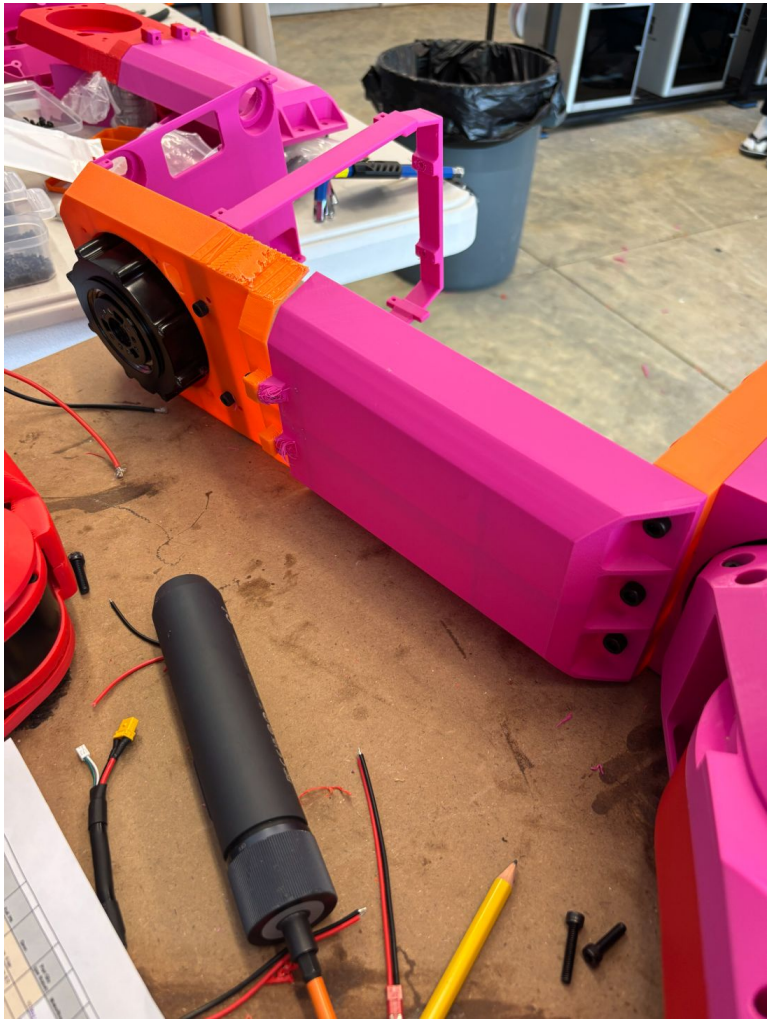
M5x20mm



Install the assembled torso side to the bottom torso

KD B 152F

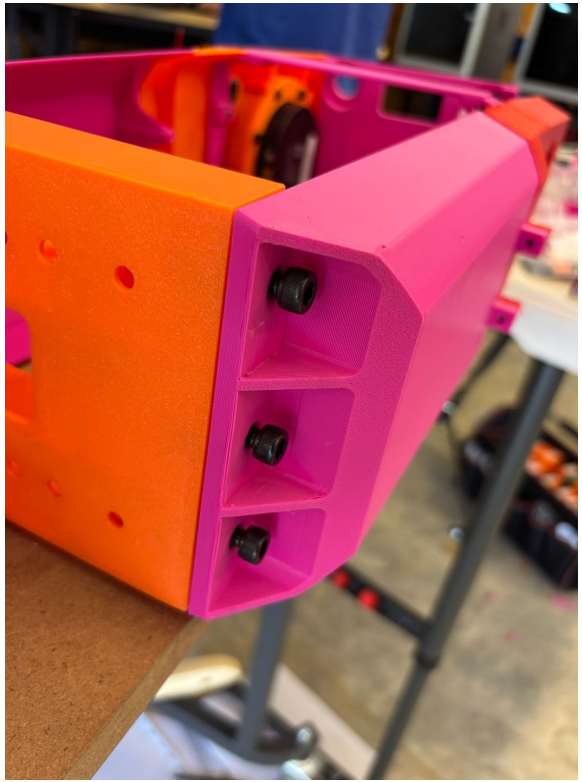
M6x25



LOOSELY Install the other side of torso to bottom piece

KD B 152F

M6x25



Loosely attach other torso side to cross brace

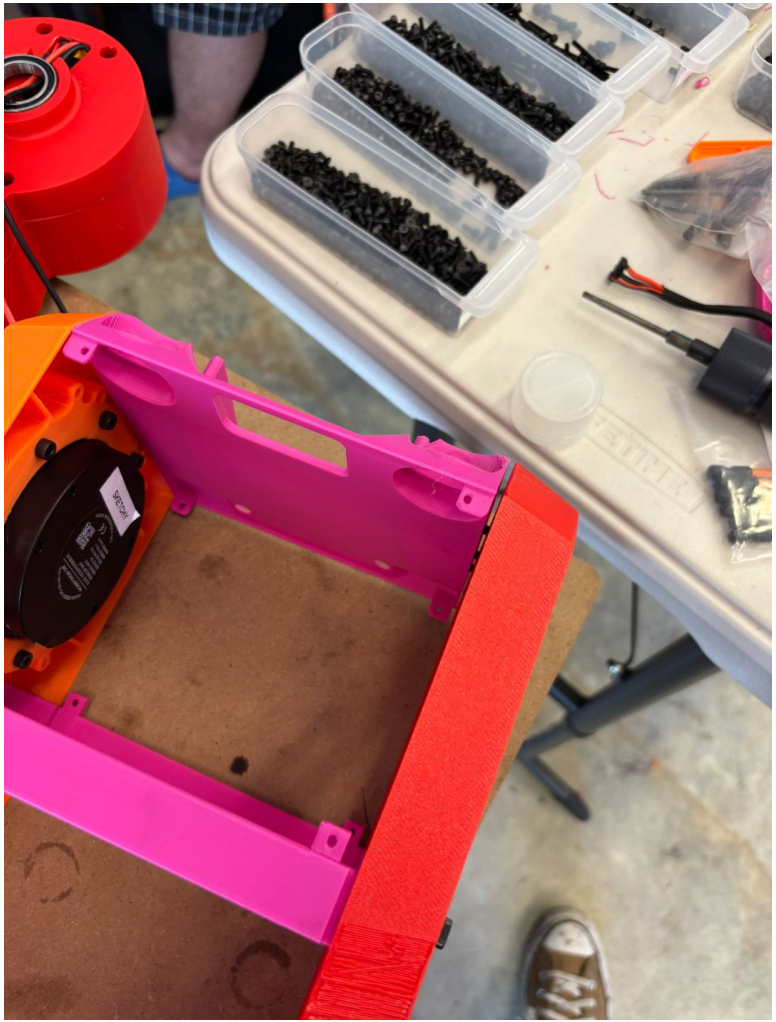
KD B 208F

M5x12

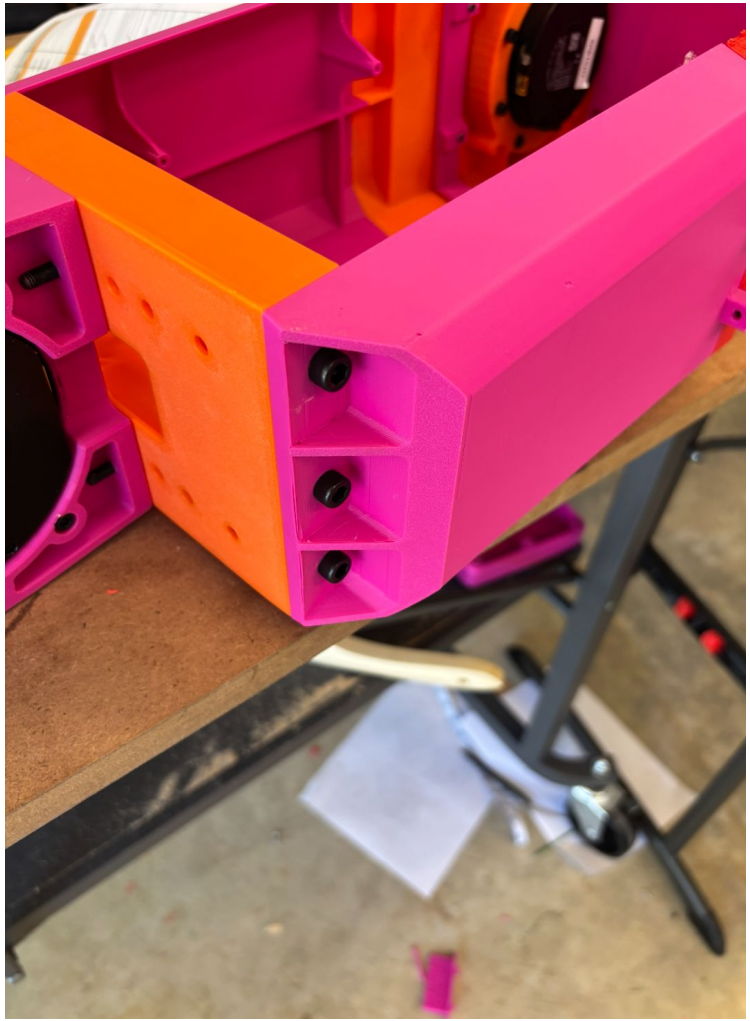
Loosely attach side of torso to top brace

KD B 159F

M4x20

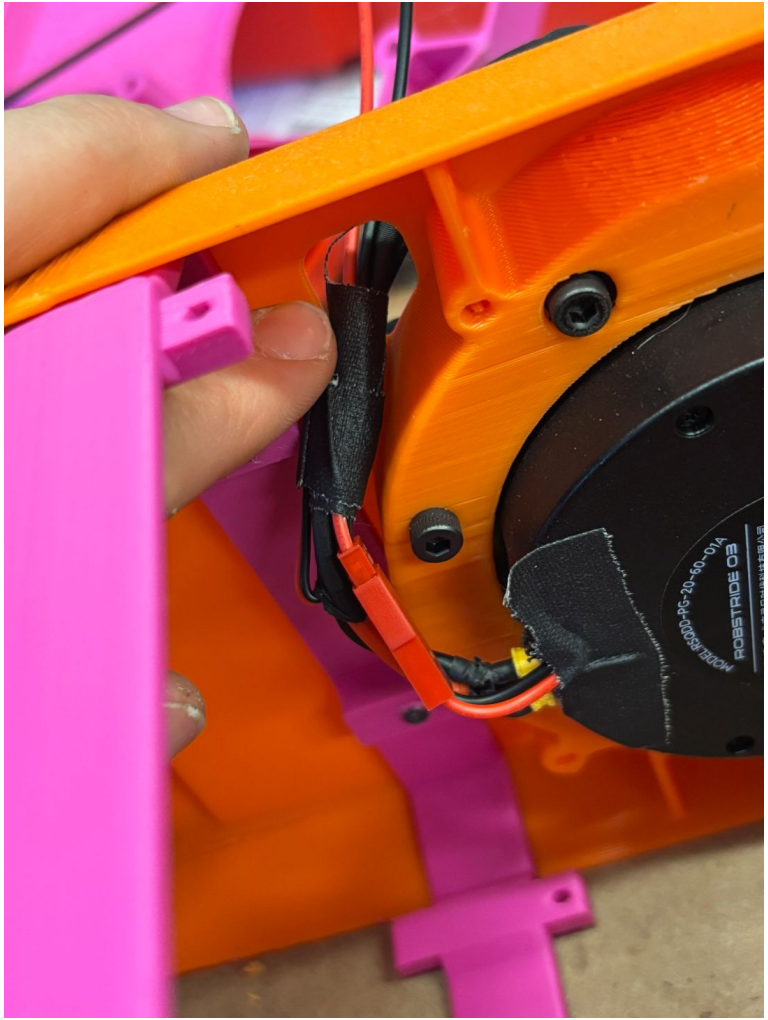


Torque down torso side mourning bolts in last 3 steps



Plug in wire on both sides

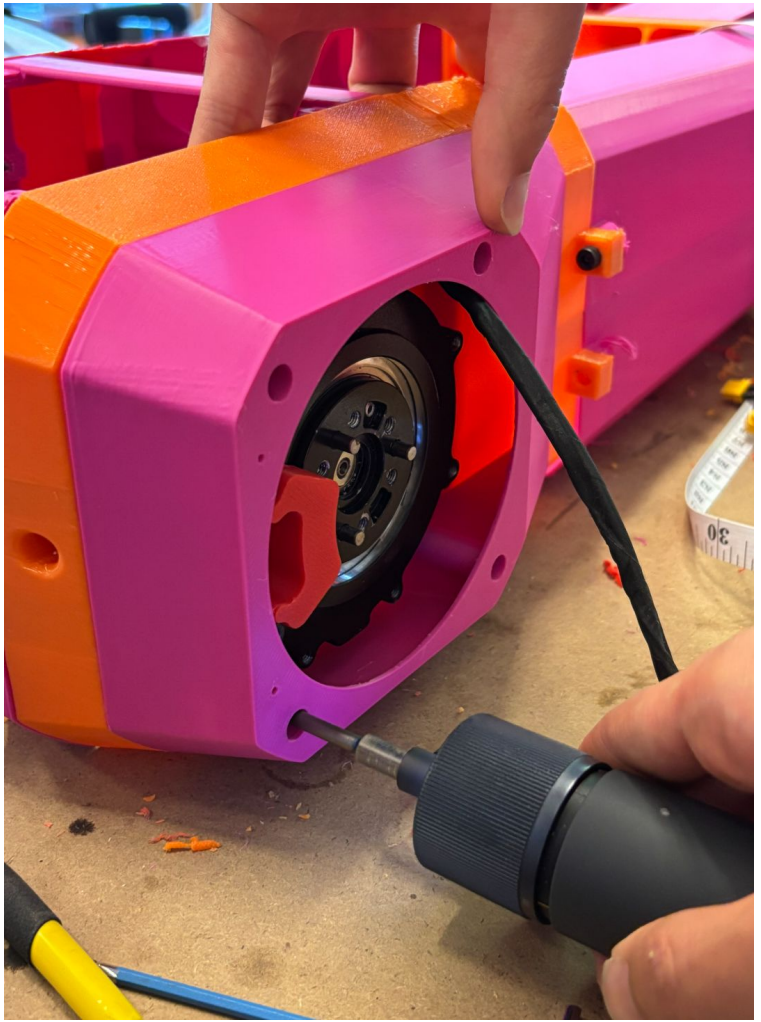
Feed wire through whole



Mount shoulder cover and feed wire through

KD B 156F

M4x8



Loosely zip tie around wire

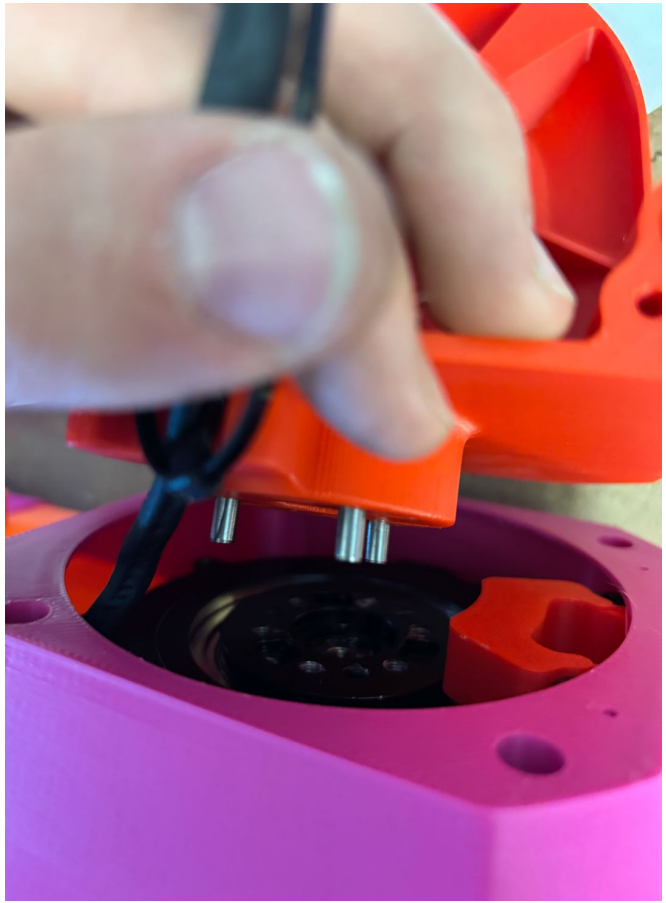
Mount shoulder yoke with pins and screws

KD C 151F

M4x20

KD C 152F

4mm x 10 mm Dowel pin



Install the pins

KD C 157F

4mm x 10mm Dowel pins

Pull wire taught

Tighten zip tie

Final Steps 最终组合

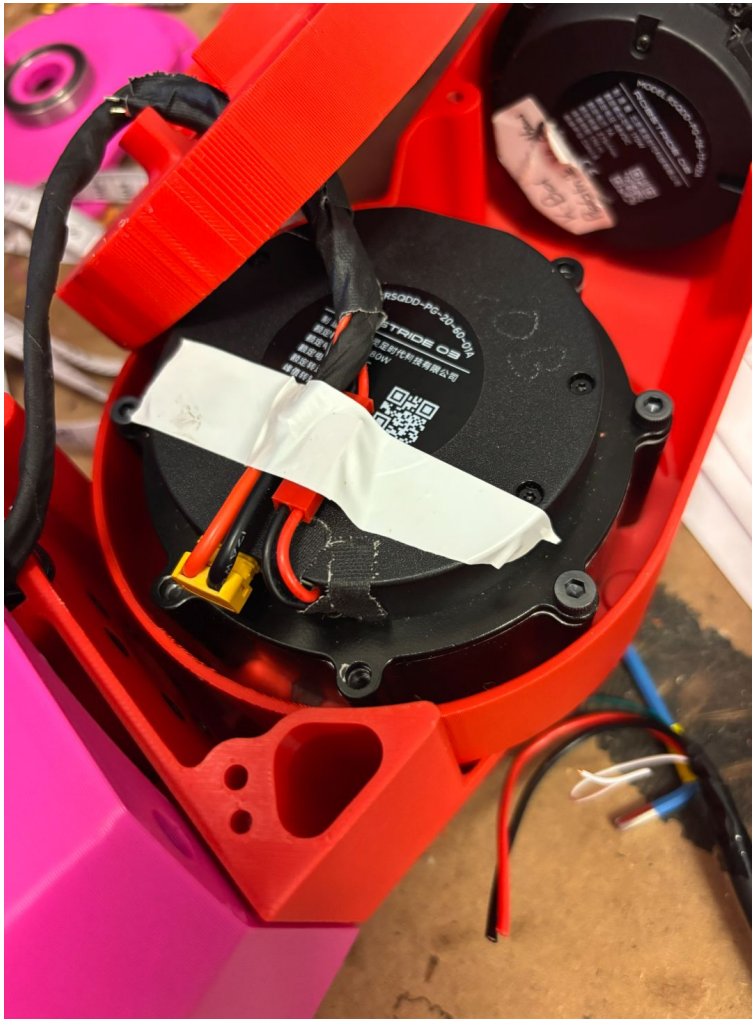
Align pins and install arm

KD C 156F

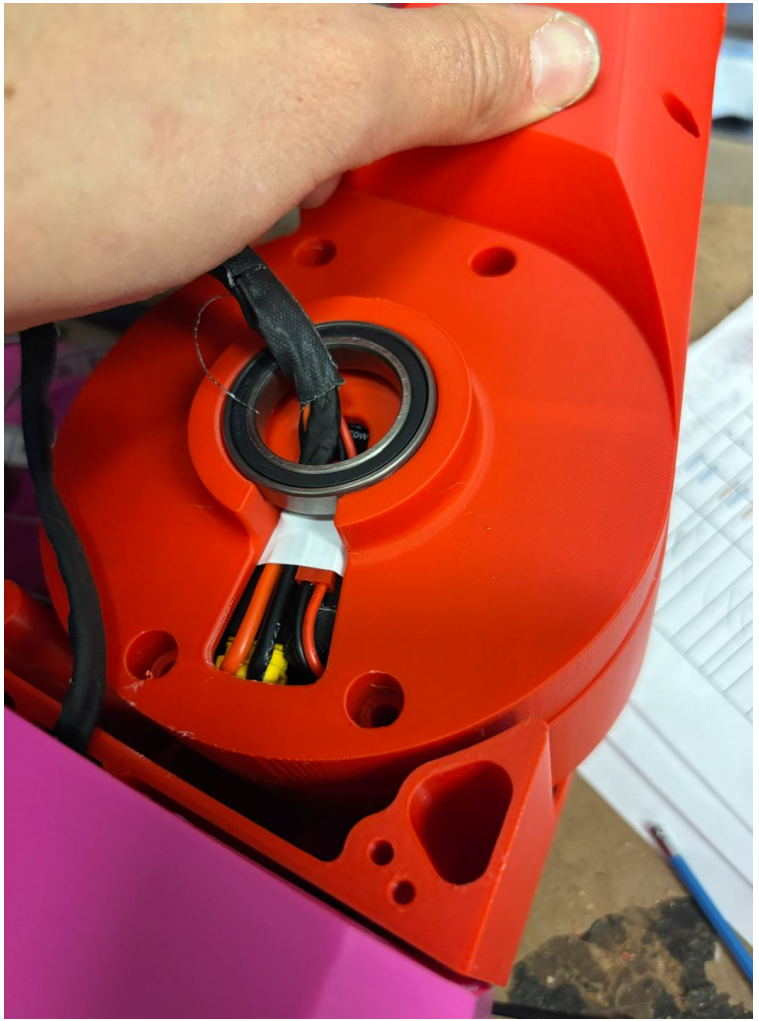
M4x20

Route wires through idle side and bearing

Tape down wires and plug in



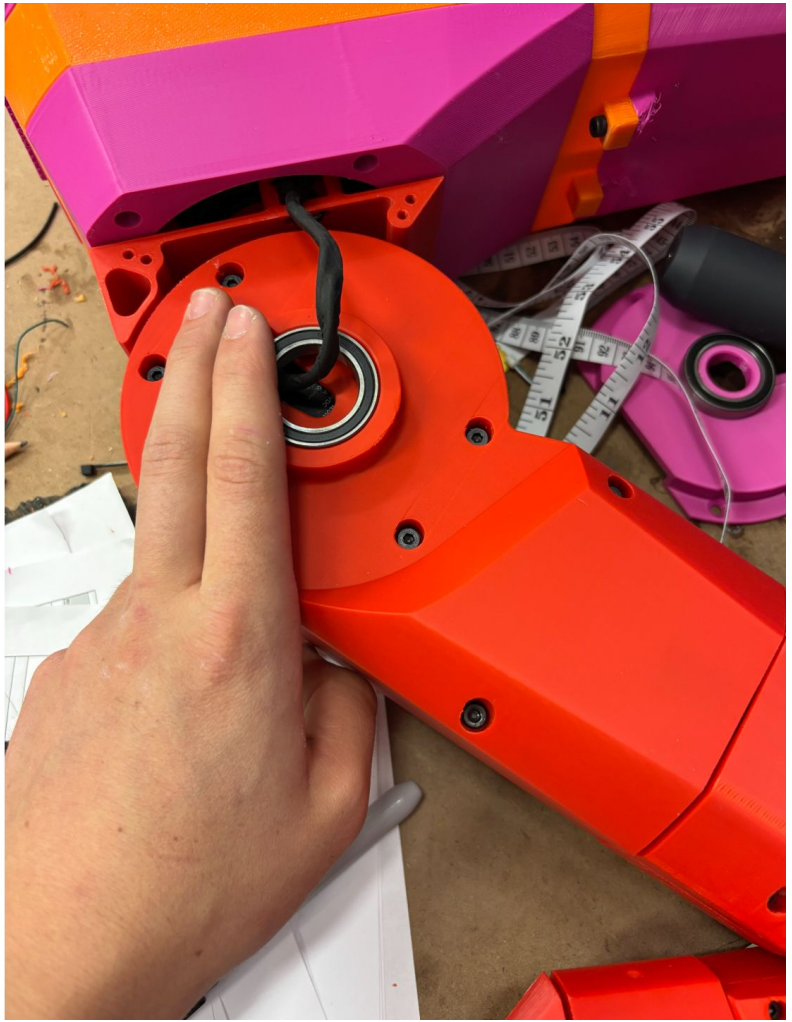
Secure wire like so



Secure idle side

KD C 254F

M4x16

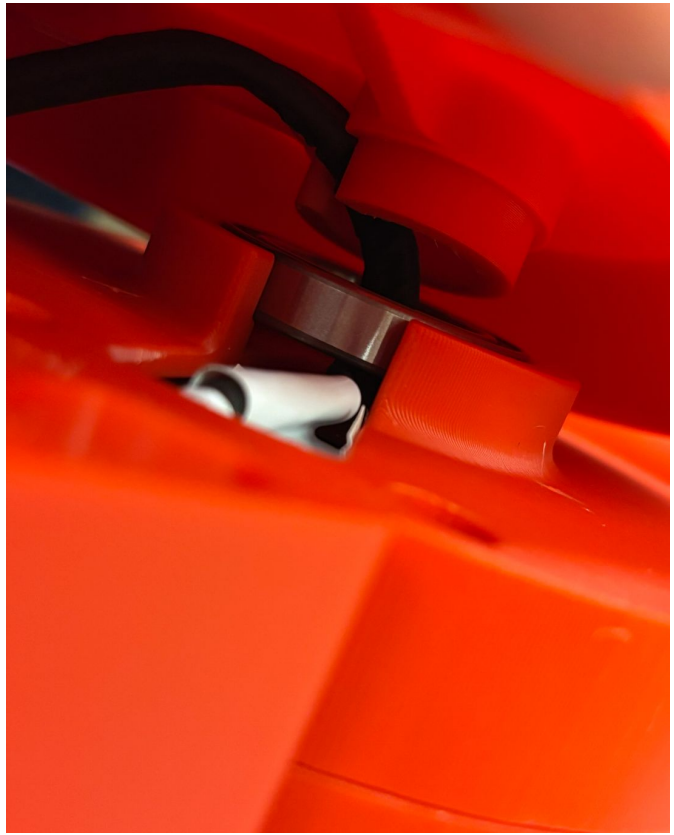


Install dowel pins

KD C 153F

3mm x 10mm

Clamp wire through center



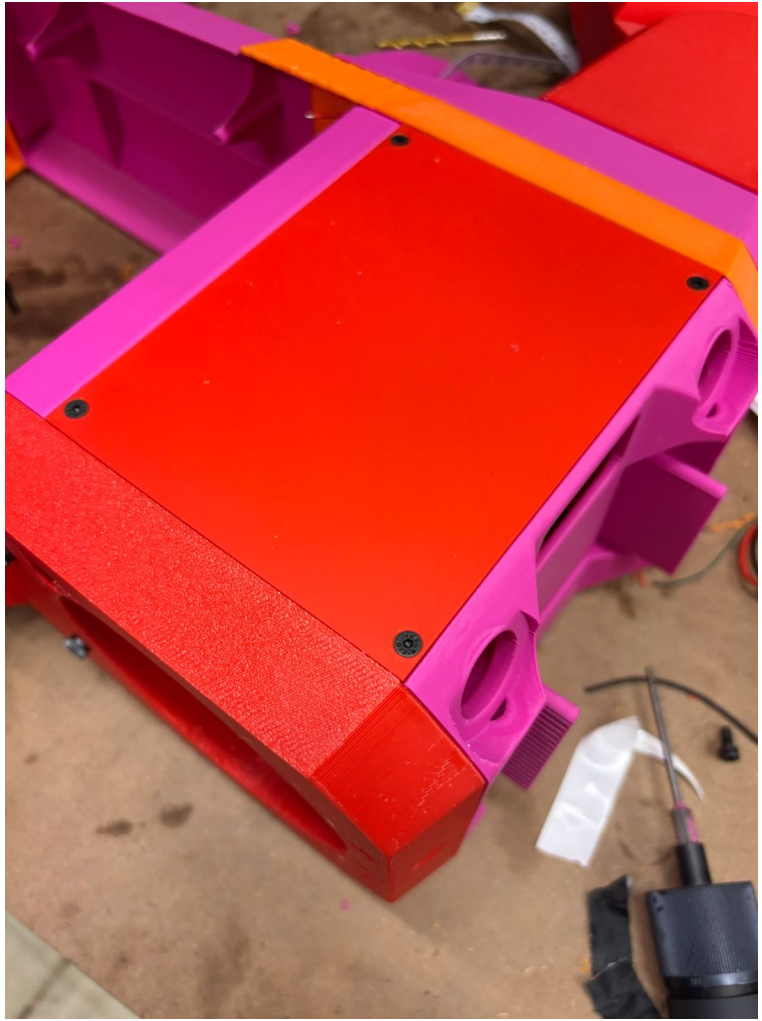
Install the other side of yoke

KD C 154F

M4x20

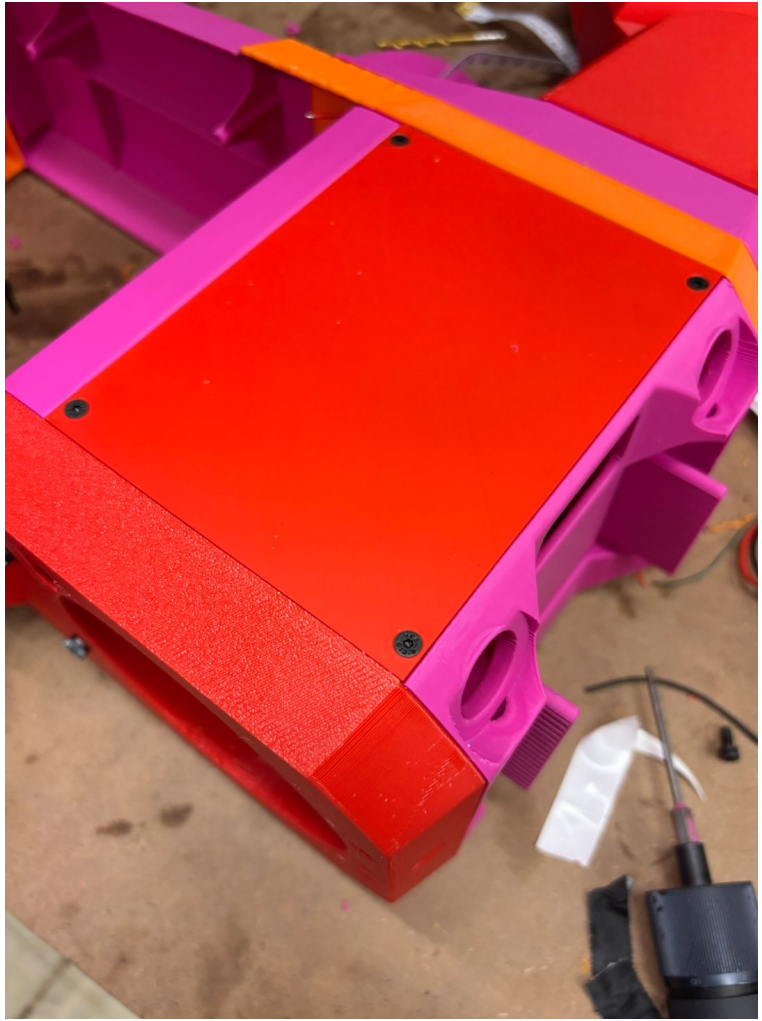
Install panel KD B 206F

M3x8 countersunk



Install panel KD B 206F

M3x8 countersunk



Mount front panels

KD B 206F

M3x8 countersunk