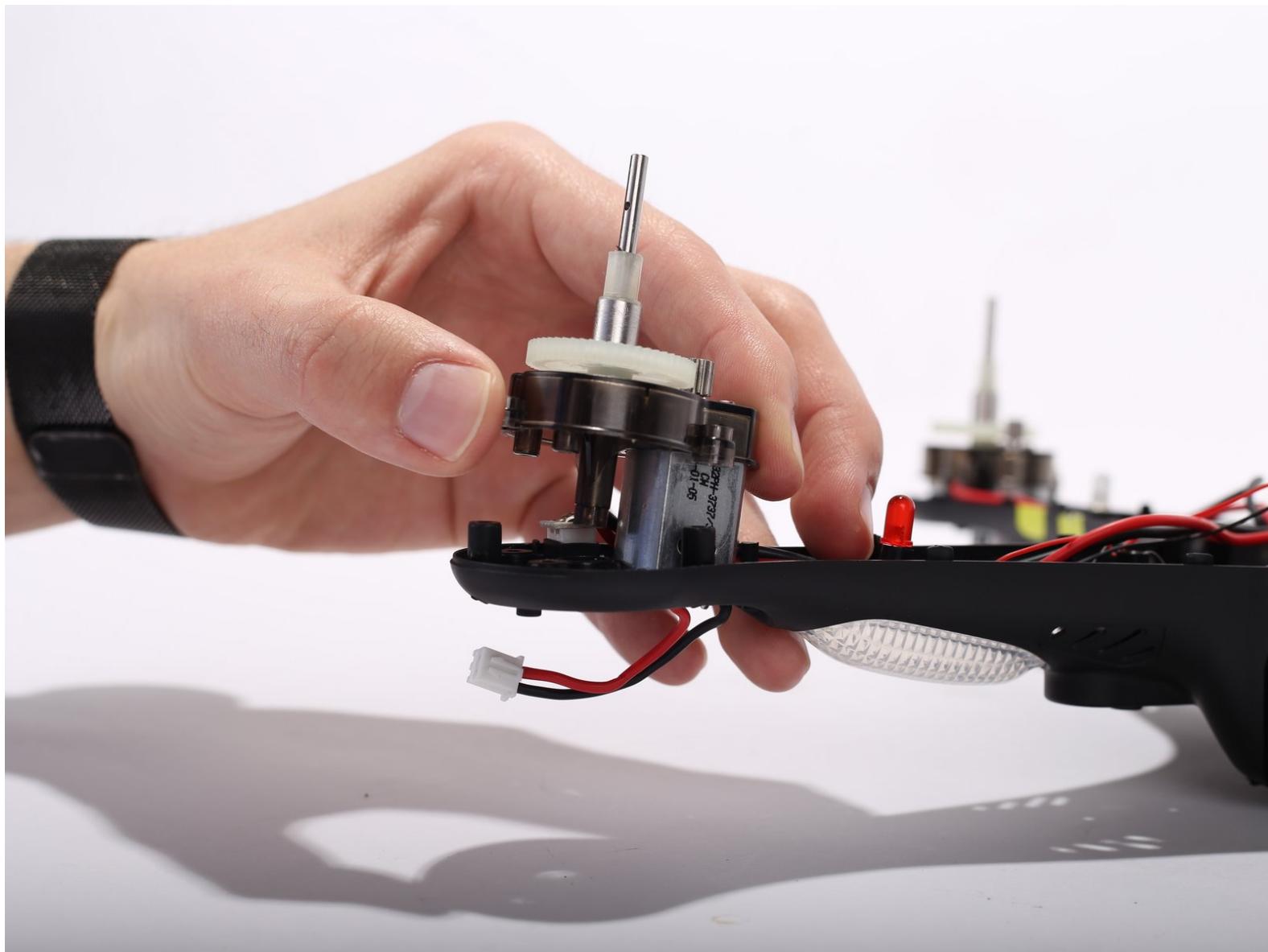




# Protocol Galileo Pinion Gear Replacement

This guide will walk you through replacing a broken pinion gear.

Written By: Thomas Ramey



## INTRODUCTION

Is a motor on your drone spinning but not causing the propeller to spin? Replacing the pinion gear as shown in this guide may help.

### TOOLS:

- [Heavy-Duty Spudger \(1\)](#)
- [Tweezers \(1\)](#)
- [Metal Spudger \(1\)](#)
- [Phillips #0 Screwdriver \(1\)](#)
- [iFixit Opening Tools \(1\)](#)

## Step 1 — Battery



- Find door on the underside of drone. Open the door.

## Step 2



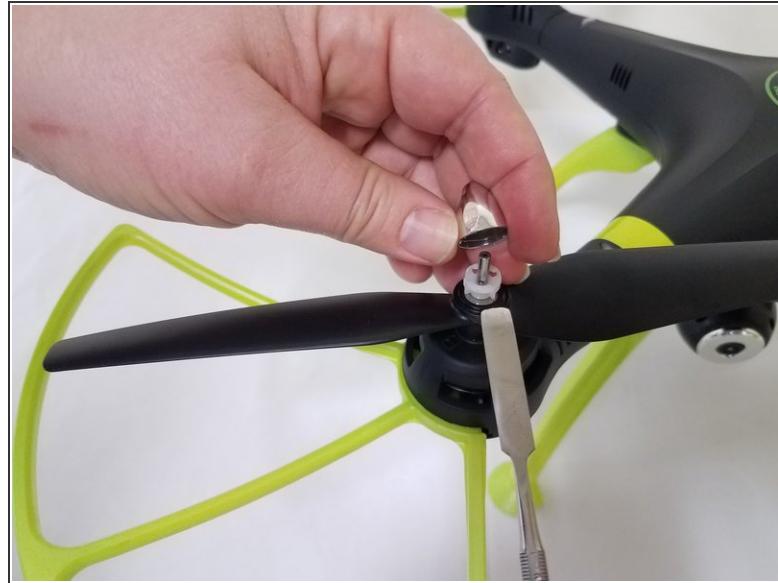
- Carefully pull out battery, pulling out wires first.

## Step 3



- Disconnect the connector.
- ☒ When reconnecting, remember to match up the black wire with the black wire and the red with red.

## Step 4 — Propeller



- Use the heavy duty spudger tool to pry off metal caps by pushing the spudger up into the cap.

## Step 5



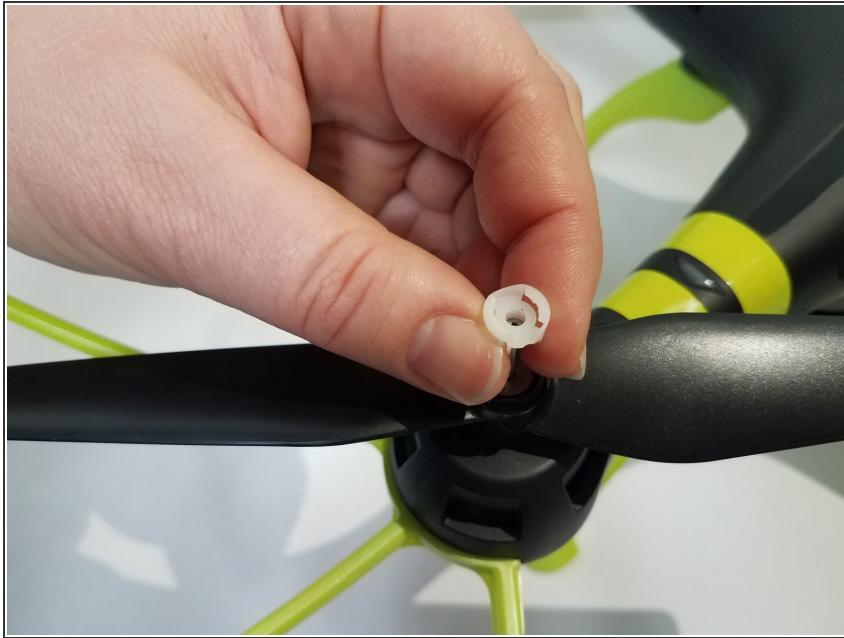
- Twist the white spindle sleeve counter clockwise to align locking pin inside with the opening.

## Step 6



- Use tweezers to remove locking pin.

## Step 7



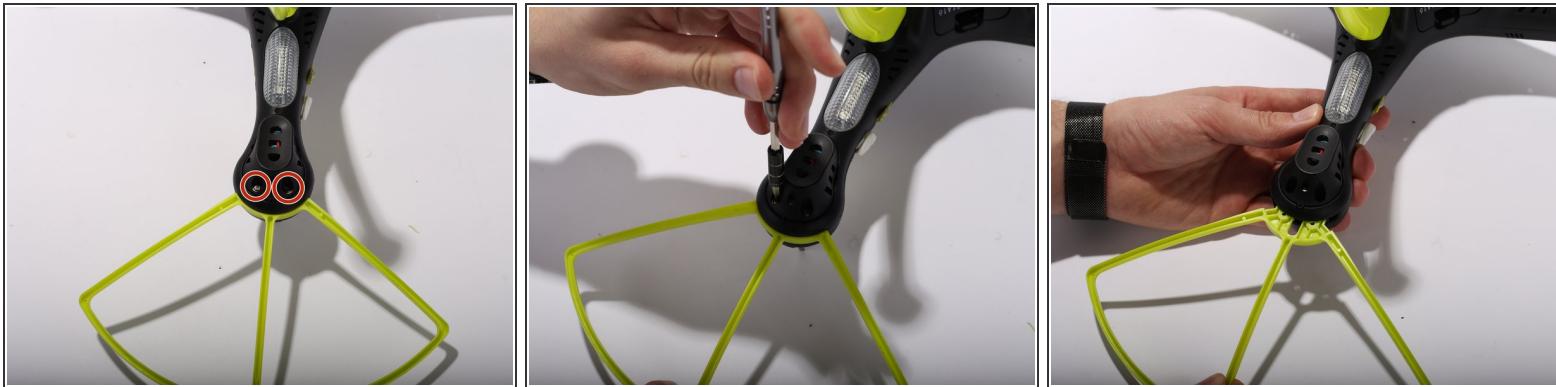
- Pull off white spindle sleeve.
- ☒ Take note of which side of the spindle sleeve is the top.

## Step 8



- Pull off propeller.

## Step 9 — Top Shell



- Remove Blade Guards by unscrewing two 13 millimeter screws using Philips #0. Pull out the guards. Repeat the steps for the other three corners.

## Step 10



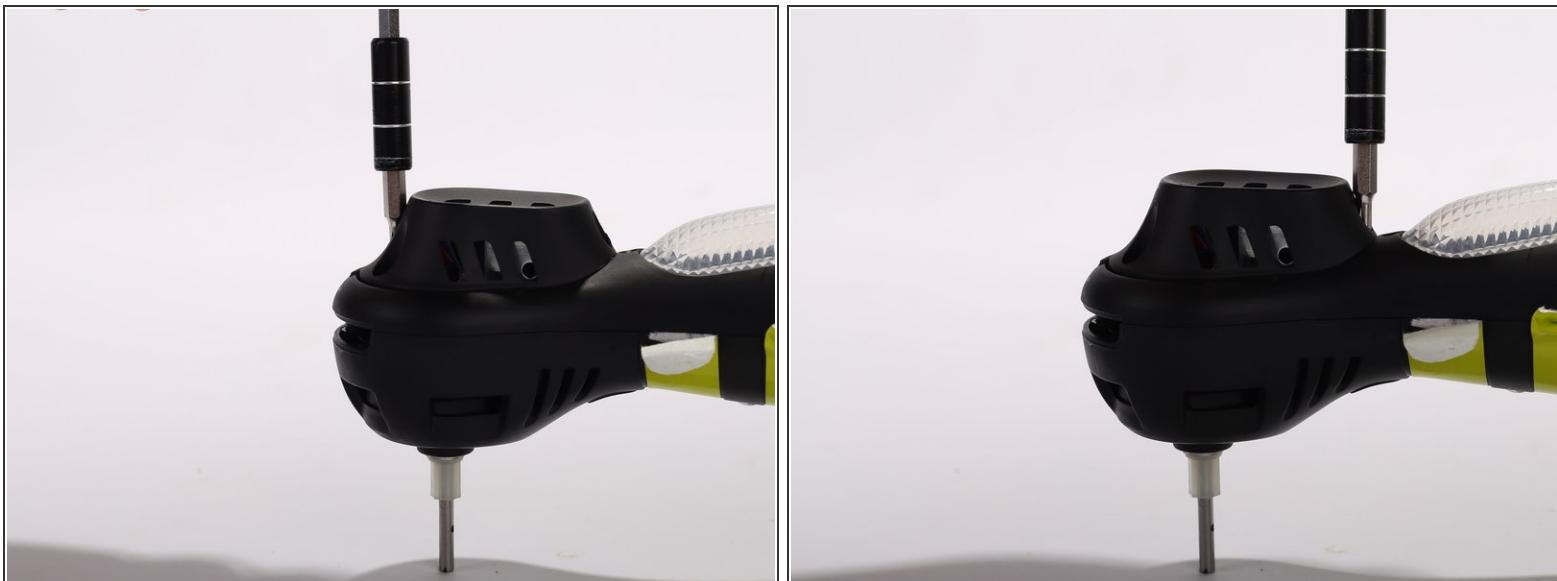
- Unscrew two 9 mm screws located inside the legs. Repeat the same procedure for the other three legs

## Step 11



- Unplug the camera wire.
- Press the hold release button and slide out the camera module away from the button.

## Step 12



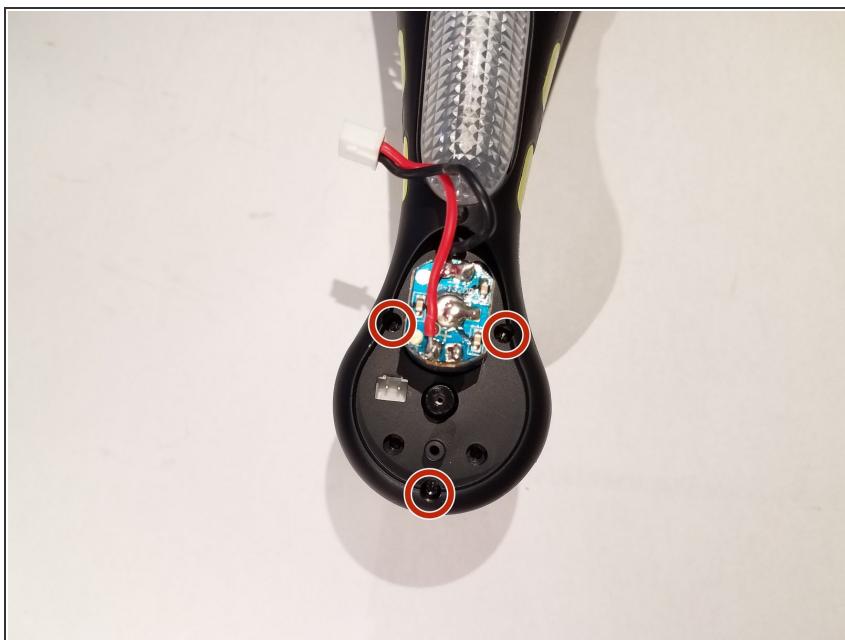
- Remove the motor protection cover by unscrewing two 9 mm screws using Philips #0. When the screws are off, use your fingers to pull the motor protection cover off. Repeat the procedure for the other three arms.

## Step 13



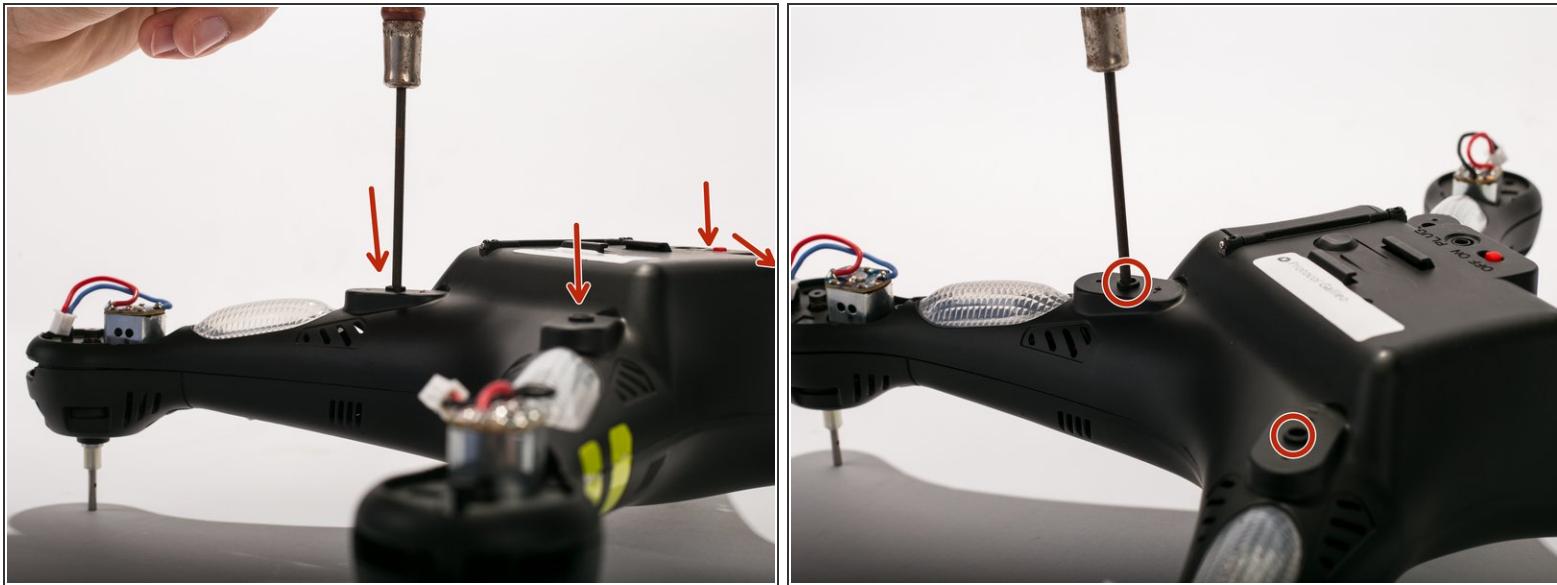
- Unclip the motor cable from the shells housing using two pry tools. Repeat the same procedure for the other three arms.

## Step 14



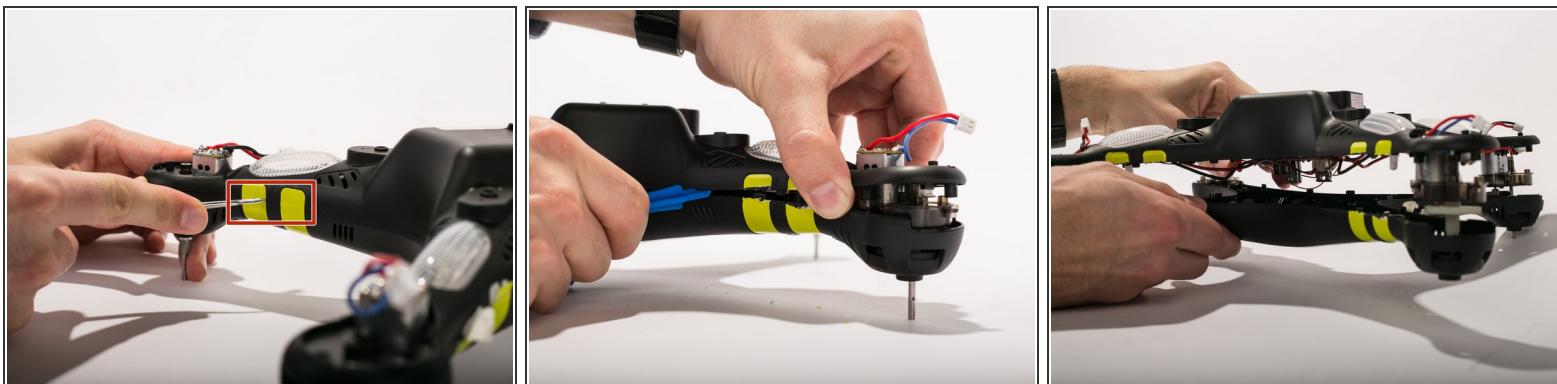
- Remove 3 9mm screws around the motor housing. Repeat the steps for the three other arms.

## Step 15



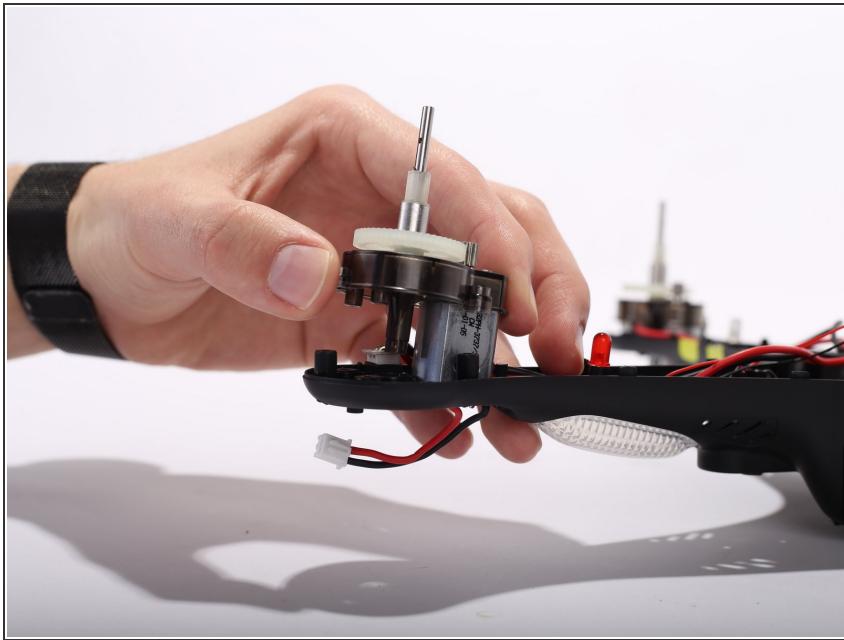
- Remove four 9 mm screws located where the legs originally are placed. (Use a thin head screwdriver)

## Step 16



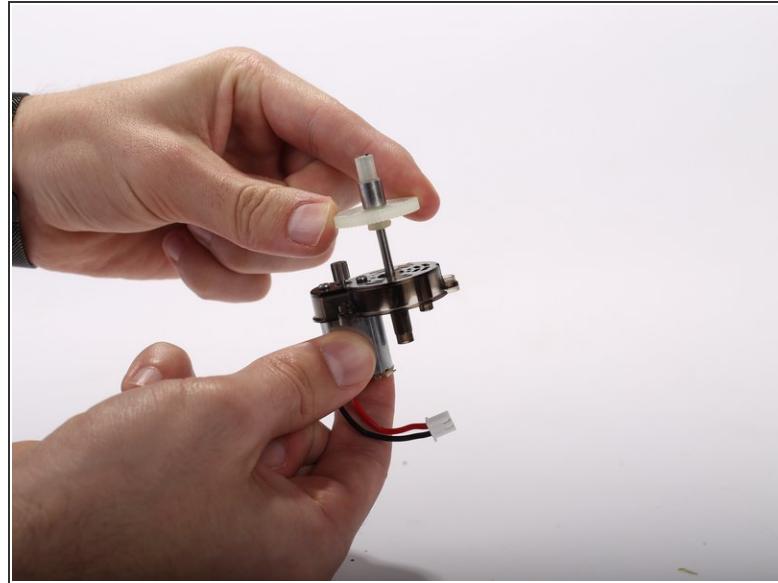
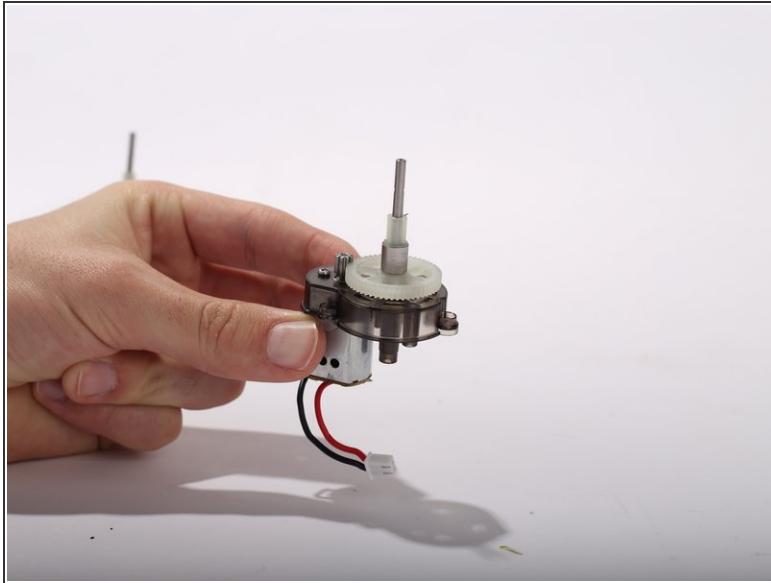
- Cut the yellow strips using a scalpel. Pry open the casing using pry tools working gently around the corners.

## Step 17 — Pinion Gear



- Remove the motor assembly from the bottom shell.

## Step 18



- Slide the pinion gear off of the motor assembly.

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