

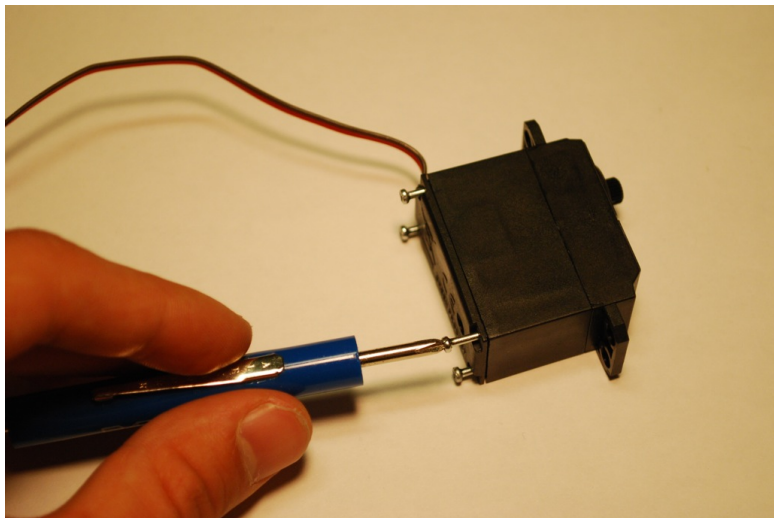
Modifying the Vigor VS-2 Servo for Continuous Rotation

Scott Bezek

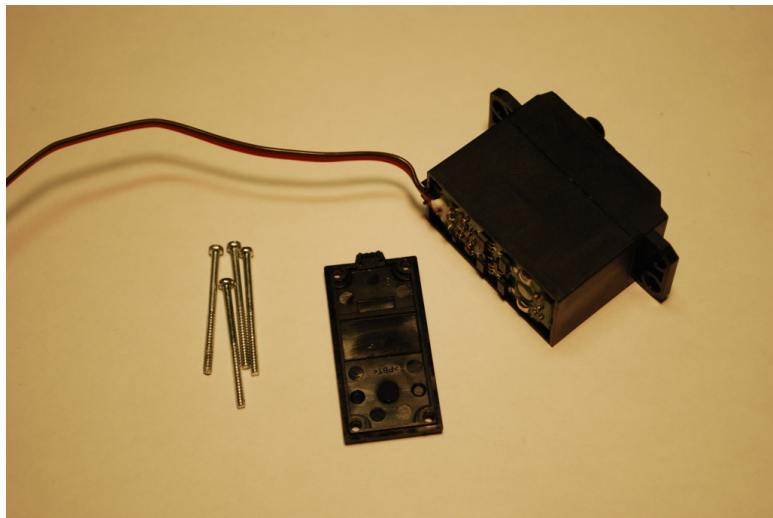
6.270 Organizers
Massachusetts Institute of Technology

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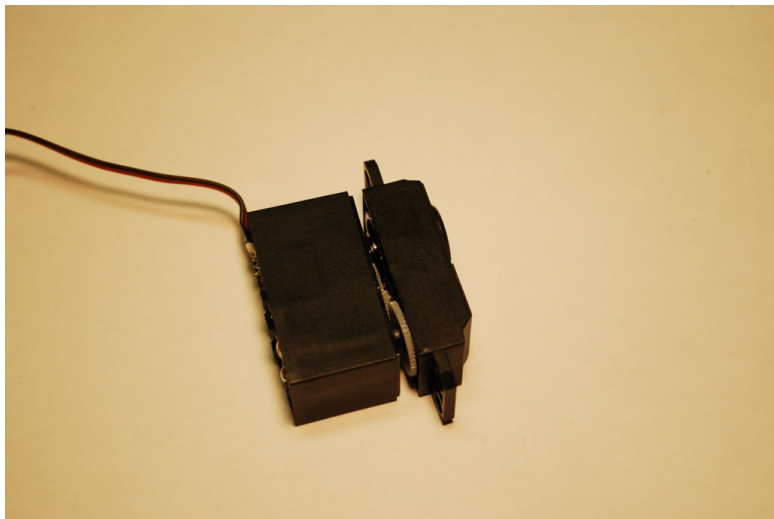
Unscrew the 4 screws



Remove the bottom cover

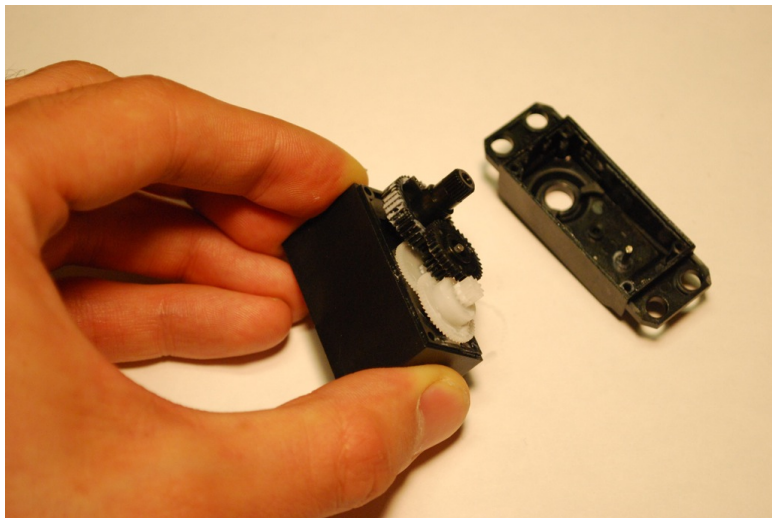


Gently open the top gearbox

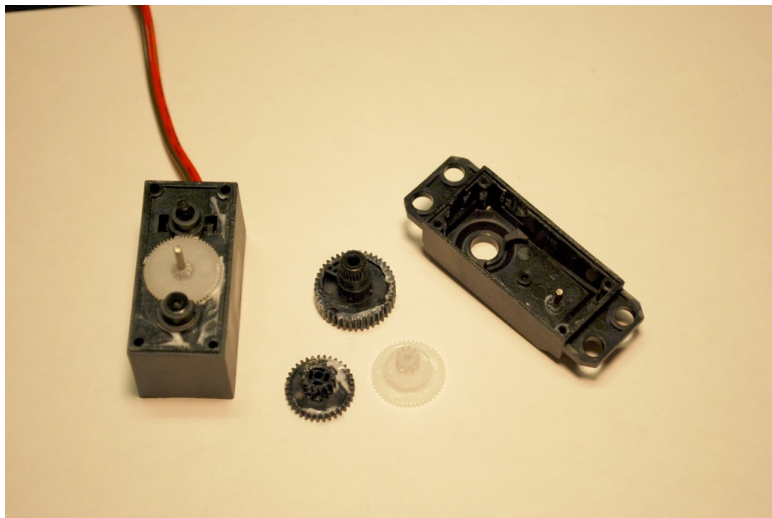


Be careful not to lose any gears!

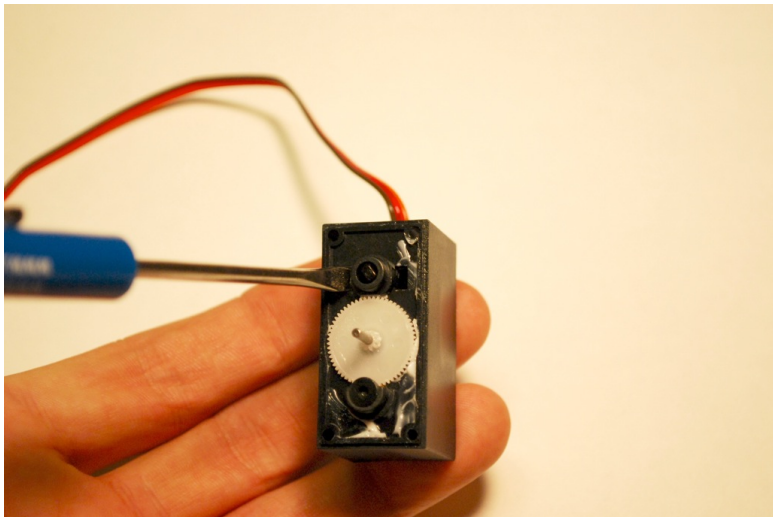
Remove the gearbox cover completely



Remove gears and set them aside

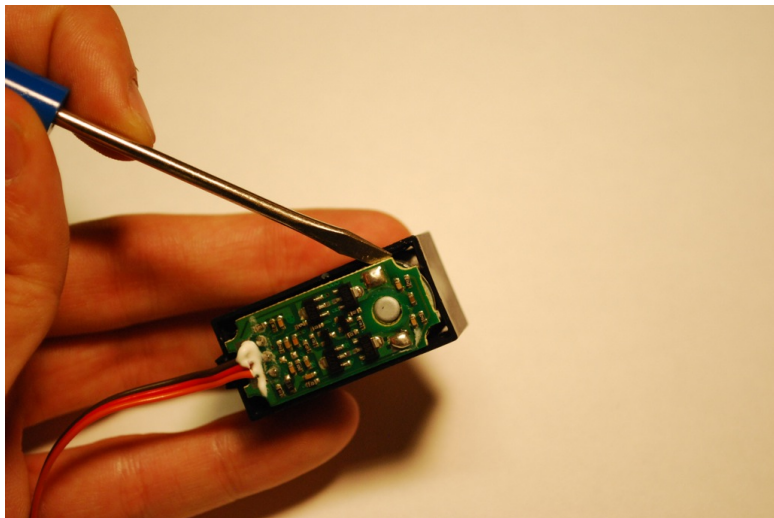


Release the potentiometer



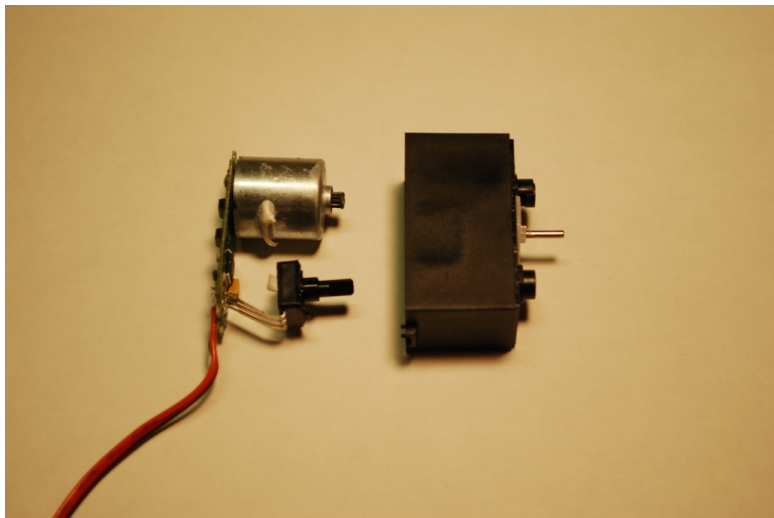
Insert a screwdriver into the tab holes near the potentiometer, and press *outwards* to release the locking tab.

Remove the motor and PCB

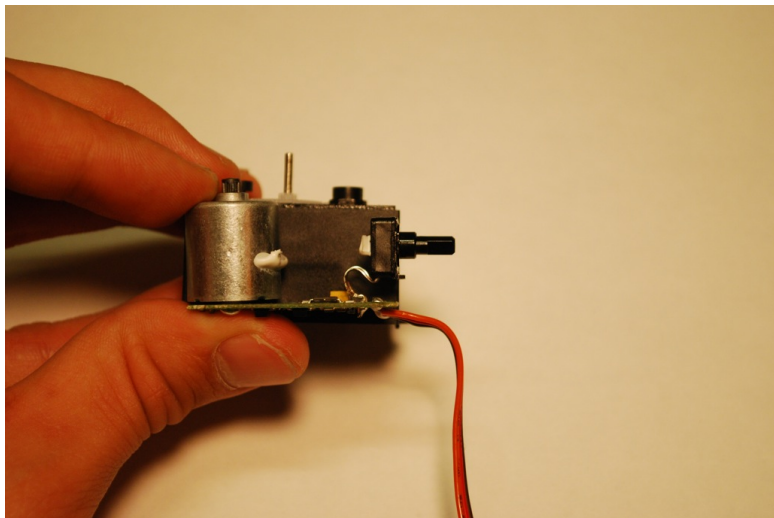


Use a screwdriver to gently pry the PCB out of the case. Be sure the potentiometer has been released first!

Remove the motor and PCB

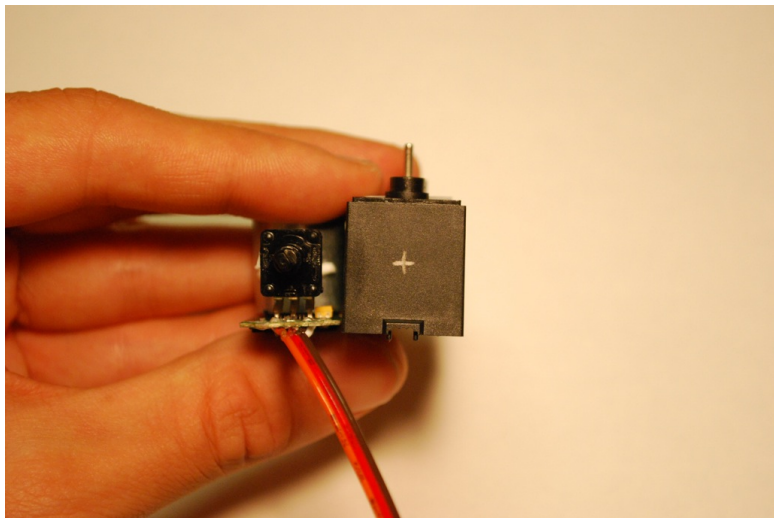


Rearrange potentiometer



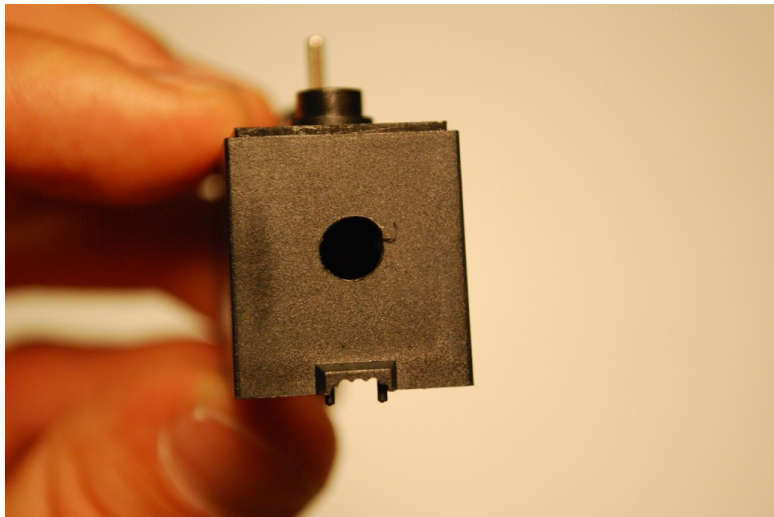
Bend the potentiometer so that it points out the side of the case rather than the top (compare to previous picture)

Mark drill location



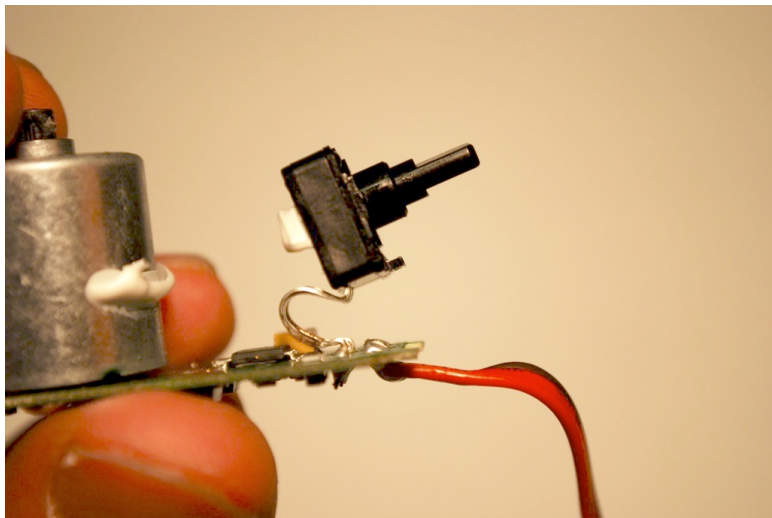
Mark the case where a hole needs to be drilled for the potentiometer.

Drill potentiometer hole



The hole should be big enough for the “sleeve” at the base of the potentiometer shaft.

Prepare potentiometer



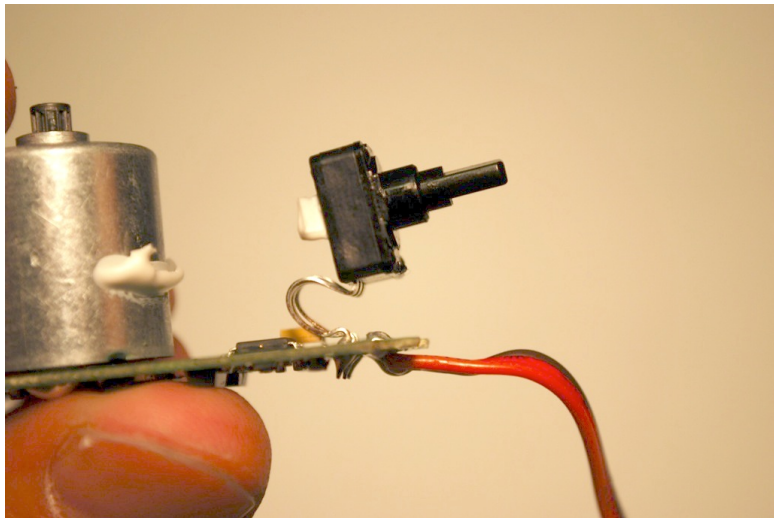
Notice the plastic “nub” at the bottom of the potentiometer? This needs to be removed so it can rest flush with the case.

Prepare potentiometer



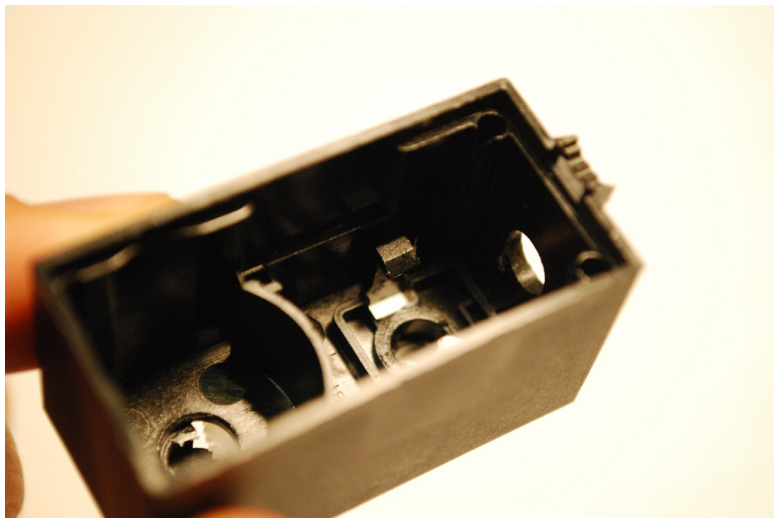
Use diagonal cutters to remove the nub.

Prepare potentiometer



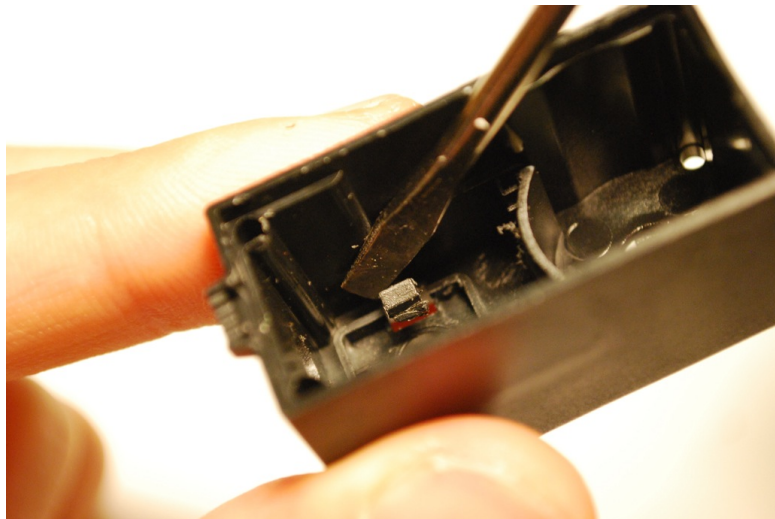
No more nub!

Remove potentiometer tabs



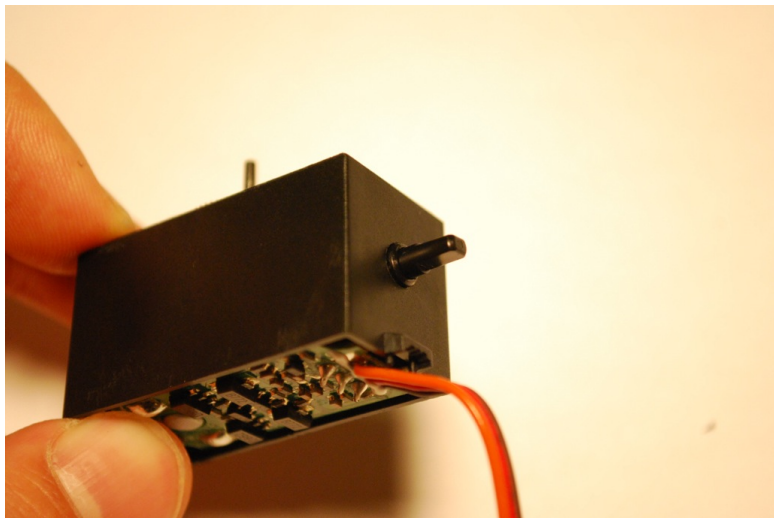
See that locking tab that held the potentiometer in place? It's going to get in the way, so remove it!

Remove potentiometer tabs



Use a screwdriver or pliers to break the tabs off inside the case.

Replace motor and PCB



Carefully slide the motor and PCB assembly back into the case. The potentiometer should poke through the hole you made.

Prepare output gear/shaft



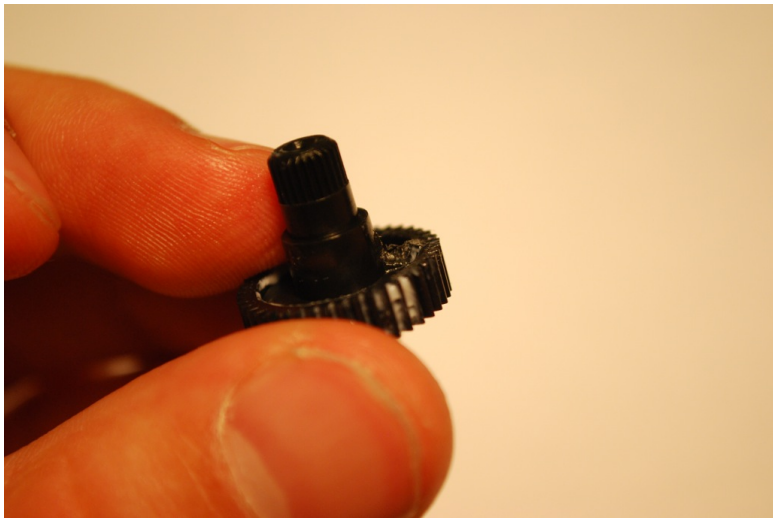
The output gear has a tab that limits its rotation to 180 degrees. This needs to be removed.

Prepare output gear/shaft



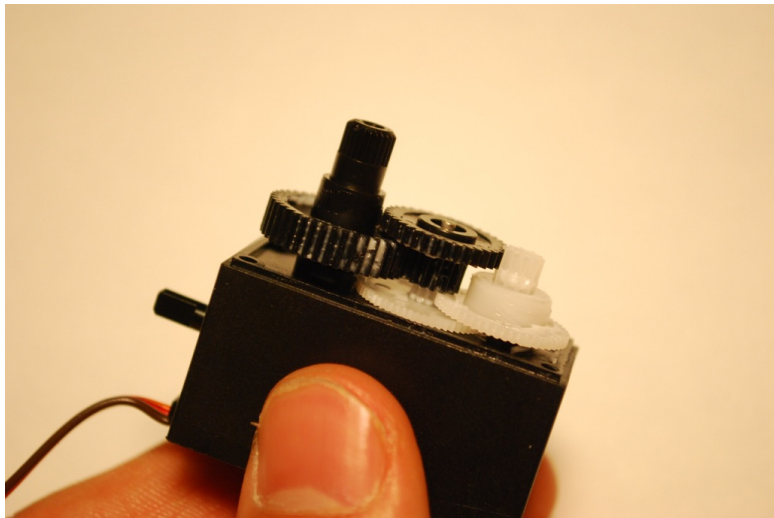
Clip the limiting tab off with diagonal cutters. Remove as much as possible or the gears may scrape inside the motor.

Prepare output gear/shaft



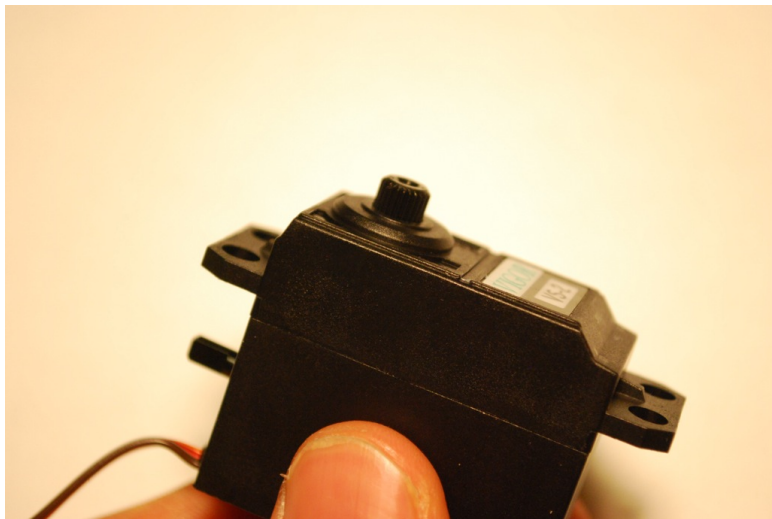
No more limit!

Align gears



Put the gears back into place - make sure all the teeth mesh cleanly.

Reattach the gearbox cover



Put all the covers back on and screw everything together.