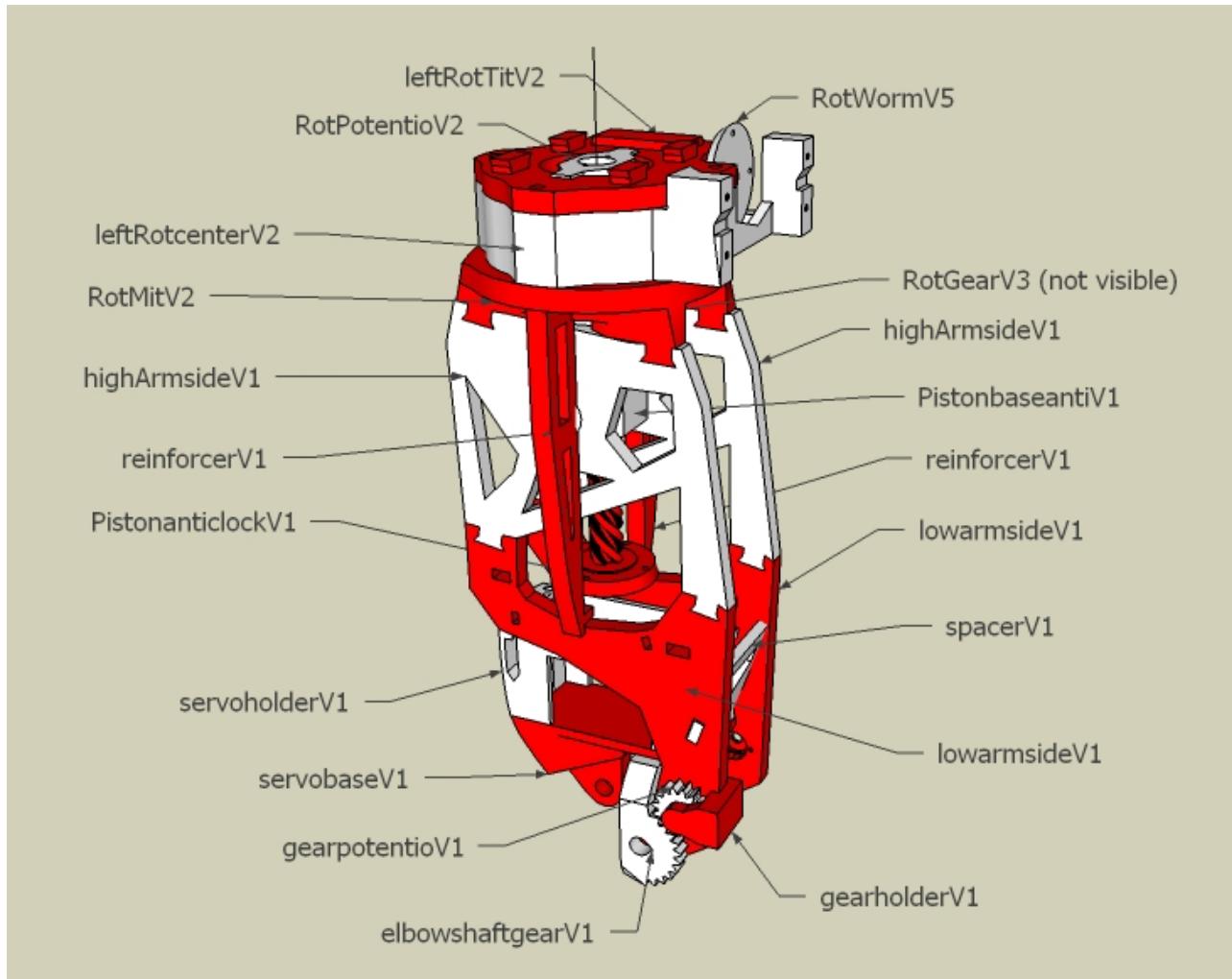


# PART: BICEP

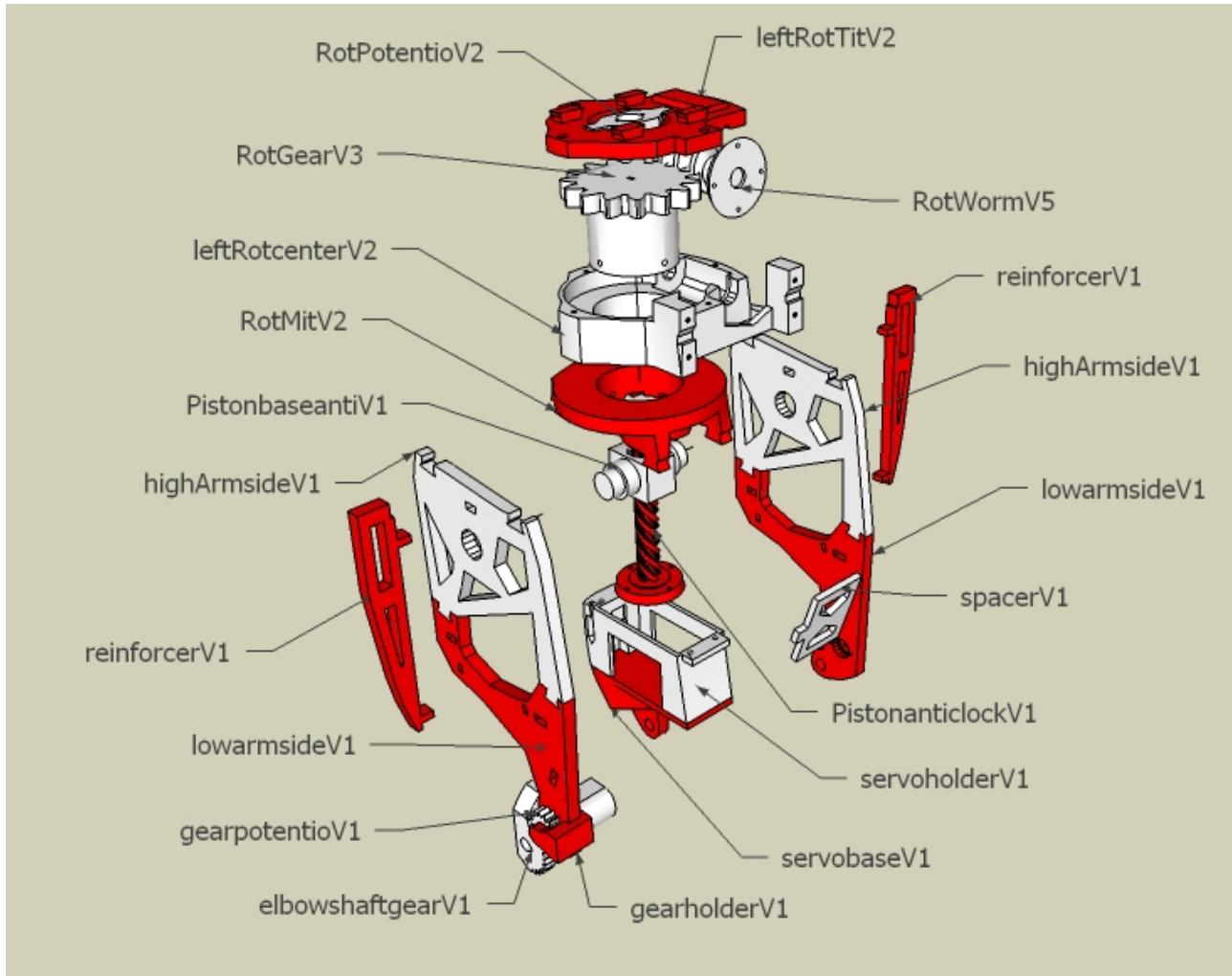
## Step 2

In which we put the parts together.



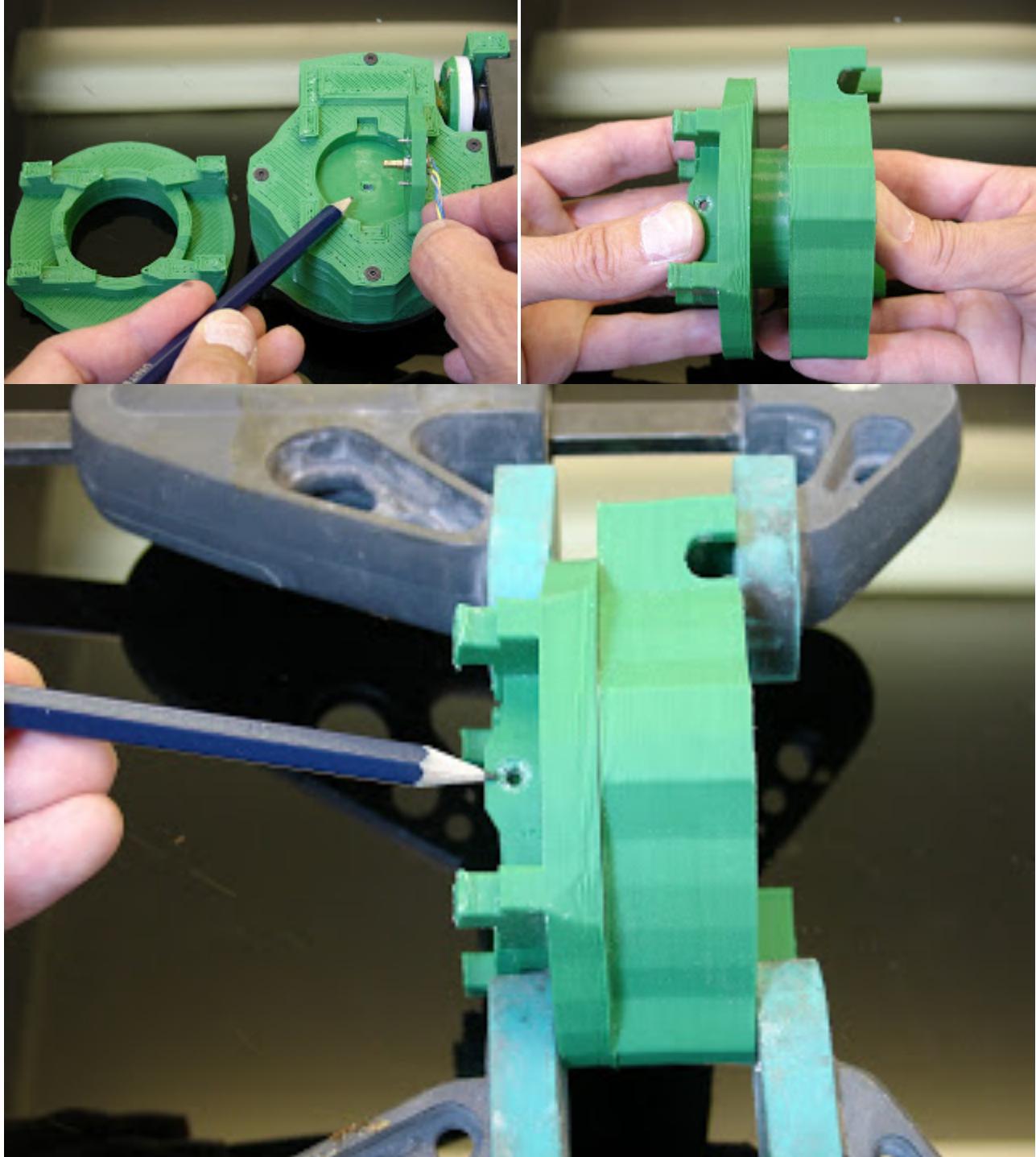
Before starting, make sure you have a clear sense of how the components fit together. The picture above shows the biceps after assembly.

# PART: BICEP



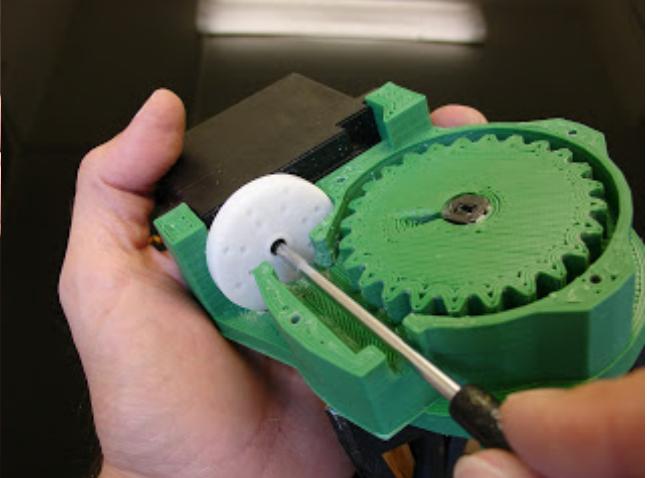
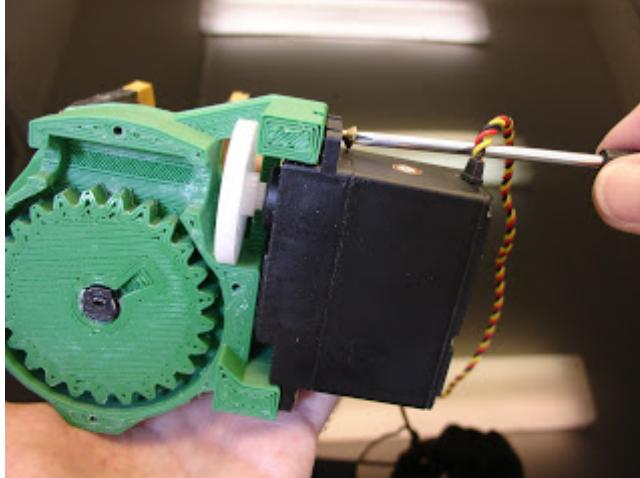
Keep referring to these sketches to know where to fit a part. The exploded view should be most helpful. Pay more attention to these graphs rather than the pictures as this is more updated. Some of the components used in the following pictures are actually from earlier versions.

# PART: BICEP



The upper left picture is to show the position of rotGear compared to rotMit. Check the little rectangle hole. Mount them together. Don't refer to the picture, the parts are not the same anymore. Clamps are helpful to make sure there is no backlash when screwing them together. Make sure your screws don't come out behind, or recut them.

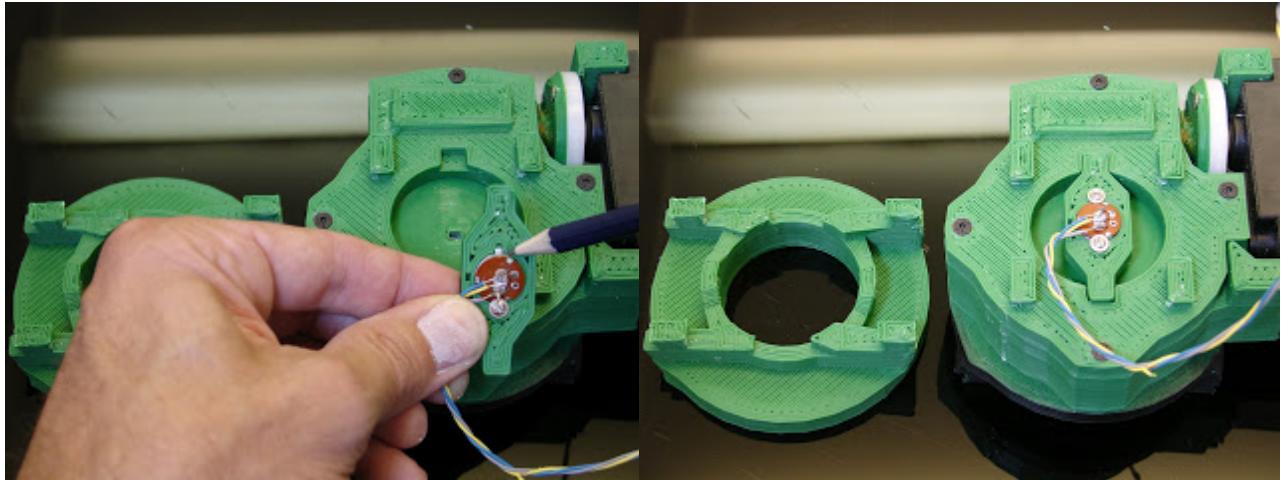
# PART: BICEP



Up next you can attach one of your servos to rotcenter. Don't tight fit the white actuator wheel. Only once the servo is properly attached, you can tight the screw. Then take rotworm and mount it to the actuator wheel with 4 little screws, also making sure they

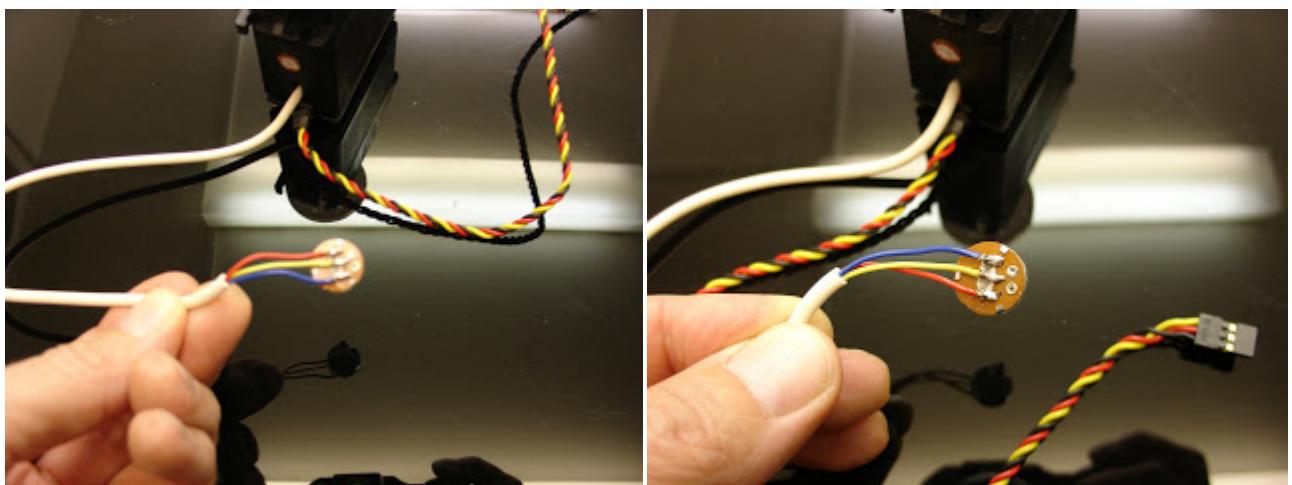
Now mount rotGear to rotCenter, it should turn easily but with no backlash. I made it operate a few turns by plugging the servo on the Arduino. Then I cleaned up the dust created by the parts. Before closing the case with rotTit, use a good amount of grease, every where on the gears.

# PART: BICEP



Mount the servo's potentiometer to rotPotentio but make sure to place the little metal plate from the potentiometer in the gap designed in rotPotentio. Use some little spare crews from your small servos.

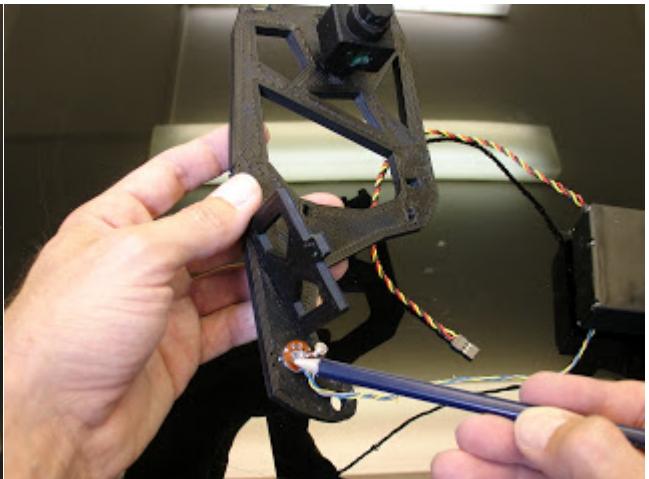
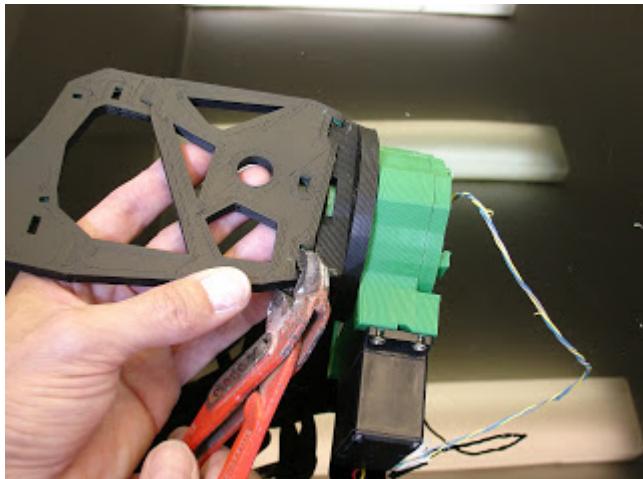
Note that if you are building the left arm, your cables should be welded in the same color order as when you opened the servo. The right arm should have the opposite color order, just as shown below.



# PART: BICEP

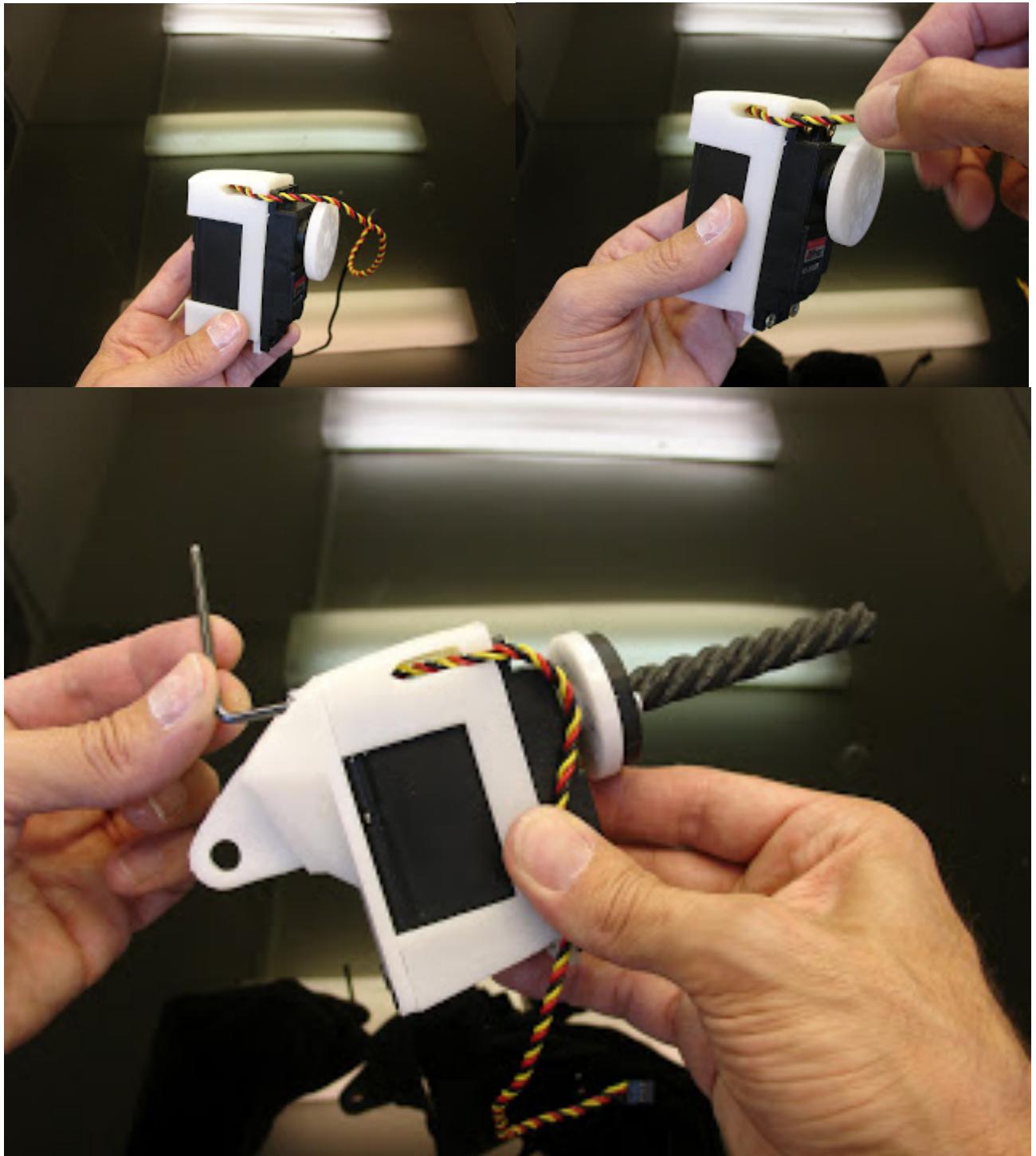


Ease pistonAntiClock in to pistonBase. I have reinforced pistonAntiClock on the inside with a metal rod. But you can use it like this, it should hold. I broke a few of them during my tests, and was glad they could break instead of something else.



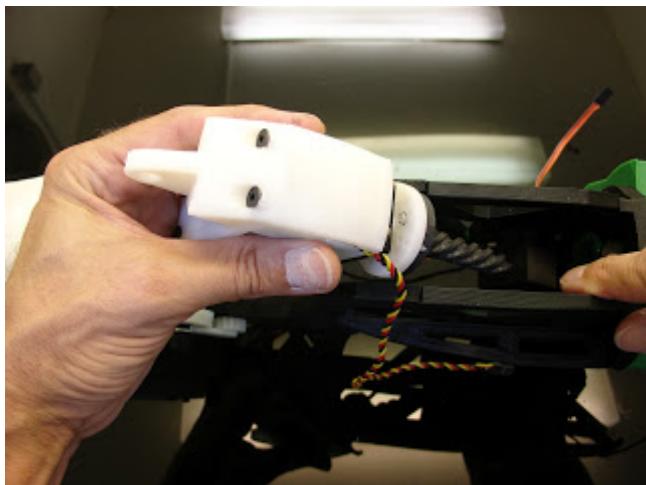
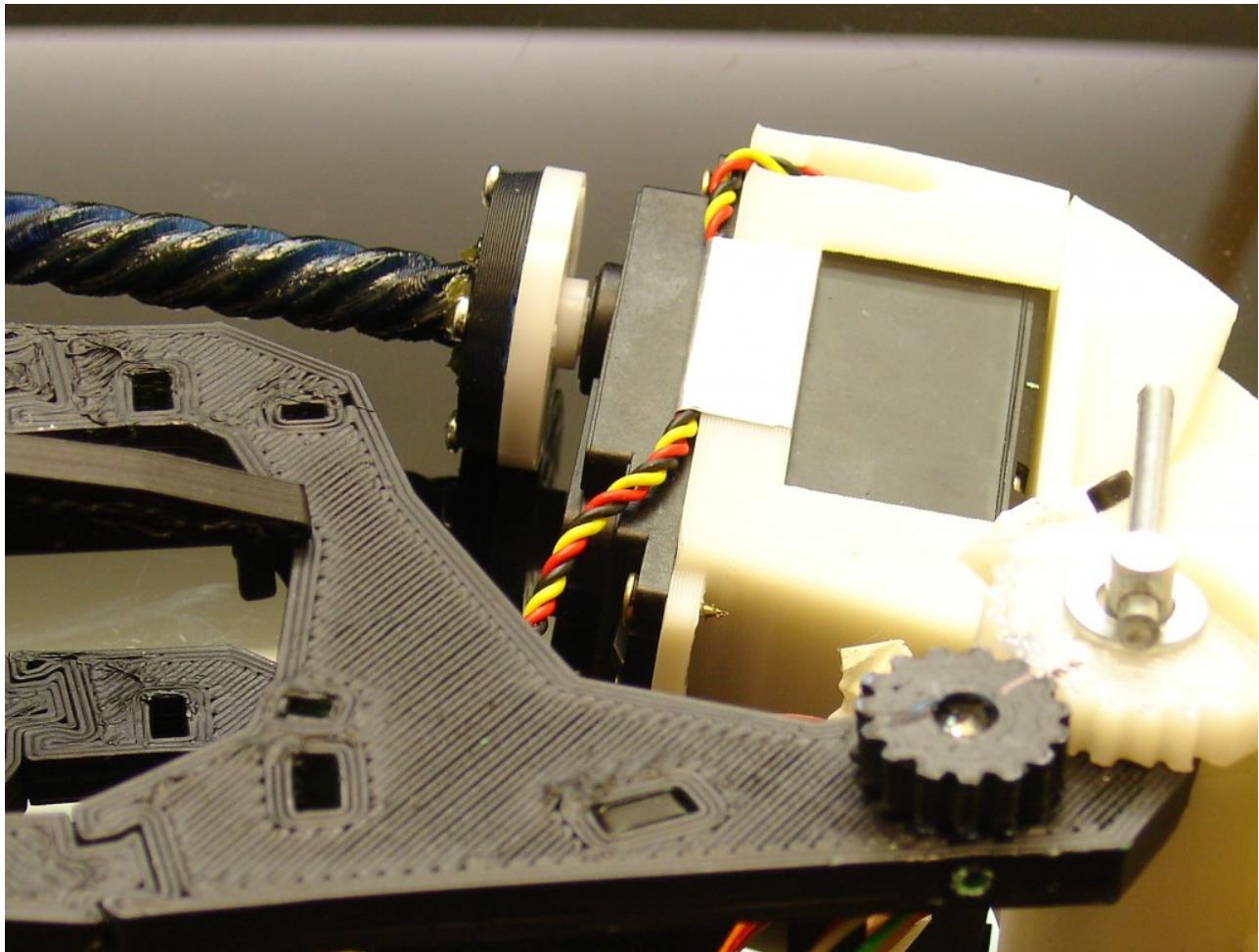
You can now start doing the lower part of the bicep. Assemble highArm to rotMit with pliers. Then add pistonBase and spacer. Attach the potentiometer again making sure to place the little metal plate from the potentiometer in the designated gap. Assemble the rest of highArm and lowArm. Later, after the tests, you will have to glue these parts.

## PART: BICEP



Attach the second servo in the servoHolder,. Run the cables as shown, tucking them down along the frame, I used aluminium tape to avoid pinching the cable during actuations. Do the same on the other side with the potentiometer wires.

## PART: BICEP



Attach the servoBase and pistonAntiClock to the actuator. Turn in pistonAntiClock in to pistonBase. Adding grease is a good idea.

# PART: BICEP

## Parts (per arm)

2x servo motors.

60 cm of cable.

rotPotentio

rotGear

rotCenter (left and right)

rotMit

pistonBaseAnti

2x highArmSide

2x reinforcer

2x lowArmSide

gearPotentio

elbowShaftGear

gearHolder

servoBase

servoHolder

pistonAntiClock

spacer

rotWorm

rotTit (left and right)