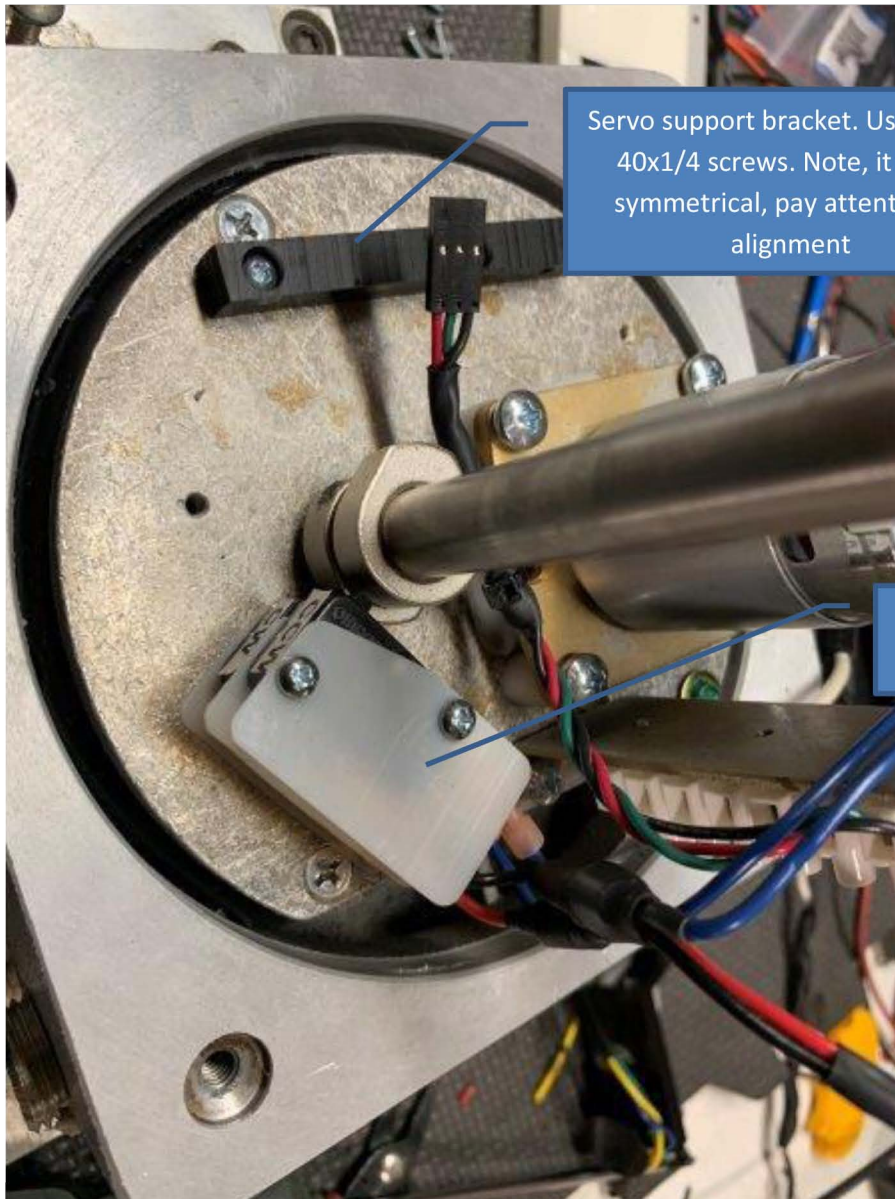
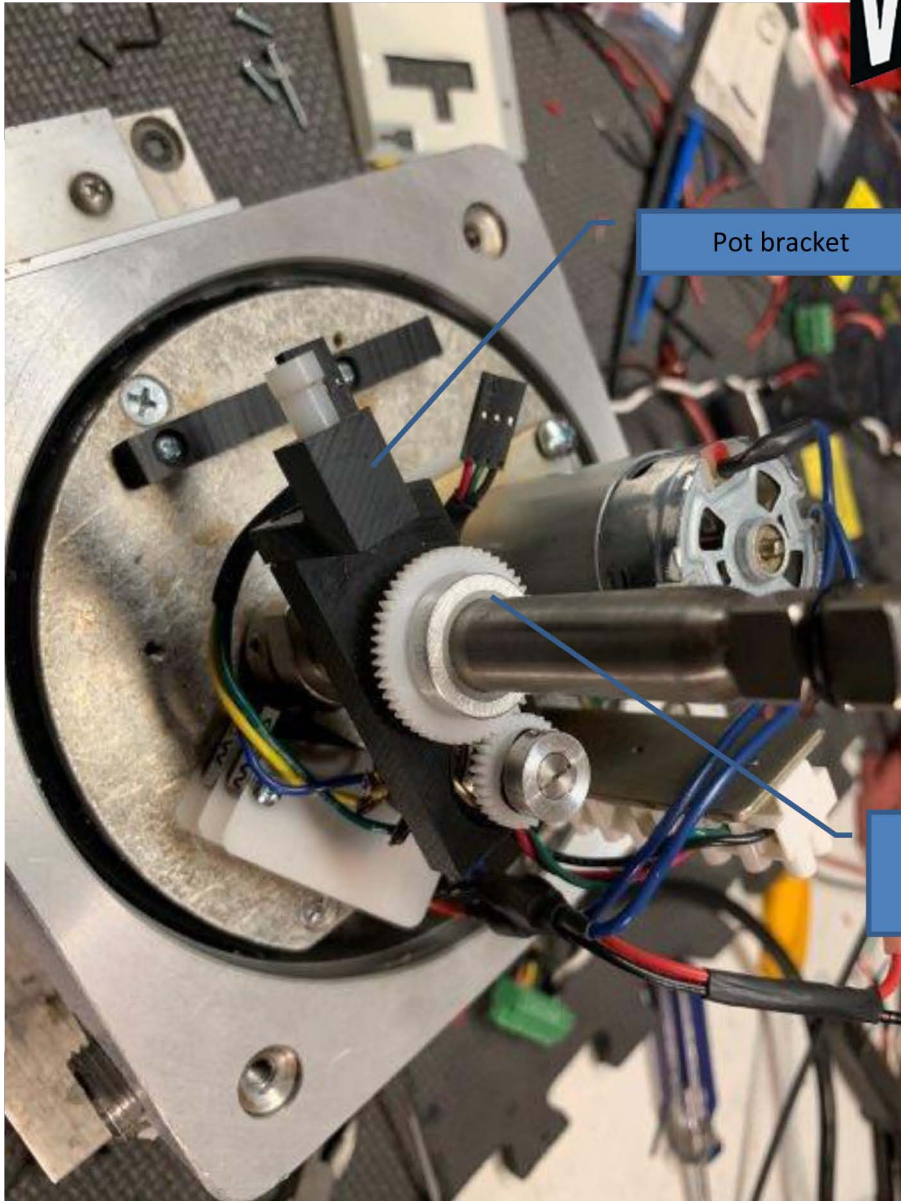


1. Remove old circuit card and the two top cams
2. Disconnect wires from motor to old circuit card. The servo kit has new wires to hook to the motor.
3. Attach the black nylon servo support.
4. Attach the limit switches. The CCW switch is on top when looking down on the actuator.



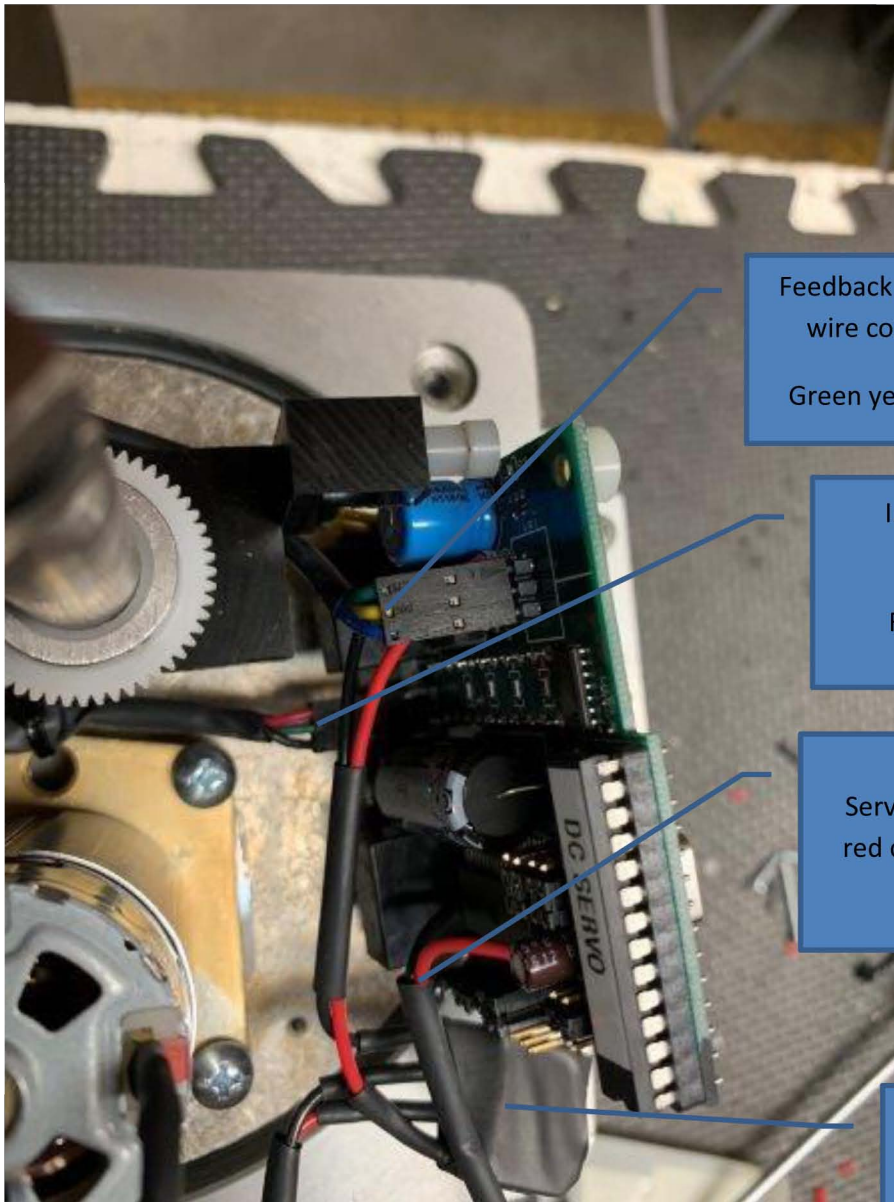
5. Cut the tie wrap holding the gear to the pot bracket. You can mix them, but they usually work best if you keep the gear sets together.

6. Place the pot bracket over the cam shaft, but don't tighten yet.
7. Place the big gear on the cam shaft, but don't tighten yet.



8. Place the servo card and wire assembly over the cam shaft and next to the servo bracket. But leave screws very loose.
9. Pull the rectifier wires under the pot signal.
10. Attach the pot signal. Be sure to align the colors as shown.

11. Attach the input signal jumper and be sure to align the colors as shown.



Feedback pot signal
wire connector

Green yellow blue

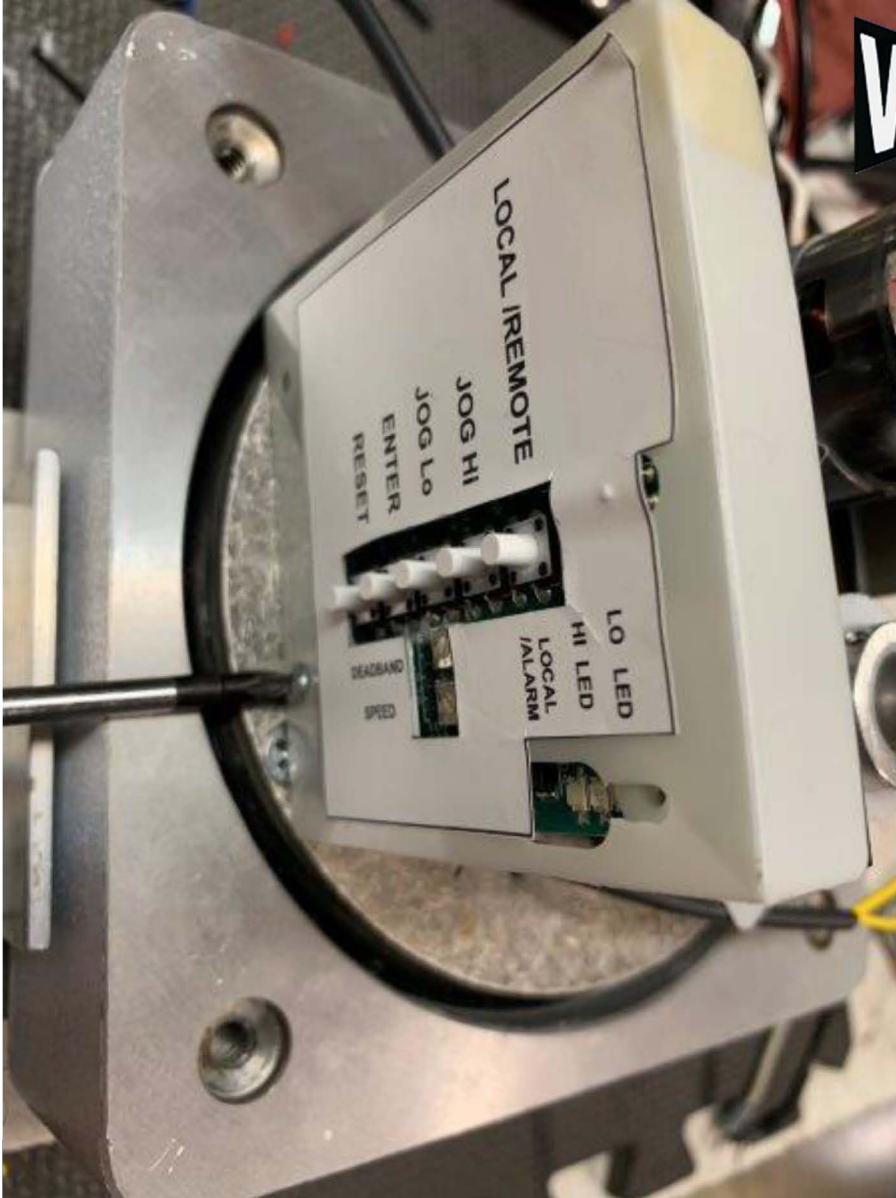
Input signal wire
connector

Red green black

Servo out wires leads,
red connects attached

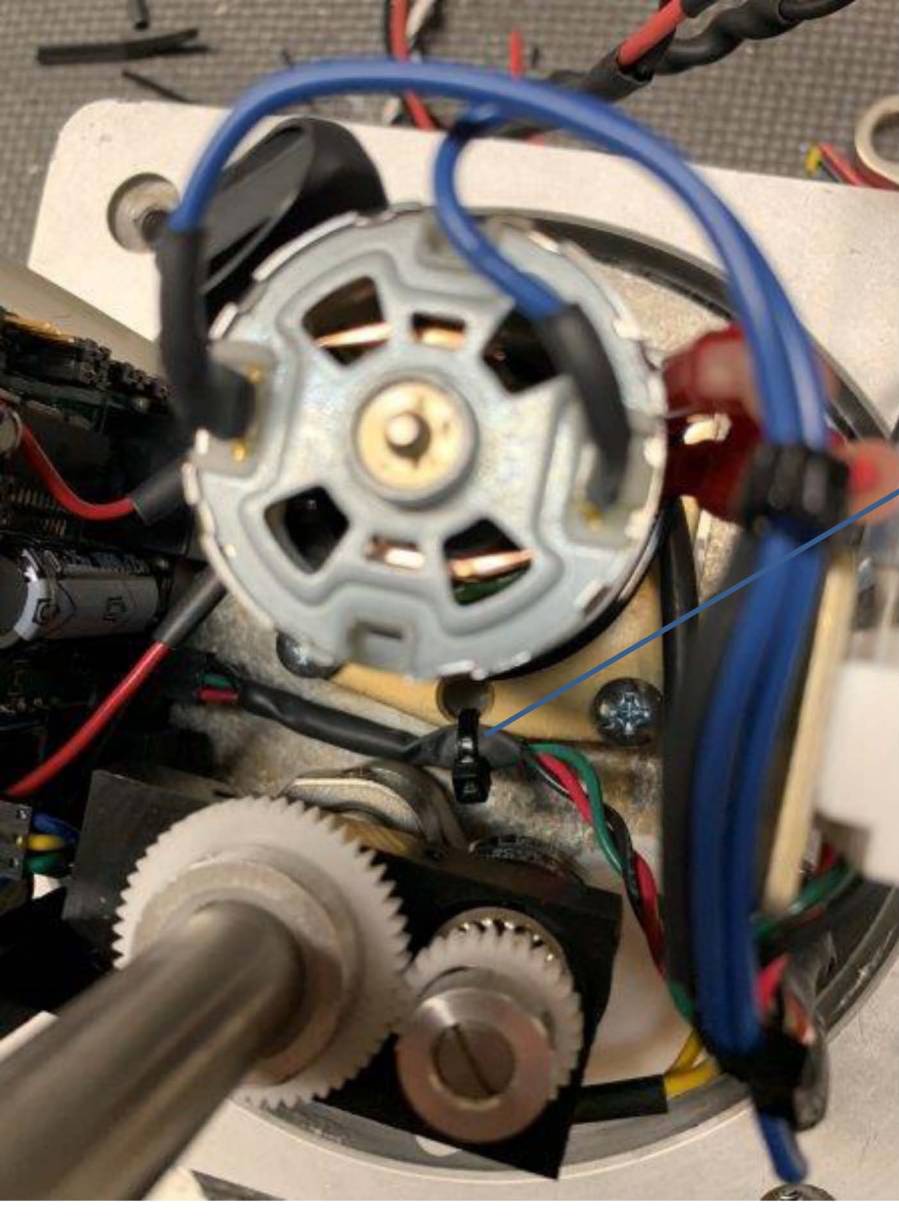
Rectifier with attached
wires, out from rectifier
goes to position 1 and 2
on terminal strip

12. Tighten the servo screws starting with the bottom two.



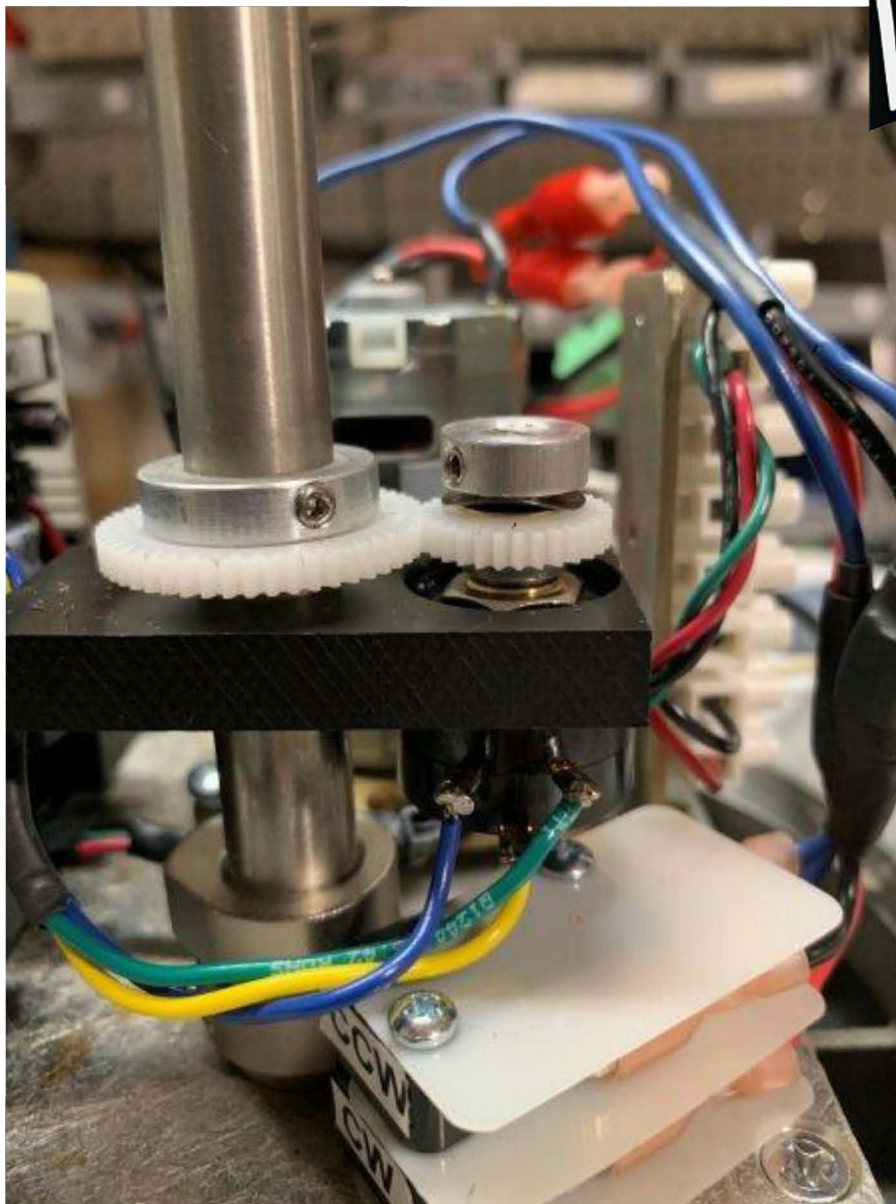
13. Attach wire tie on input signal wire (green, black, red) to motor base. This keeps that wire from touching the cams.

VALTORC



Wire tie for input
signal connect

14. Align the feedback pot.



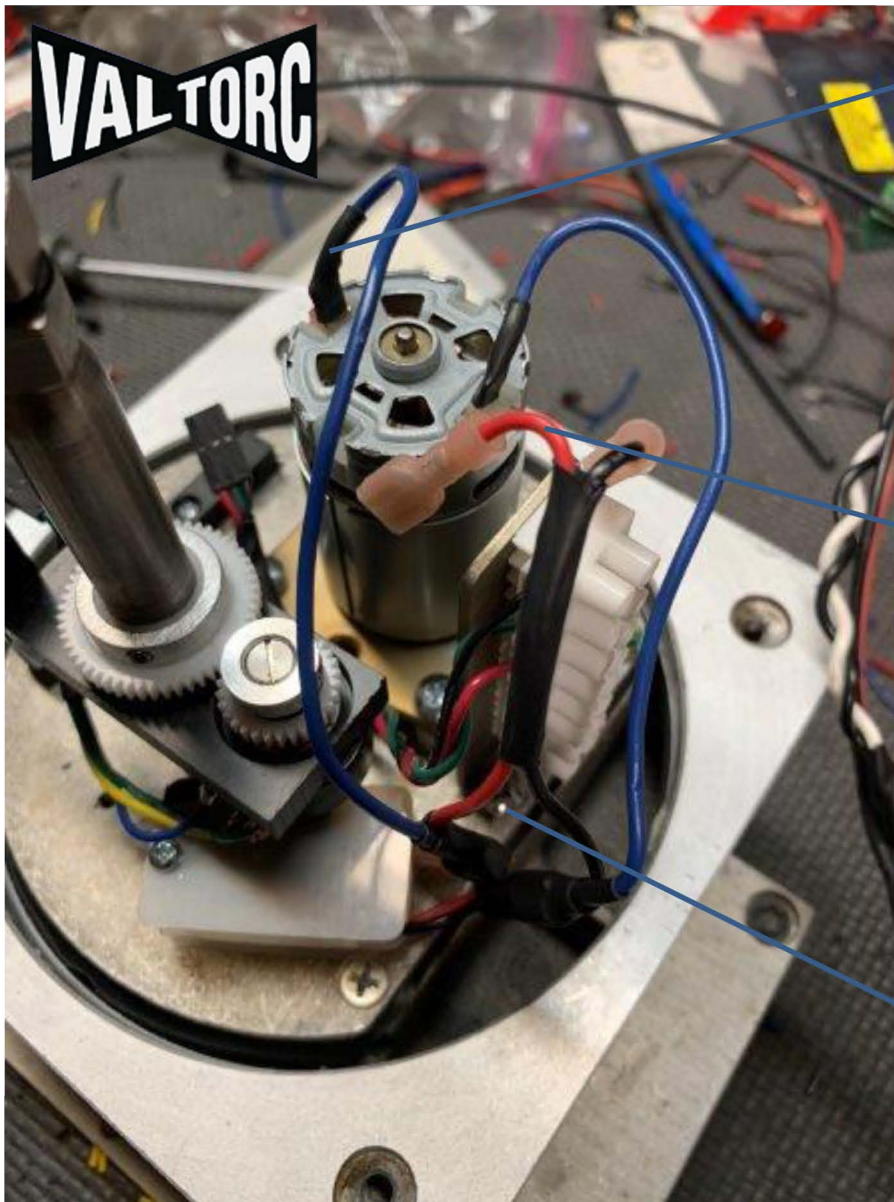
VALTORC

15. Tighten the upper servo screw while aligning the pot bracket.

16. Bolt the terminal bracket down using the attached 6-32 screw.

17. Connect the blue motor wires to the motor. Note that the blue wire from the red/blue combination has to go to the correct motor terminal. Usually I attach the wires, but don't heat

shrink until the end. That way I can verify the operation before shrinking.



Attach blue wire from the blue/red combination to this motor terminal

Attach this pink connect with red wire to the red female connect with red wire from the servo out

6-32 screw for terminal bracket

18. Hook up the pink female connects to the red male connects (the red connects are attached to the rectifier). The red wire goes to the red wire from the rectifier and the black goes to the black.
19. Set the top cam. At this point you can apply 24vdc power, but be aware that the unit will start moving as soon as you hook up power. And since the cams aren't set yet, you want to stop it from moving. So press the top button after you apply power. This puts it into local mode. Then you can adjust the unit to adjust the cams.
20. Rotate the actuator to the full CCW position by using Jog Hi. (Note if the unit doesn't rotate CCW when pushing jog Hi, then you have either the motor leads backwards or the servo out leads backwards).

21. Rotate to about 110 deg position. The cams stop the unit if the microchip drives too far. The cams are safety overtravel. They are not tripped normally. See next picture.



Top cam, set
it for Jog Hi
overtravel

Overtravel
about this
much to set
cam

VALTORC

22. Set the bottom overtravel cam Jog Lo.



VALTORC

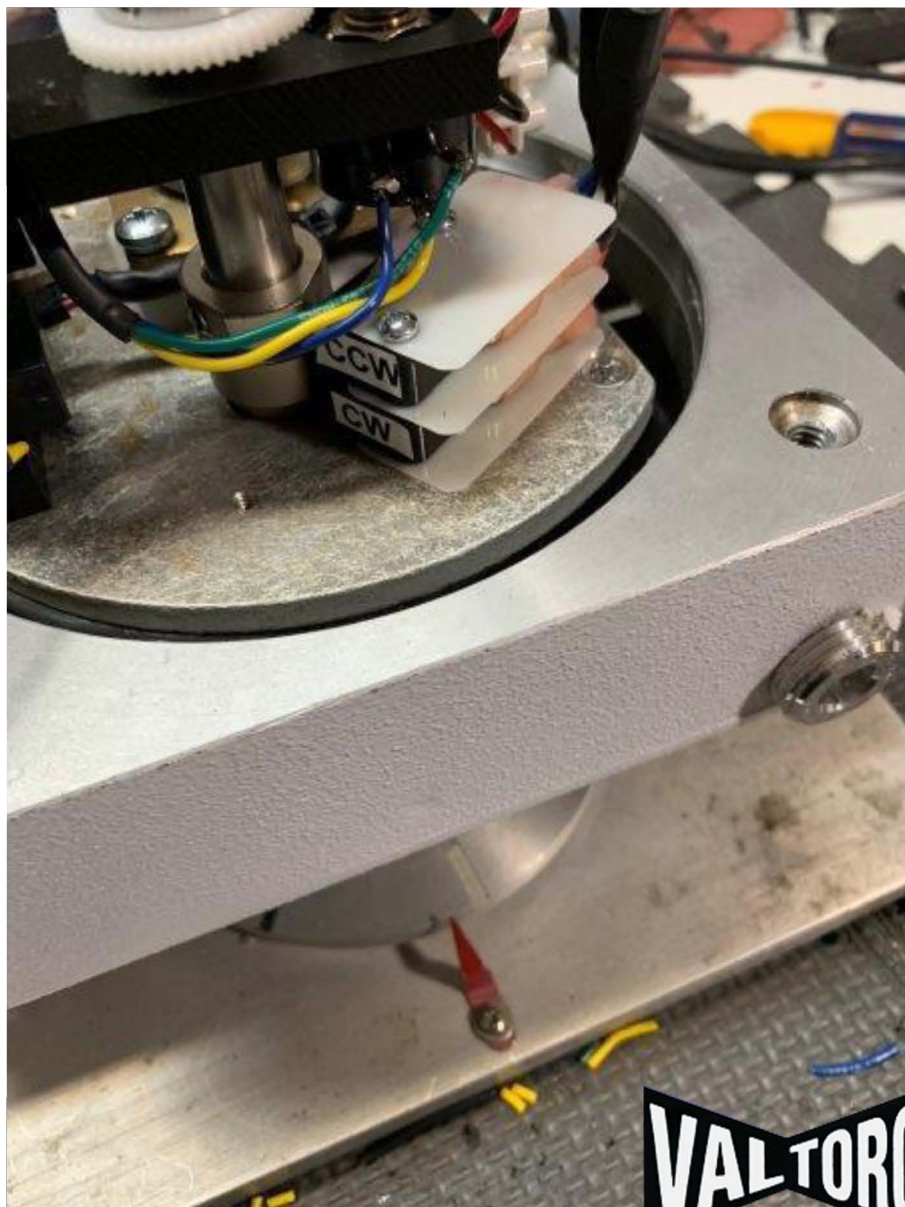
Bottom cam,
Set for CW
overtravel

Overtravel
about this
much to set
cam

23. Now simply calibrate the servo.

24. Jog to the Hi position (20mA), but go past 90 a little and set the position.

25. Push and hold enter, push Jog Hi.



26. Jog to the Lo position (4mA).

27. This time stop right at 0 degrees and set it.

28. Push and hold enter and push Jog Lo to set the position.



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29. Push the top button to put the servo in remote mode.

30. Check the Hi and lo positions (4 and 20mA).

31. Note you may have to adjust how far past the Jog Hi to get it to stop correctly on the 20mA remote signal. Each board seems a little different.