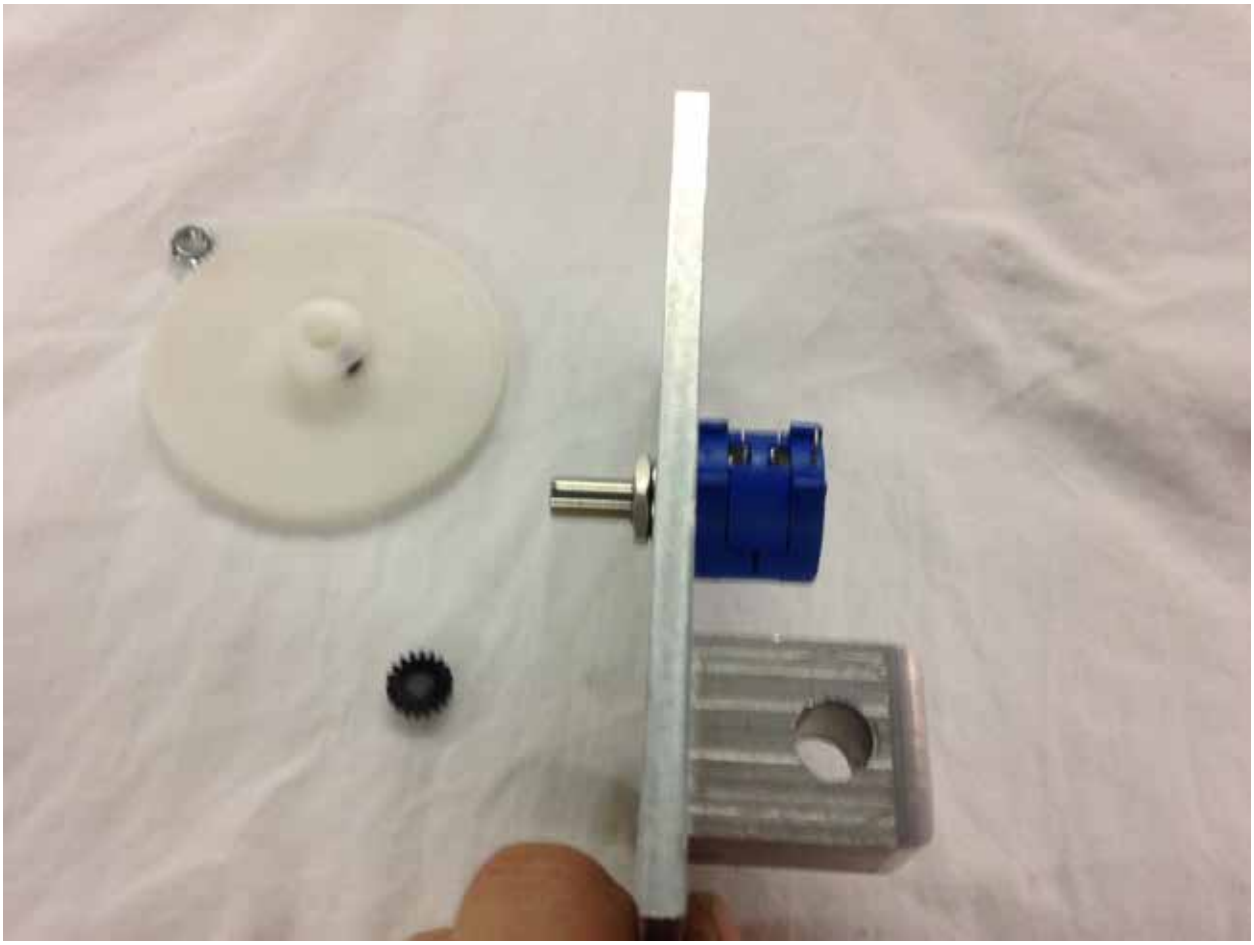
Sensor Installation

All DART Linear Actuators, no matter the stroke length or pulley ratio, can utilize the DART Sensor kit for position feedback. Sensor kits are sold separately. Follow the steps outlined here to install your sensor kit as pictured below.

To install your sensor kit the drive enclosure portion of the actuator must be taken apart. To do this you will need the following tools: #2 Philips screw driver, 5/16” box wrench or socket, 1/2” box wrench or socket, blue Loctite #243, 5/64” Allen wrench.

1. Begin installation of your DART sensor kit with the actuator fully retracted (its shortest configuration). Next, remove the 6 #8 philips screws securing the top and side plates.

2. Install the 10 turn potentiometer into the top plate as shown carefully securing it with the star washer and 1/2” nut. Do not over torque.

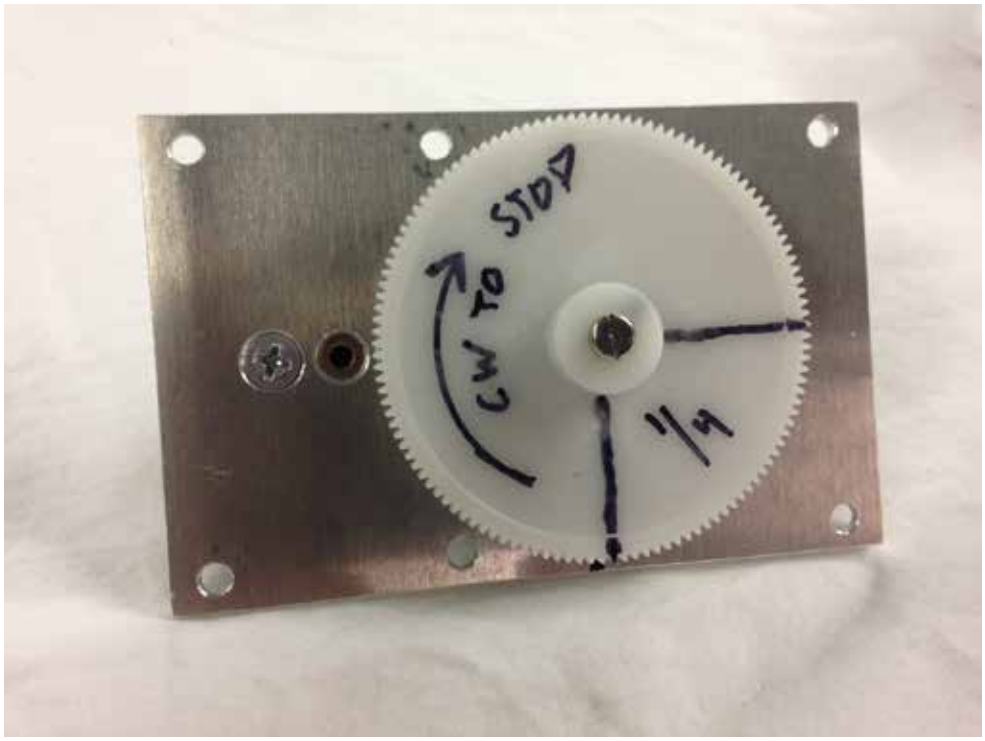


3. Slide the 18 tooth gear on to the lead screw shaft down to the step followed by the 10-32 thin nut. Do not over torque. Use a small amount of Loctite on both the bore of the gear as well as the 10-32 nut.

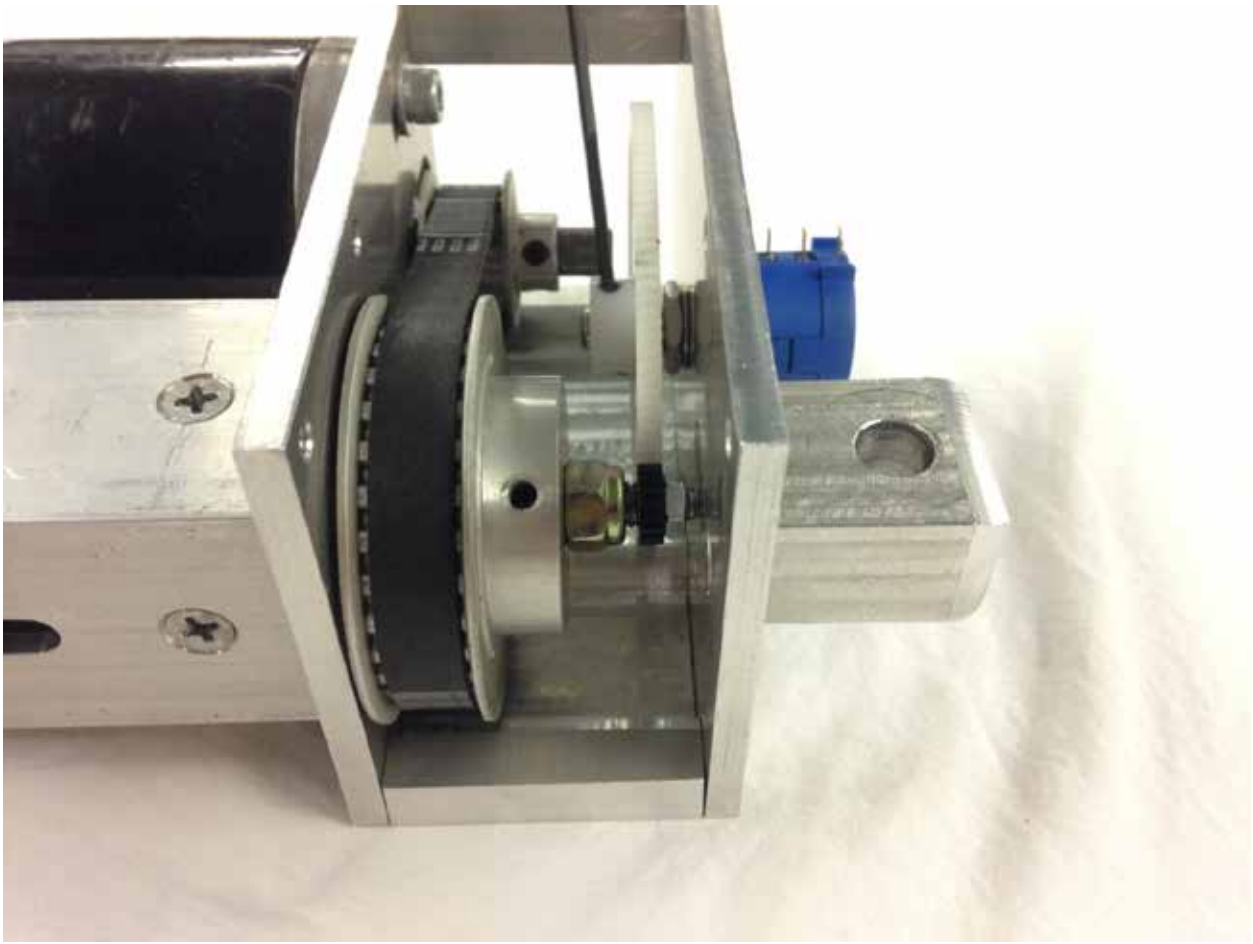
4. Place the 120 tooth gear on the potentiometer shaft with the gear hub facing away from the pot as shown. Do not tighten the set screw at this time.

5. With the gear hub facing up as shown, rotate the gear clockwise until the potentiometer hits it hard stop.

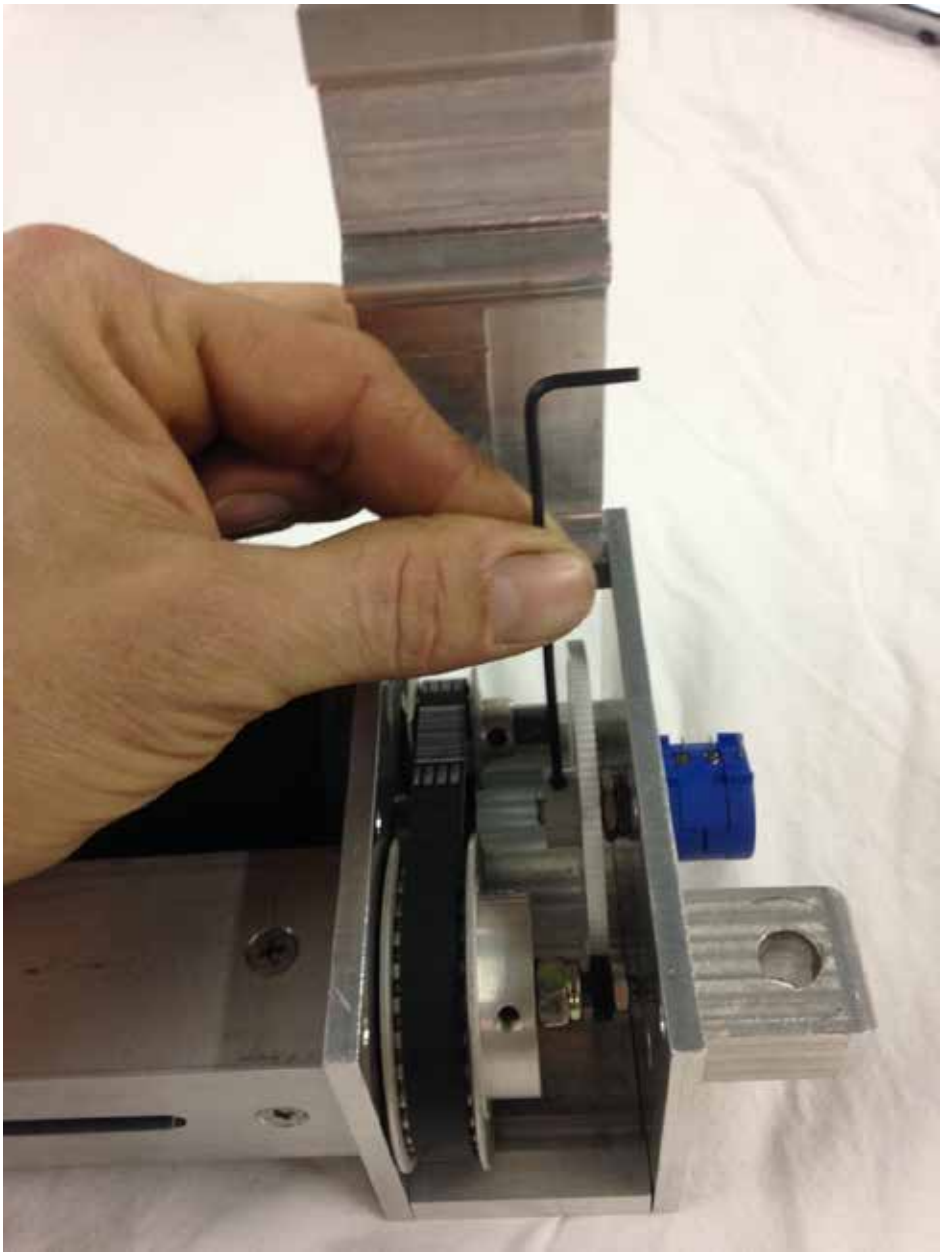
6. Rotate the gear back (counterclockwise) 1/4 turn from the hard stop.



7. Again, **ensure that the actuator is fully retracted for sensor installation or the lead screw hard stops and potentiometer hard stops will not be coordinated properly and damage will occur.** Place the top plate back on the actuator. The end of the lead screw shaft should fit into the bushing facilitating proper gear mesh. Ensure that the 120 tooth gear did not rotate during installation. Put one side plate in place with its 3 #8 machine screws and partially install the other with 1 #8 machine screw as shown below. Do not tighten the screws at this point. Slide the 120 tooth gear up or down on the potentiometer shaft until both gears are aligned with one another.



8. Once aligned, the 120 tooth gear may be locked to the potentiometer shaft via the set screw in the gear hub. Do not over tighten.



9. The remaining 2 #8 machine screws can now be installed and all 6 screws can be tightened. Tighten in a crisscross pattern in two steps. Sensor kit installation is now complete.