

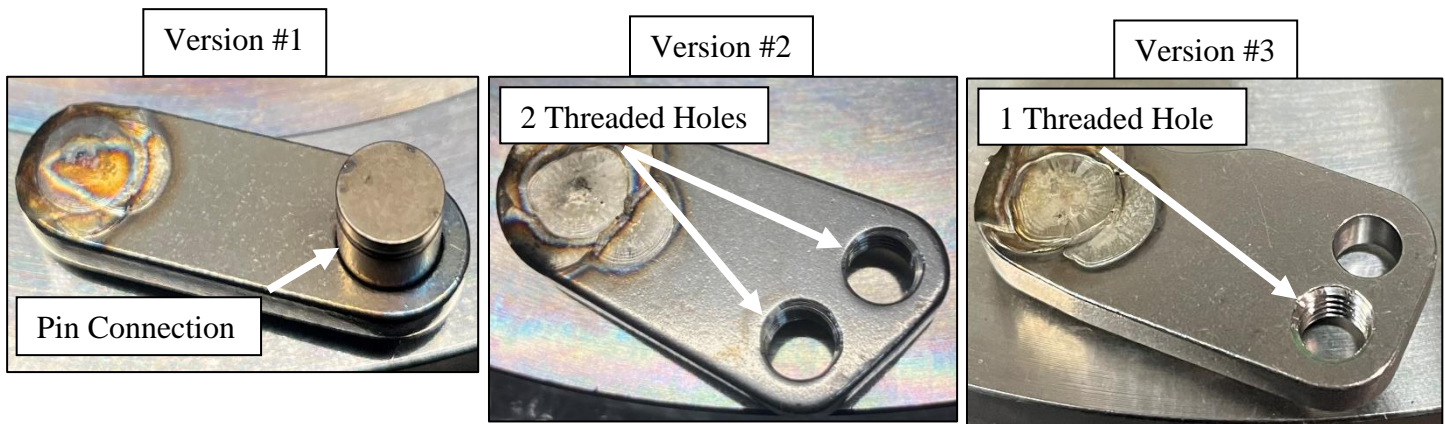
Warning: If your specific application of the DPS Turbonator VGT requires you to re-clock the 3-stage actuator. Do not clock it above the exhaust manifold and VGT turbine housing. The excessive rising heat produced by the exhaust manifold and VGT turbine housing could damage your 3-stage actuator. If your application requires you to position it in this location. It is critical that you heavily shield the actuator from the rising heat.



DPS 3-Stage Actuator Calibration

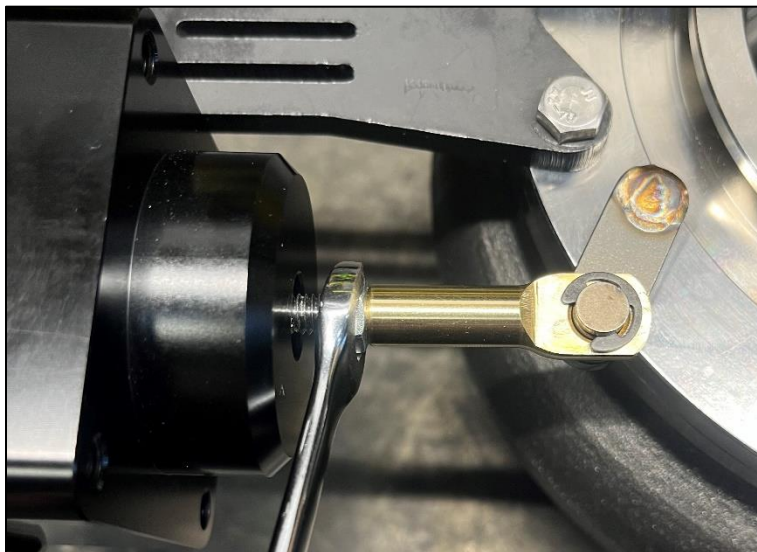
Your 3-Stage actuator is pre-calibrated for your specific application based on testing done by Diesel Power Source. The following instructions show how to calibrate the actuator.

Identify which actuating arm is attached to your Turbonator housing. If you have Version #1 refer to the “*Actuating Arm Version #1 Calibration*” section below. If you have either Version #2 or Version #3 refer to the “*Actuating Arm Version #2 & Version #3 Calibration*” section below.

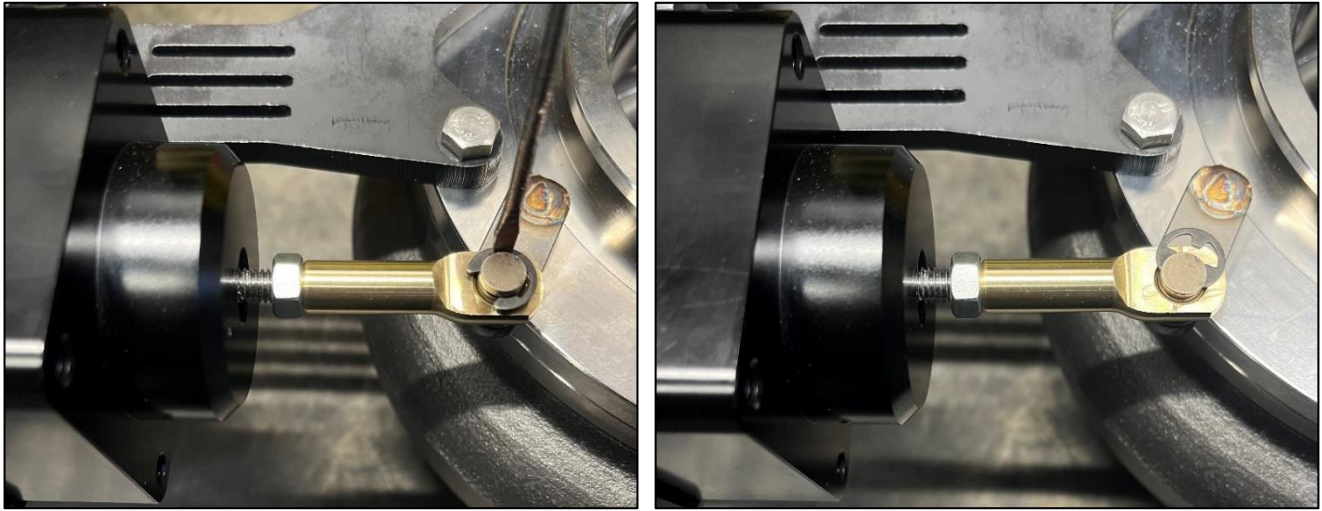


Actuating Arm Version #1 Calibration:

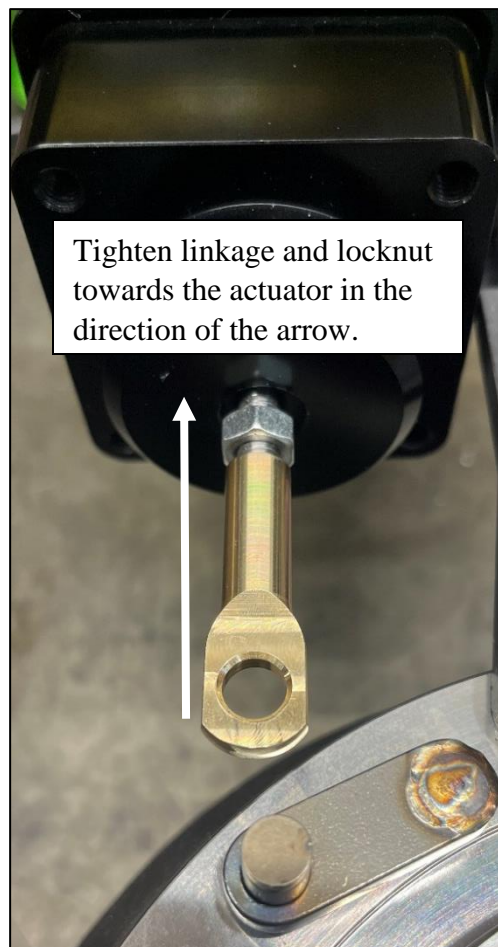
Step #1: Loosen the locknut from the linkage using a 10mm wrench.



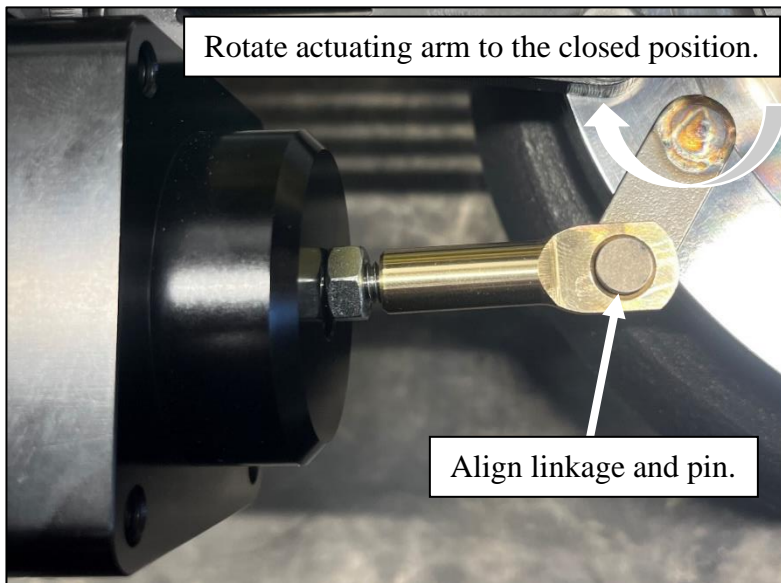
Step #2: Remove the E-clip securing the linkage to the actuating arm pin. Use a small flat head screwdriver to pry the E-clip out of the groove. **DO NOT LOSE THE E-CLIP DURING THIS PROCESS!!!**



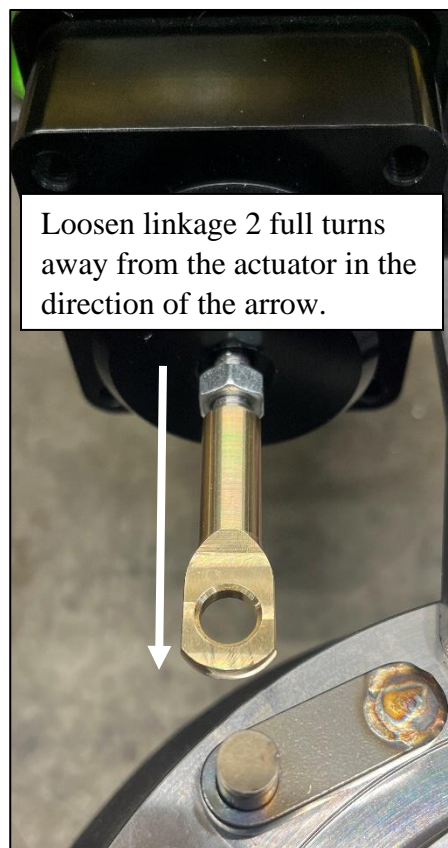
Step #3: Tighten the actuator linkage and locknut all the way towards the actuator.



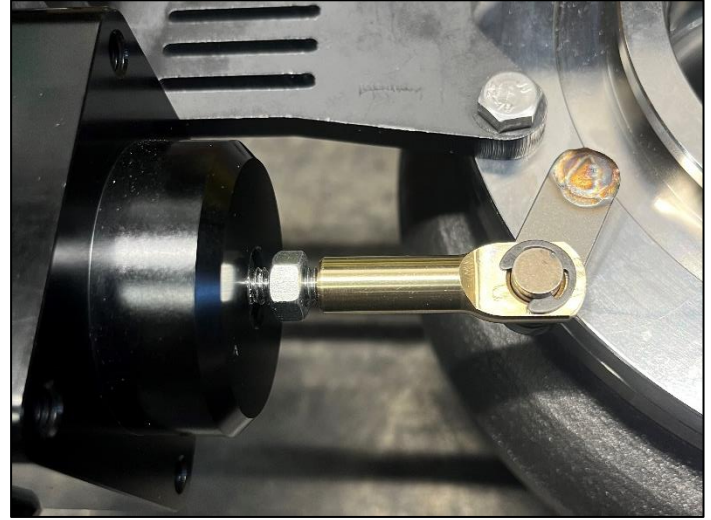
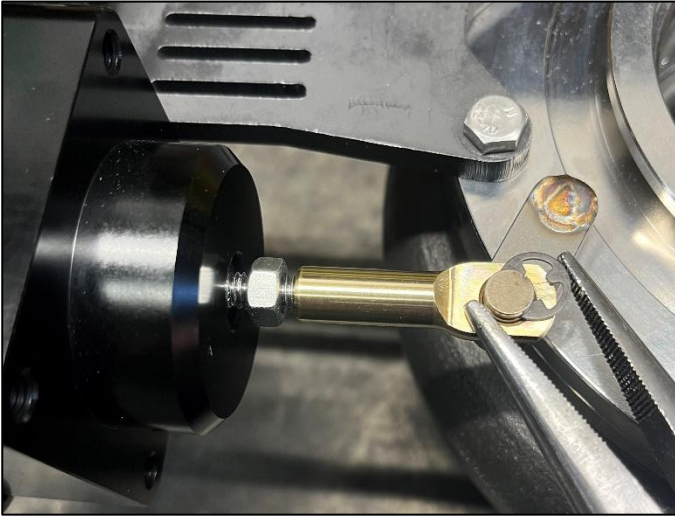
Step #4: Rotate the Turbonator INT actuating arm all the way to its closed position in the clockwise direction. While the actuating arm is in the closed position align the linkage with the pin. This is the zero position where all the vanes in your Turbonator INT housing are closed.



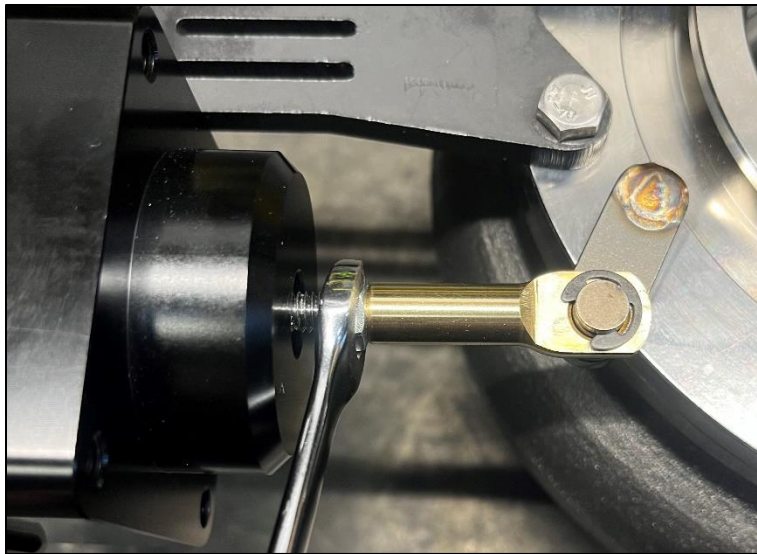
Step #5: Remove the linkage from the pin and loosen the linkage **2 full turns** away from the actuator. This will set the starting positions of your Turbonator INT housing.



Step #6: Align the linkage with the actuating arm pin in the new location and secure the E-clip to the actuating arm pin using a pair of pliers to snap it into the groove located on the pin.



Step #7: Tighten the locknut against the linkage using a 10mm wrench.



Step #8: Take the truck on a test drive to determine the performance of the calibration. The calibration can be adjusted by loosening the linkage away from the actuator. If the turbo isn't spooling fast enough, the linkage needs to be loosened away from the actuator. We recommend loosening the linkage a half turn at a time and test drive between each adjustment until the best spool up is achieved. A small change can make a big difference. You should never loosen the linkage more than 4 full turns after you have done the initial 2 full turn calibration in the previous steps.

Actuating Arm Version #2 & Version #3 Calibration:

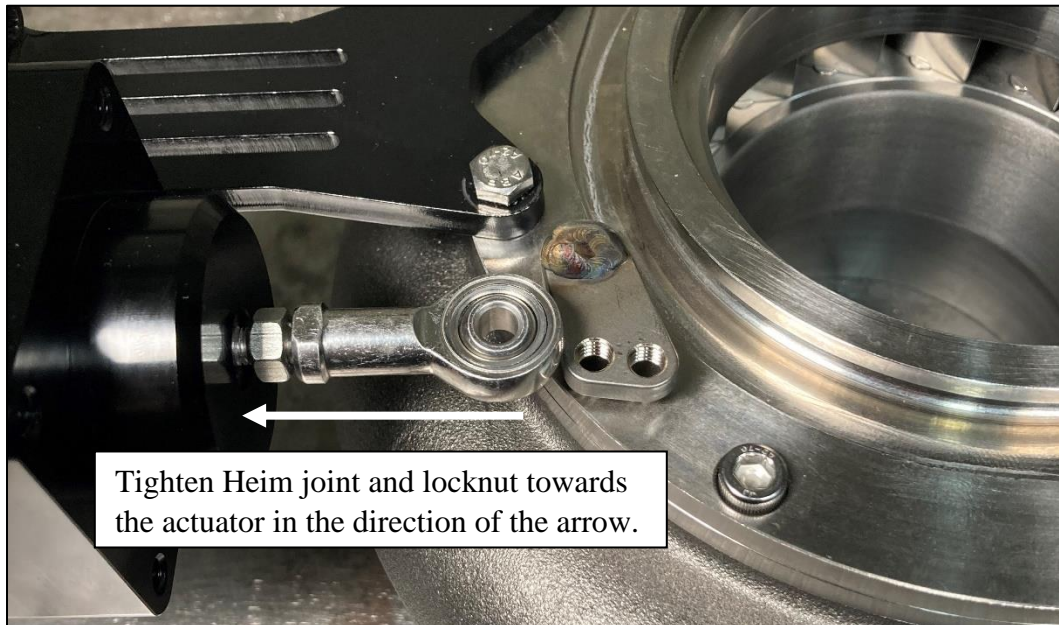
Step #1: Using a 10mm and 11mm wrench, loosen the lock nut that is fastened to the Heim joint.



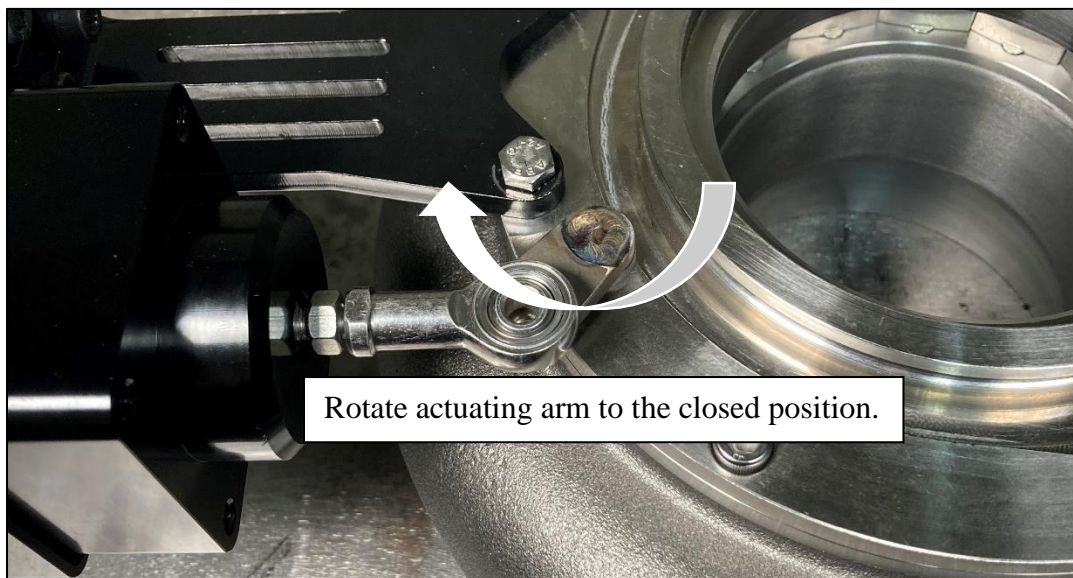
Step #2: Remove the M6-1 x 14mm socket head cap screw by using a 11/16 wrench and a 5mm Allen key.



Step #3: Tighten the actuator Heim joint and jam nut all the way towards the actuator.

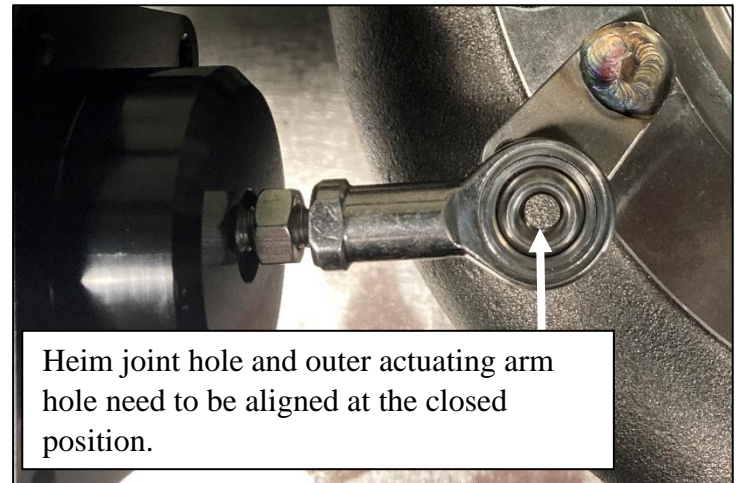
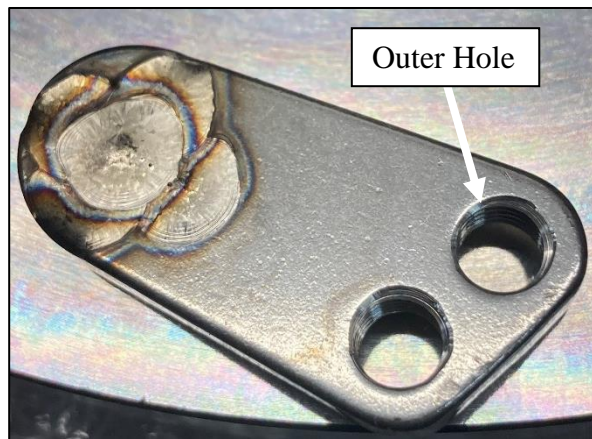


Step #4: Pull the Turbonator INT actuating arm all the way to its closed position in the clockwise direction.

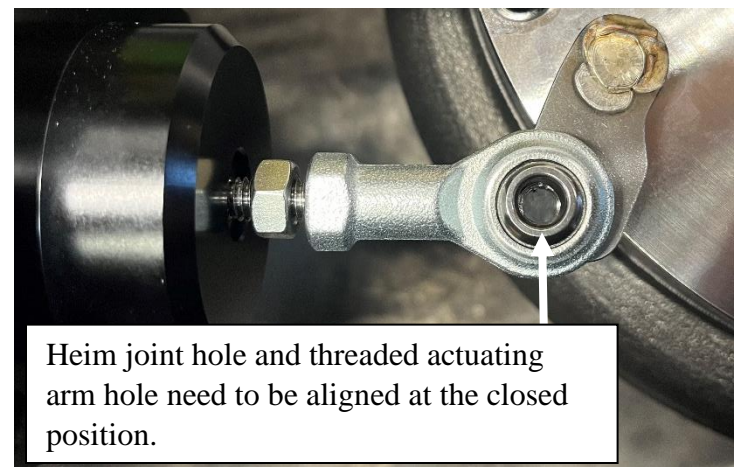
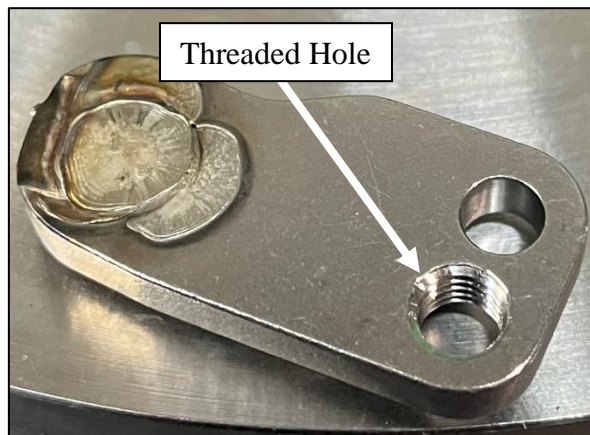


Step #5: With the actuating arm in the closed position. If you have version #2 of the actuating arm loosen the Heim joint until the joint hole aligns with the outer hole of the actuating arm. If you have version #3 of the actuating arm loosen the Heim joint until the joint hole aligns with the threaded hole located on the actuating arm. (NOTE: There is only 1 threaded hole on version #3 of the actuating arm.)

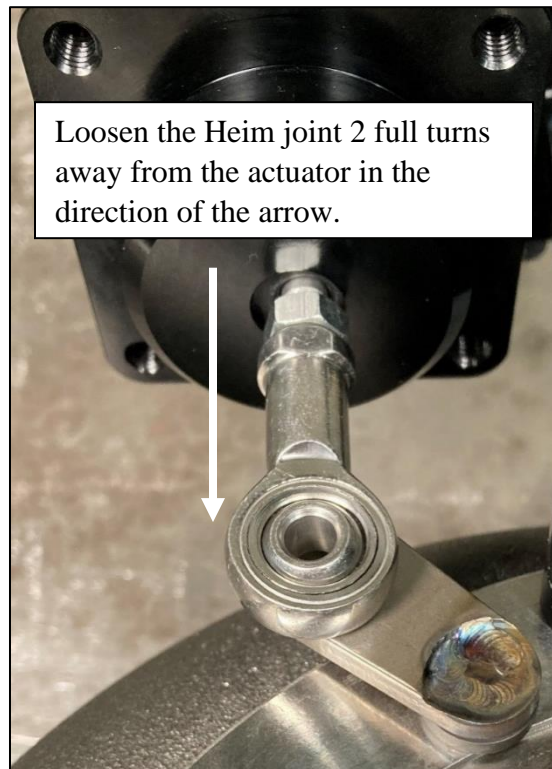
Actuating Arm Version #2



Actuating Arm Version #3



Step #6: Now move the actuating arm away from the Heim joint and loosen the Heim joint **2 full turns** away from the actuator. This will set the starting position of your Turbonator INT housing. Realign the Heim joint hole with the previously aligned actuating arm hole from the last step.



Step #7: Thread the M6-1 x 14mm socket head cap screw into the aligned holes. Once finger tightened use a 11/16 wrench and a 5mm Allen key to tighten the cap screw and linkage arm assembly.



Step #8: Using a 10mm and 11mm wrench, tighten the lock nut to the Heim joint. Do not twist the Heim joint in the process.



Step #9: Take the truck on a test drive to determine the performance of the calibration. The calibration can be adjusted by loosening the Heim joint away from the actuator. If the turbo isn't spooling fast enough, the Heim joint needs to be loosened away from the actuator. We recommend loosening the Heim joint a half turn at a time and test drive between each adjustment until the best spool up is achieved. A small change can make a big difference. You should never loosen the Heim joint more than 4 full turns after you have done the initial 2 full turn calibration in the previous steps.