

GEM28/CEM26 DEC/RA Axle Stiction Adjustment

Tool needed: A set of metric Allen wrench, a small Phillip screw driver. Maybe a pair of pliers

Symptoms: User may experience a mount DEC axis does not respond fast enough during autoguiding.

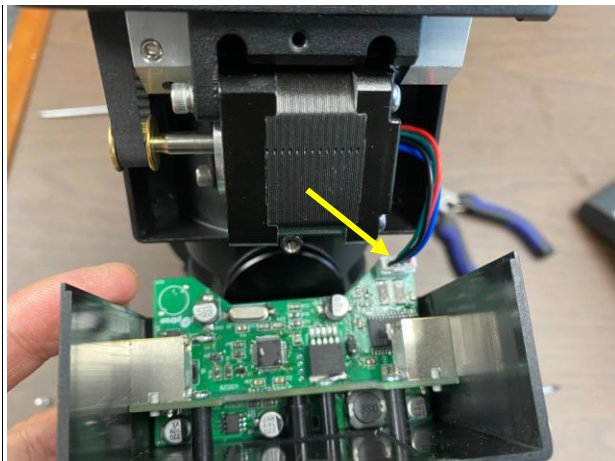
Solutions: Please check the guiding software settings, mount free plays, worm/ring gear meshing and belt tension before performing this adjustment.

If the DEC axle is too tight, you should feel the stiffness at certain position when you turn the dovetail by hand.

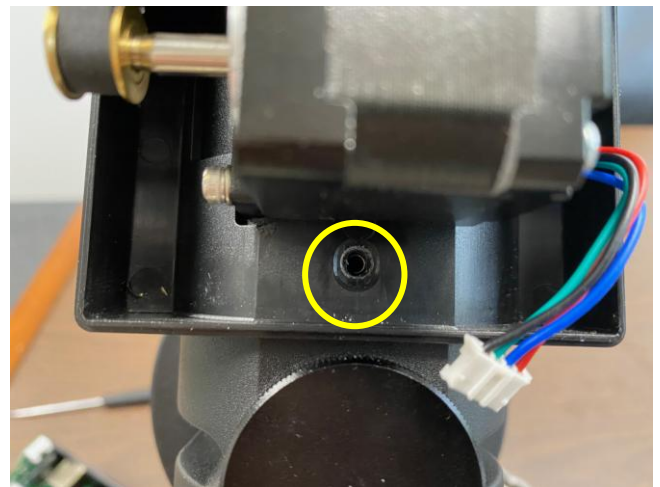
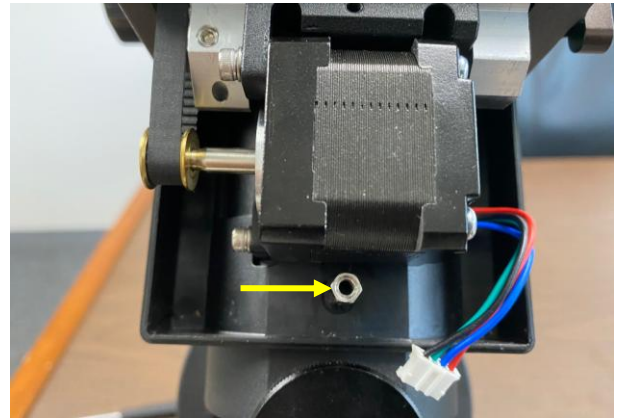
1. Remove mount DEC motor cover.



2. Carefully unplug the motor cable from the DEC control board.



3. Unscrew the screw post to expose the hole on the mount DEC axle housing. You may need a pair of pliers to turning the post.

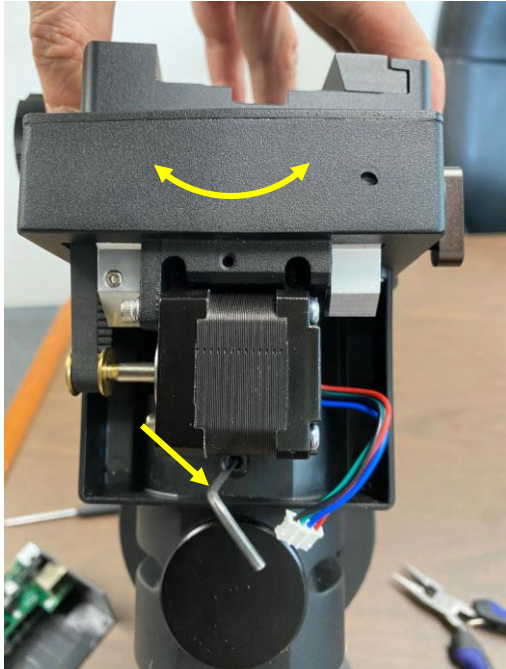


4. The DEC axle is mounted inside the housing with a bearing locking nut. It was tightened using a pair of special nose pliers. Then locked by a set screw, which can be accessed through the screw hole above.



Since we do not have the tools to release the locking nut, we'll use a small wrench to do it.

5. Unlock DEC gear switch. Insert a 1.5mm wrench into the thread hole. Slowly turn the DEC axle by rotating the dovetail saddle, until you feel the wrench is inserted into the set screw end.



Carefully adjust the wrench position to make sure that it is fully engaged with the set screw. Turn half turn counterclockwise to release the set screw. Do NOT turn too much or you may lose set screw!

Keep the DEC gear switch disengaged. Hold and push the wrench in to keep it in the set screw. Turn the dovetail counterclockwise (CCW). Stop when you feel the locking nut is released.

Then turn the dovetail saddle clockwise to engage the locking nut again. Do not turn the dovetail saddle with a lot of force to avoid over tighten the bearing locking nut.

Tighten the set screw to secure the bearing locking nut.

6. Turn the dovetail saddle 360 degree to feel the smoothness of the DEC axle.
7. Thread the post back. Connect the motor to the control board and put the cover on.

8. For GEM28 RA axle, both the set screw and locking nut can be accessed easily after unthread the read RA axle cover.



CEM26 Mount:

1. Same procedures for DEC axle.
2. RA axle access is from front side.