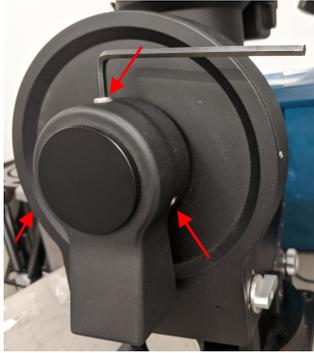


CEM70 RA Worm Replacement

1. Disengage the RA gear switch and lock the RA axle locking knob.
2. Remove the larger screw and two locking screws on counterweight (CW) shaft house, then remove the CW mounting housing.



3. Remove three screws (two on the surface and one on the top, which may require a different tool to be taken off) and then take off the front cover of the ring gear compartment.



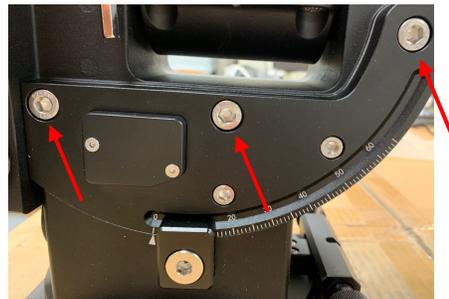
4. Take the mount upside down and loose two locking screws (one on left side and another on right side), and then put the mount base on a box or other object with an appropriate height nearby.



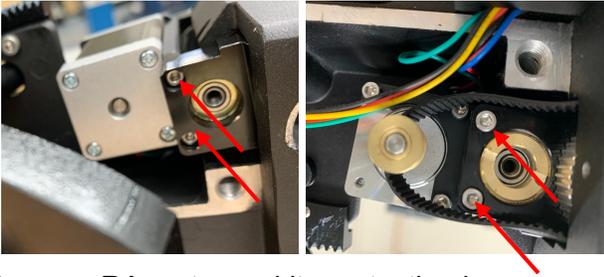
5. Remove five screws and take off the panel and pay more attention to the connection wire arrangement. All of them should be put in a notch in the other side of the panel when assembling later.



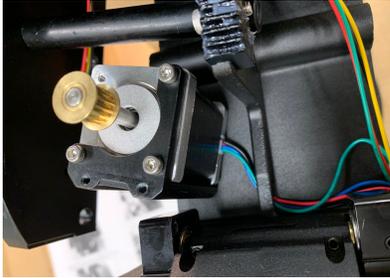
6. Remove three larger screws on the other side and take off another panel with scale.



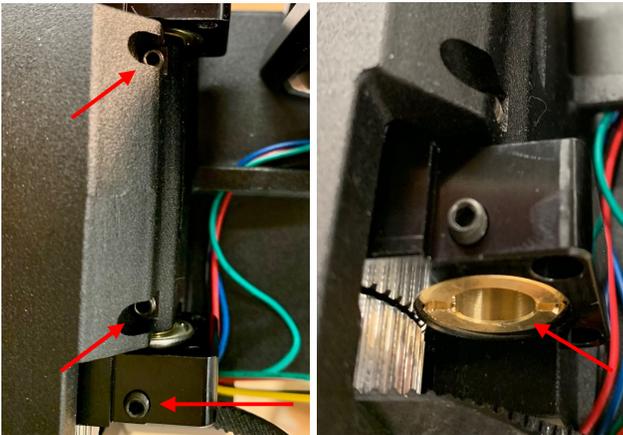
7. Remove four screws for RA motor bracket (two in one side and two in the other side).



8. Remove RA motor and its protection bar.



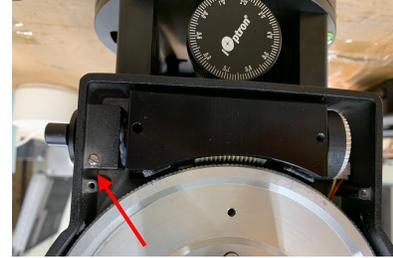
9. Loosen three setting screws (two for locking the worm assembly hinge axles on each side and one for locking the end cap). Loosen the brown end cap and then push the axle.



10. Take out the hinge axle. Push the second axle from another side and take it out, too. Please pay more attention to the two brass washers between RA worm assembly and the mount frame on each side, which are easy to drop below the main board or even behind the RA ring gear.



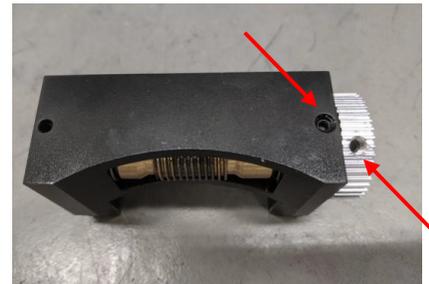
11. Remove the latch for RA gear switch knob.



12. Make sure that the gear switch is in disengage position. Pull out the gear switch knob slowly. (RE) Please pay more attention to the small ball while pulling out the gear switch knob. If necessary, move RA worm assembly up and down slowly while pulling out the gear switch knob further.



13. Pull out the whole RA worm assembly with belt. Loose two setting screws and then remove the pulley.



14. Remove the brown end cap and pull out the old RA worm and its two bearings.



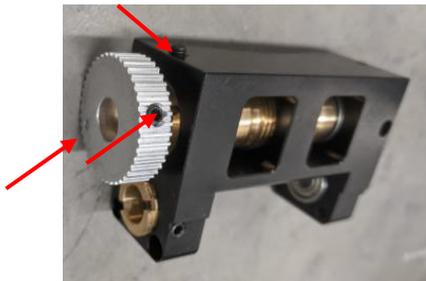
15. Remove the two bearings and check if they work well. If working properly, use them with the new worm. Otherwise, they should be replaced.



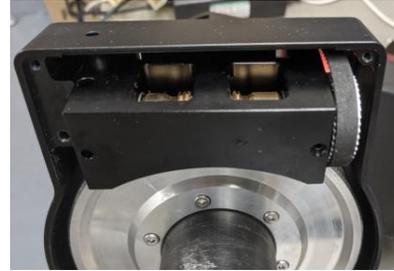
16. Put new worm with bearings into RA worm housing. Then install the brown end cap. Adjust and tighten the worm end cap to make sure that the worm rotates freely and there is no free play. (replace pic) Then fasten the setting screw gently.



17. Put back the pulley and pay more attention to make sure that its surface with a dent is toward outside. Tighten the setting screws for the pulley and the worm end cap.



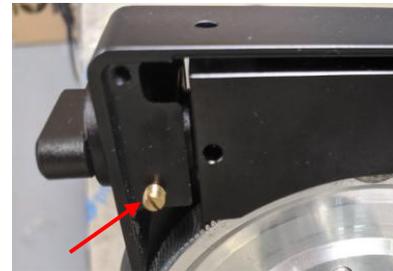
18. Grease the worm. Then wrap the belt to the pulley and put back the whole worm assembly into the mount frame.



19. Put back the clutch knob with the small ball and spring by turning the clutch knob back and forward slightly and while pushing it. Please pay more attention to the small ball.



20. Install latch for RA gear switch knob.



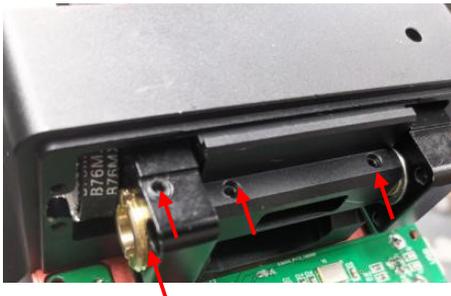
21. Put one brown washer back between the worm assembly and the mount frame. Insert one axle from one side of the mount frame into the bearing inside the worm assembly, and adjust the washer and worm assembly to make sure the axle to go through the bearing, washer and the worm assembly. Then tighten the setting screw for the axle.



22. Similarly, put the second washer back in the other side between the worm assembly and the mount frame. Insert the second axle into the bearing inside the worm assembly, and adjust the washer and worm assembly to make sure the second axle to go through the bearing, washer and the worm assembly. Then tighten the setting screw for the second axle.



23. Install the brown end cap and tighten it. Push the axle to an appropriate position. Fasten three setting screws.



24. Put back RA motor and its protection bar. Install the protection bar by installing four screws. To make the belt tight, use a small flat screwdriver to lift the motor a little bit while fastening four screws.

25. Put back the panel with scale by installing three screws and fastening them all.



26. Put back another panel while pay more attention to arrange the connection wires well. The two sets of connection wires must be put in the notch which is in the other side of the panel.



27. Hold and push hard the panel while making sure if the two sets of connection wires can move freely inside and outside of the panel. If any of connection wires cannot move freely, please go to Step 28 and rearrange connection wires and put them all in the notch.

28. Put back the base, make the locking nut in a correct orientation and fasten it. Do the same on the other side.



29. Install front cover by installing three screws.

30. Install CW nose by installing one screw and two setting screws.