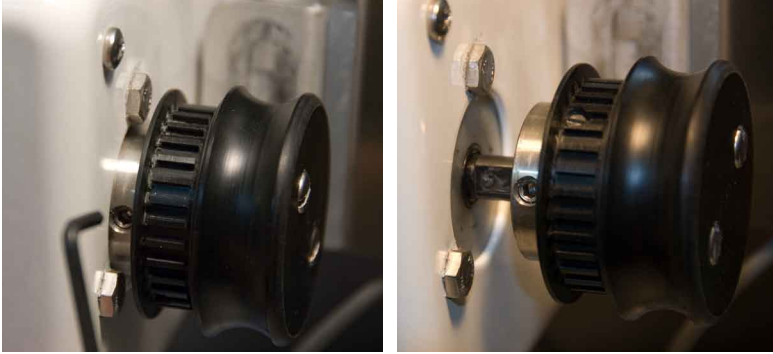


Servicing the clutch on Newer CPT Autopilots

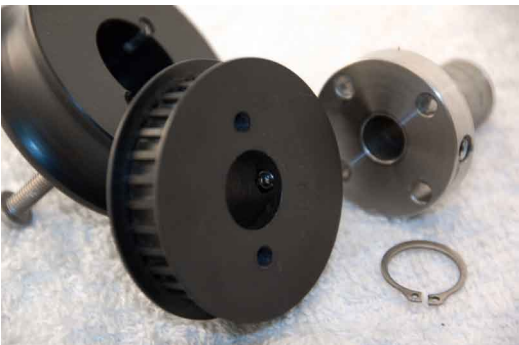
August 28, 2014



1. Remove the clutch: Use a 1/8" allen wrench to loosen the setscrew. The driveplate and clutch will slide off the motor shaft.



2. Make sure the ends of the two shear-pin screws are not bent, then remove the two screws from the back of the clutch. Remove the circlip, then remove the drive gear from the driveplate shaft.



3. Clean the clutch gear, especially the shaft hole and the spring-loaded plunger ball that is visible inside. Lightly oil the ball on the plunger, working the oil inside. Lubricate the shaft with a little oil or grease, and slide the gear onto the shaft, and install the circlip.

4. Holding the black hand disk tight against the gear, thread the two shearpin screws back into the gear. Do not overtighten them. With the clutch disengaged, leave clearance of at least 1/16" or more between the ends of the pins and the drive plate. If the shearpins are too close to the plate, they will catch in the holes and bend when manually steering.



5. Lightly grease the motor shaft to prevent corrosion. Slide the clutch all the way onto the motor shaft and tighten the setscrew. Don't overtighten or gall the stainless threads. A bit of antiseize makes future removal easy. The setscrew may be torqued up to 62 in-lbs.

Notes:

* A broken shear pin tip, trapped under the drive plate, can cause a screeching sound from the clutch.

* Clean and lube the clutch each season, more often if heavily used. Over-tightening the belt eventually causes wear in the clutch and motor shaft. Keep the drive box in alignment with the belt, and check that the wheel adapter hasn't changed from a centered position after several years of use.