

## How do I replace the belt on a Standard CH-3 Belted Drive Unit?

### **WARNING**

- **Never reach hands or other body parts in or near moving parts!**
- **Maintain a safe distance from any fixed or moving propeller!**
- **Prior to beginning any work on your project, turn off the main battery switch and/or remove the battery terminals and ignition keys!**
- **Some parts are heavier. The unit components weigh between 20 lbs. - 60 lbs. Take necessary precautions to avoid injury when preparing to, or when installing the drive unit. Always have a co-worker or assistant available to help.**

**If you have any questions or need technical assistance, contact Customer Service at 866-679-4200.**

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First you will need to remove the propeller from the drive unit. It helps to mark positions and pitch angles before removing. Next you remove the outboard lower bearing by unbolting the bearing and removing the (4) 3/8" – 16 x 2" cap screws, then loosen either the set screws in the bearing (SFC-24) or remove the lock ring on the bearing (SFC-24TC). Polish any exposed shaft area extending out past the bearing to remove any rust. Then apply some penetrating oil to help loosen the inner race of the bearing from the shaft. Rotate the outer flange portion of the bearing so that the (4) holes are not over the (4) tapped holes in the main case to avoid damaging the case threads when removing the bearing. All (4) holes in the bearing flange that is used to bolt the bearing on to the housing have 1/2 - 13 NC threads inside. Use (4) pieces of 1/2" – 13 x 5" long all thread with (2) nuts jammed together on one end of each to act as draw bolts turning all (4) all thread equally to pull the bearing off the shaft. Be sure to only turn draw bolts (1) revolution each at a time.

**NOTE: You may need (2) aluminum shims about 1/8" thick to place on the inside of the housing between the end face of the lower pulley and the housing. This will give the pulley a positive stop and keep you from bending your flexplate. Try to shim the entire space before attempting to draw the bearing off of the shaft.**

Once the bearing is off the shaft, you should verify the shaft size. Our specifications on the shaft end is 1.4995 diameter + .0002 - .0000. You may still use the same shaft with as much as .002 undersize as long as you are sure that either the set screws or lock ring on the bearing are firmly secured to the shaft to keep the shaft from spinning inside of the bearing's inner race.

Then remove the entire upper assembly by taking out the (9) 3/8"-16 x 1 1/2" hex cap screws around the perimeter of the bearing holder flange. **Be careful as this assembly weighs 57 lbs. and can fall down after the 9<sup>th</sup> cap screw is removed.** With a helper, while holding upward slide the upper assembly out of the main case bore. **Be careful not to damage the pulley teeth while handling.**

Next you will use a hydraulic jack and blocking under the oil pan to take pressure off of the unit's main case. Unbolt the (2) rear mounts attaching the unit to the engine stand. Then unbolt the (7) 3/8" cap screws holding the main case to the engine block.

Now with the jack raise the engine a little higher and remove the main case from the dowel pins of the engine. Inspect the lower assembly, pulley, flexplate, and shaft for any damage or excessive wear. If everything is in good shape you can now start the cleaning and assembly process.

You may follow our 13 steps instructions for installation of the CH-2 and CH-3 drive unit to an engine starting at Step #5. However it would be beneficial to review the entire instruction list.

**If you have any questions please call us toll free at 866-679-4200 or email us at [propellers@csonline.net](mailto:propellers@csonline.net)**