

TASK 2.6 – Alternate Instructions for Brass Threaded Propeller Shaft Couplers – Assembling and Installing the Propellers

Due to a supply issue in mid-June of 2022 that has continued into the fall of 2022, some SeaPerch kits were shipped with brass threaded propeller shaft couplers (propeller shafts) as opposed to the standard stainless steel propeller shafts (Figure 1). The threads on the brass propeller shaft may strip while tightening the self-locking hex nut if these instructions are not followed.



Figure 1

Stainless steel propeller shaft
Brass propeller shaft

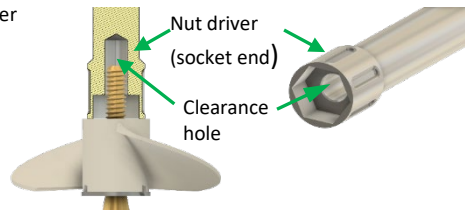


Figure 2

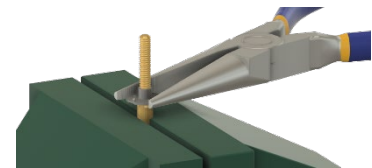


Figure 3

Before proceeding, make sure the nut driver has a hole in the end of the shaft that will allow the propeller shaft to be inserted at least 3/8" into the nut driver. (Figure 2) In addition to the table vise, needle nose pliers, and nut driver, you will also need small hammer.

Follow the instructions in the 2021 Build Manual until you reach the fifth green bullet point on page 39.

- ☐ Use needle nose pliers to tighten the tee nut all the way down, making sure not to bend/fold the prongs as these hold the propellers in place. Tighten until the tee nut is snug and stops rotating, but do not overtighten (Figure 3).
- ☐ Loosen the vise and push the propeller shaft downward until the tee nut rests on the top of the vise jaw. Tighten the vise, being careful not to crush the end of the propeller shaft.
- ☐ Push the propeller onto the propeller shaft with the marked groove facing downward (toward the tee nut) until the propeller rests on the tee nut. (Figure 4)
- ☐ Push the nut driver over the propeller shaft until it rests on the propeller. Hold the nut driver in a straight line with the propeller shaft (Figure 5) and gently tap the end of the nut driver with a hammer. Tap only as hard as is necessary to drive the propeller onto the tee nut.
- ☐ Continue tapping until the propeller touches the flat flange on the tee nut (Figure 6).
- ☐ Thread a self-locking hex nut onto the propeller shaft with the white plastic nylon insert facing upward/flat part of the hex nut facing downward (Figure 7).
- ☐ Use the nut driver to tighten the nut only until it touches the propeller. Overtightening will strip the propeller shaft threads and the nut will not hold the propeller in place.

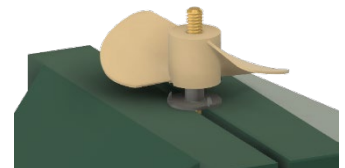


Figure 4



Figure 5

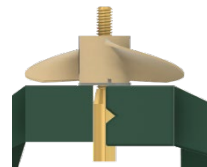


Figure 6

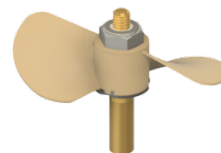


Figure 7

Repeat for the other two propellers. **Do not** attach the propeller assemblies to the motors yet!

Resume following the 2021 version of the Build Manual with TASK 2.7 – Waxing the Motors (Waterproofing), on page 40.