

## Folding and Feathering Propeller Maintenance (Spring)

For seasonal cruisers and racers, one should perform a visual check over your propeller to ensure many years of trouble free performance. The ideal time is after haul out prior to your next sailing season.

Here is a simple check list to perform which only takes a few minutes.

### Propellers in Fresh Water:

Folding propellers (Fresh water):

- 1) Check over for any foreign debris or any type of growth such as algae, calcium build up etc. Algae are typically a green or brown colour. Calcium debris has a light grey appearance. Remove this before it builds up to a “moon surface” type look.



Figure A



Figure B

See photo “A” and “B”.

- 2) Clean where required. Ideally artificial steel wool works well with water. For more challenging areas you can use CLR with water, or any other calcium-lime-rust removal product. If the gears require cleaning you may need to remove the locking pins to remove the blades. A wire brush will also assist in tight spots.
- 3) Once complete be sure to apply a modest amount of marine grease on the gears to provide protection and smooth operation.

- 4) Inspect either the shaft, sail drive and/or propeller anode. The anode protects your propeller and shaft from stray electrical currents. If any build up is present use a wire brush, coarse emery cloth or fine metal file to remove till the bare metal is exposed. If one area is worse than others, brush evenly around the entire surface to ensure that the balance is even throughout. Failure to do so may result in shaft vibration and cutlass bearing wear. If the anode cannot be evenly finished replace with a new one. See Photo "C".



Figure C

- 5) Check all propeller screws to ensure they are snug. If they have come loose you should remove them, clean with a solvent e.g. acetone, apply the appropriate type of Loctite and reinstall.

Feathering propellers (Fresh water):

- 1) Check over for any foreign debris or any type of growth such as algae, calcium build up etc. Algae are typically a green or brown colour. Calcium debris has a light grey appearance. Remove this before builds up to a "moon surface" type look. See photo "A" and "B".
- 2) Clean where required. Ideally artificial steel wool works well with water. For more challenging areas you can use CLR with water, calcium-lime-rust removal. Be sure to use this sparingly to avoid having any seepage into the encased gearing. The CLR will dissolve the grease that protects the gears.
- 3) Be sure that the grease is topped up to eliminate any moisture so the gears are protected. This will also prevent any moisture from freezing during winter months. Check your propeller manual to ensure that you are using the recommended grease.

- 4) Inspect either the shaft, sail drive and/or propeller anode. The anode protects your propeller and shaft from stray electrical currents. If any build up is present use a wire brush, coarse emery cloth or fine metal file to remove till the bare metal is exposed. If one area is worse than others, brush evenly around the entire surface to ensure that the balance is even throughout. Failure to do so may result in shaft vibration and cutlass bearing wear. If the anode cannot be evenly finished replace with a new one. See photo "C".
- 5) Check all propeller screws to ensure they are snug. If they have come loose you should remove them, clean with a solvent e.g. acetone, apply the appropriate type of Loctite and reinstall.

## **Propellers in Salt Water:**

### Folding/Feathering Propellers

Same instructions as above but more often. Depending on exposure to stray currents, poorly grounded marinas or neighboring boats the anode may corrode in as little as 6 months. Check and dive often! Once stray current corrosion has attacked your prop it may be time for a new one. This wear is evident by a reddish colour and in more extreme cases wearing at the blade tips see Photo D.

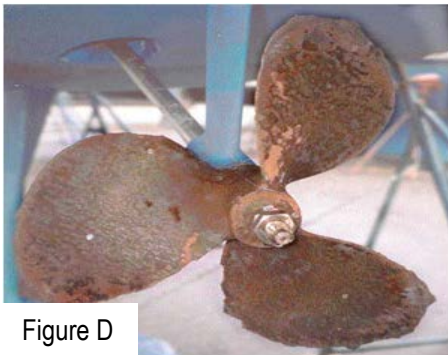


Figure D

Brush off any barnacles before they harden. If your boat is unattended for weeks on end place a plastic bag around your prop containing a few swimming pool chlorine tablets.

---

*Annual propeller maintenance will enhance motoring performance, reliable folding or feathering to provide successful gear shifting along with less drag while sailing.*

---