

**FEATHERSTREAM™**  
PROPELLERS  
SAILDRIVE



**darglow**  
MARINE ENGINEERS

# Owner's fitting Instructions



To watch a YouTube video with step by step instructions on how to fit your FeatherStream propeller visit our website [www.darglow.co.uk/product-support/Video-gallery](http://www.darglow.co.uk/product-support/Video-gallery)

SAILDRIVE  
July 2015 edition

# Important stuff to know before fitting...

Thank you for choosing a Darglow saildrive FeatherStream propeller – it has been 100% designed and manufactured by craftsmen engineers in the UK. With care, this propeller should deliver many years of excellent service. So, before we lead you through the simple fitting instructions, we'd like you to spend a few minutes reading about some important maintenance matters.



Blades in position for run ahead



Blades in feathered position for sailing



The propeller is supplied fully assembled and filled with grease. There is no need to disassemble the propeller. In some cases, where space is restricted, it can be disassembled and reassembled on the shaft. Please contact Darglow for special fitting instructions if this applies, before proceeding. The propeller should automatically take up the required forward drive, sailing or reverse positions in use. However, there are some minor differences between its use and that of a fixed propeller.

revs will cause damage to the pitch stops and premature wear of the propeller. When sailing with a saildrive propeller, the engine should be stopped as normal, in neutral. Then, with the engine off, reverse gear should be engaged to lock the shaft. This will cause the propeller to feather. The propeller will only feather from the forward drive position (ie: having been motoring in forward prior to sailing). It will not feather from the reverse position.

## About the anode

The propeller is protected from electrolysis by the zinc anode. This is designed to be used in addition to other anodes on the boat (hull, saildrive anodes etc). If it is the only anode on the boat it is likely to be consumed quickly. The rate at which the anode is consumed varies enormously and it will be used at whatever rate it needs to in order to protect the propeller. Most owners need to change the anode once per year (or less often) but in some rare circumstances it may not last a whole season, so it is advisable to check it periodically. When the anode is being replaced, make sure that the mating face between propeller and anode is clean. This will provide good electrical contact around the base of the anode.



**When motoring, it is very important to allow the engine speed to drop down to idling revs when changing from forward to reverse and vice versa.** This reduces force on the pitch stops inside the propeller. Rapidly changing from forward to reverse at high engine

## Anti-fouling

As with any bronze propeller, regular hull antifouling should not be used on the propeller. There are many propeller antifouling products available and almost any can be used provided the manufacturer states clearly that the product is safe to use with bronze propellers. The only exception is the thick grease type products that require the propeller to be heated before application. **NB - Applying excessive heat to the propeller may cause the grease inside the propeller to melt**



## Grease

The grease inside the propeller needs to be topped up at least once a year. On the side of the hub there is a small hole blocked with a grub screw. This should be removed with a 3mm allen key and the grease nipple (supplied with the propeller) inserted in its' place. A grease gun can now be connected to the nipple and grease pumped into the hub whilst the propeller is moved from stop to stop as the grease is injected. Once grease starts to exit from the propeller, either from the inner / outer hub junctions or blade junctions, or the area around the pitch cassette, the hub is filled. The grub screw should be replaced. It is very important that the correct grade of grease is used and Darglow Feathering Propeller grease is recommended.



## Important

When fitting a new FeatherStream, or after greasing, ensure that the propeller is free to move and test immediately after launch, whilst in slings, or along side. Never engage gear with the vessel out of water as this can damage the propeller. This also applies to any feathering of folding propellers.

## Adjustments

Should any change of blade angle (pitch) be required, please contact Darglow for instruction on how to proceed. Before lifting the boat, a sea trial should be performed noting engine speed and hull speeds at 200rpm intervals from tick over rpm to maximum achievable rpm underway (throttle fully open).

## Customer support

If you have any queries regarding the fitting, use or maintenance of Featherstream propellers or if you require grease / anodes etc. please contact Darglow for personal assistance.

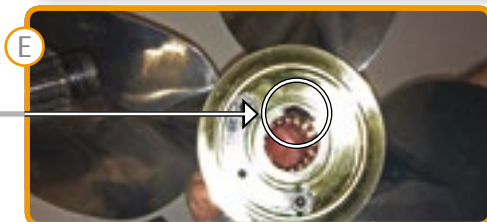


# Fitting instructions: Saildrive FeatherStream propellers

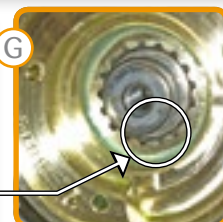
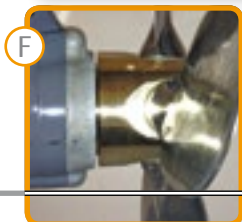
1 [A] Check that the stainless steel spacer provided by the Saildrive manufacturer is in place at the forward end of the shaft. Different models of Saildrive need different spacers. To ensure the correct spacer is fitted, measure from the aft face of the spacer back to the end of the splined part of the shaft. [B] This distance should be 78mm or less.



2 [C] Use a marker pen or a dab of paint to mark the aft face of the spacer. [D] Then slide the propeller onto the splined shaft as shown. Push the propeller forward on to the spacer. [E] Then remove the propeller and make sure there is ink/paint on the forward end of the propeller inner hub. This is to check proper contact with the spacer to be sure that an incorrectly fitted or wrong anode is not preventing the propeller from sitting properly on the spacer.



3 [F] Slide the propeller back on the shaft all the way up to the spacer. [G] The splined part of the propeller should be sitting approximately 1.5 - 3.0mm aft of the end of the splines on the shaft as shown in the photo.



4 [H] The bronze propeller nut and paired Norlock washer have been stuck together in the correct position as shown in photo. This is to ensure that as the nut is fitted, the washers do not fall into the wrong position.



5 [I] [J] [K] [L] [M] If the washers do come off the nut, they should be put back on as shown using a small dab of grease to hold them from falling off while being fitted. The two, wider spaced wedge shaped 'cam faces', should be facing each other in the middle and the finer, knurled faces, should be facing outward – one facing the nut – the other facing the propeller.



**6** [N] Fit the nut as shown. [O] Make sure the Nordlock washers don't fall off the register at the front end of the nut while the nut is going on.



**7** [P] Once the nut reaches the propeller hub with the washers in the correct position, tighten moderately, then back off by a 1/4 turn. This is to check that the washers are in the correct position. If they are, you should find that the nut is harder to undo, than it was to do up, and releases with a 'click' upon undoing. This means the Nordlock washers are in position, working properly.



**8** [Q] Now that it has been established that the washers are in the correct position, fully tighten the bronze nut using a 22mm socket. Tighten to 50ft/lbs = 68NM = 7.0KgM.



**9** [R] Fit the central stainless steel, drilled locking bolt. [S] Tighten until it is tight and the holes line up with the slots in the bronze nut.



**10** [T] Fit the split pin as shown. [U] It is very important to ensure that no part of the split pin can catch the inside of the anode when fitted. The anode fitted to the outer hub must be free to rotate around the nut and split pin. The arrangement shown achieves this.



**11** [V] Fit the zinc anode using the medium strength thread locker supplied on the two anode screws. [W] Tighten hard with a normal length allen key.



**12** [X] Finally, check that the movement of the propeller is free from forward position to reverse position and back. This should be possible just using the effort of one finger on a blade tip. With the engine off, you can engage forward, then reverse gear, to prevent the saildrive shaft rotating while you do this test.



**Mission complete.**  
Let's get that boat in the water and go sailing!



## Genuine hand-built Darglow propeller:

Prop' no:  Hub size:  Anode code:   
Diameter:  Pitch setting:  Number of blades   
Saildrive:  Shaft nut:   
Rotation:  Pitch cassette: forward  reverse

# Owner's certificate

## Owners details:

Date purchased:  Name:   
Address:   
  
 Post code:   
Telephone number:

## Vessel details:

Vessel make:  Vessel model:   
Engine make:  Engine model:   
Engine HP:  Maximum RPM:



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