

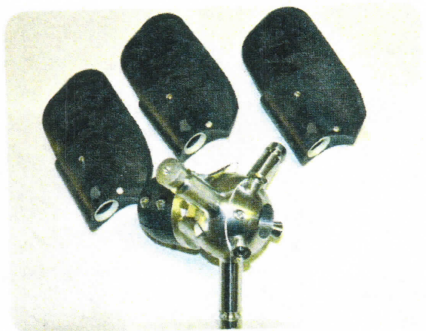


Unlike solid props, folding or feathering examples require occasional attention if they are to remain dependable. **Gordon Buchanan** gives his 12 year old Kiwiprop a new lease of life.

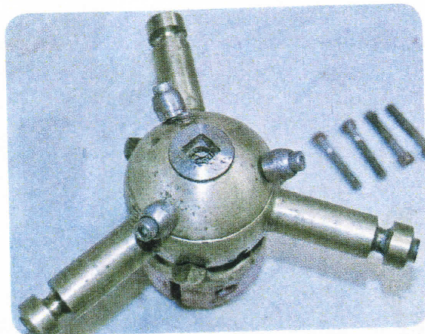
KIWI REBORN

A PROPER SERVICE

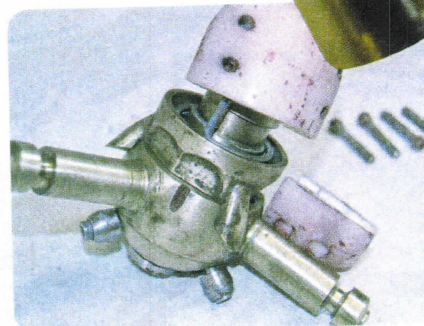
OVERHAUL: STEP-BY-STEP



1. The main change in newer Kiwiprops is that they are stainless steel. Earlier models are bronze.



2. The blades are easily removed by tapping the retaining pin from its locating hole. With the blades removed the four allen bolts are released from the nylon nose cone.



3. The nose cone is split, one half comes off easily, the other locates the internal spring, and needs a little easing.

FOR many decades boat owners blissfully carried out their winter maintenance without giving a second thought to the propeller that sticks out of the back of their boat. This was fine in the days when that essential item of equipment was an extremely solid one piece bronze casting. Nowadays many boats are fitted with folding or feathering propellers, and these do need a bit of attention if trouble free service is expected. The excellent feathering Kiwiprop is no exception, but a few simple steps will prolong its life and prevent trouble developing. The unit shown here is over 12 years old and has given excellent service over that time. Later units are stainless steel rather than bronze, and seem likely to last even longer as a result of the constant development.

Almost certainly the prop will be firmly embedded on the prop shaft, a simple hub puller, available from most automotive shops for a few pounds, will make short work of the task of removing it. The locking allen bolt that holds the shaft nut in place should be slackened before undoing the nut. If the unit is covered in old antifouling, a few minutes spent scraping will pay dividends, although care must be taken to wear suitable breathing protection as the dust and particles are poisonous.

TAKING THE PROP APART

The best place to get all the work done will be on a workbench. With the Kiwiprop, all fastenings are assembled with socket heads, so a small set of allen keys is all that is required. Life is considerably simpler if the propeller blades are removed, and for this a small punch is required to drive the locking pins out. They will move quite

easily and once removed the blades simply slide off their individual shafts. As soon as the pins are removed, they should be inspected for wear, being vital components; they hold the propeller blades onto the unit. Lubrication of the freely rotating blades is by means of grease applied through a small hole in the centre of each blade. Newer blades have a neoprene seal, an improvement over the old 'O' rings used in earlier models.

The four bolts on the nylon nose

“FOLDING OR FEATHERING PROPS, DO NEED A BIT OF ATTENTION”

cone need to be removed for access to the inner workings of the unit. The nose cone consists of two parts, one having a locating hole for the main spring. A little gentle manipulation will free both parts, and then the spring can be lifted from the main casting, but only after exactly identifying the location of the various components. It should be noted that the newer stainless steel units have the nose cone bonded to the main shaft, so should not be disassembled unless damaged. The spider has three locating studs that mate with one of two sets of slots on the outside of the blade carrier. Note the set of slots in use before lifting the spider from the unit. The second set of slots is used for opposite rotating propellers. The blade carrier should then slide off the main shaft leaving the boss ready for cleaning. The boss has three pins with rollers that are in use when the propeller is used in reverse. A check

KEY INFORMATION

Time taken
Approximately 2 hours



Tools
Set of allen keys.
Needle nose grease gun
Grease, thread locking compound
Supply of clean rags
Punch or small diameter rod

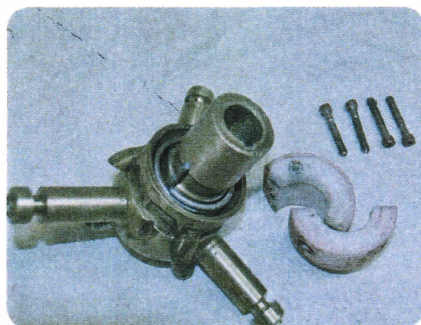
Costs
Only a few pence for grease and locking compound, unless any parts are required. New Kiwiprops are priced at £1,014 including VAT and due to the design, this price includes any size of blades and choice of right or left handed rotation. They are available from: Vecta Marine, 01672 564456, www.vectamarine.com

Skill level - Easy
Even easier on new propellers as they should not need any dismantling in normal use.

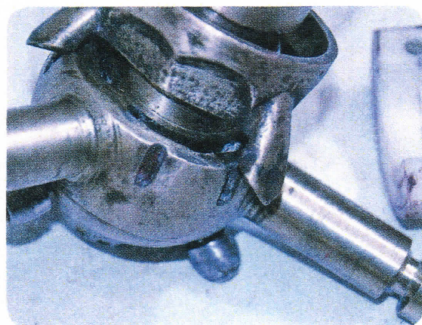
TOP TIPS

A clean bench and plenty of clean rags will help prevent any grit getting to the working parts.

Remember to pretension the spring to the same tension as prior to dismantling, and check that the reassembled propeller operates correctly. This is easily checked by rotating the blades while holding the nose cone. When removing nosecone on older models make sure that the nose cone and adjacent casting are marked to ensure that correct spring tension is reinstated on assembly.



4. The spring is clearly visible and simply lifts out of the casting.



5. The spider then slides off, but note its locating slots before removing it.



6. There are two set of slots in the hub. They dictate which way the propeller rotates so care is needed.

to ensure that the rollers are rotating smoothly is probably all that is required, but if not they will need to be removed and freed. A dab of grease under the roller and a spot of thread locking compound before reassembly will complete this part of the overhaul. The newer props have a slightly different shape of roller, and very early units used nylon rollers.

After completely cleaning any old grease from the components, a check for wear or any damage follows. As these propellers are very well made it is unlikely that any components will need to be replaced, and it is merely a matter of re-greasing the moving parts and reassembling it.

REASSEMBLY

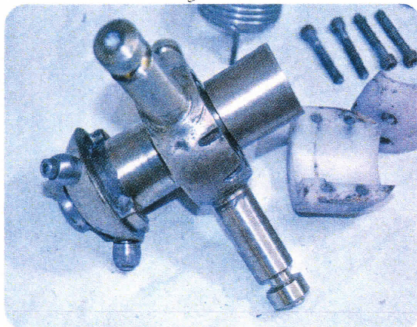
Shell NLG2 is one of the recommended greases, although I have found some difficulty in obtaining this locally, and have successfully used white marine grease as an alternative. A better alternative is Mobil XHP 222 marine grease, which is available from the UK manufacturers of the Kiwiprop if not available locally. Apply liberally to all parts except the surface of the main shaft where the nylon boss is clamped in place. One of the really good modifications on more recent props is the machining of the shaft with grooves that positively locate the nose cone, rather than relying purely on friction to retain the required spring tension. Reassembly is the reverse of dismantling with the exception that the spring needs to be pre-tensioned. With the unit assembled and the nylon boss bolts in place but not fully tightened, rotate the boss against the spring about a quarter of a turn, and holding the parts in that position tighten the boss bolts. Newer units have punch marks used to accurately align the different components.

The blades can then be replaced and the locating pins tapped flush, but note the position of the 'O' rings, or in newer units, the seals. The blades are greased through the small screw hole located at the root of the slim part of the blade. At the same time it is worth topping up the grease through the two grease holes on the main unit.

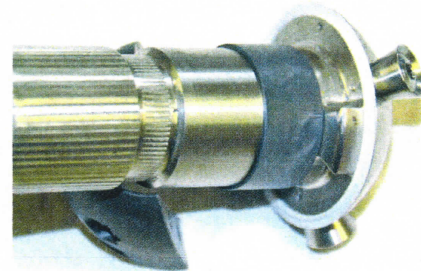
With the current state of development, these propellers are not only very effective, both when motoring and when reducing drag under sail, but as can be seen, will nowadays last a long time given little maintenance other than a topping up of the grease levels. They are also very competitively priced.

As an added bonus, pitch is very easily adjusted if necessary. In my case with a 20hp engine a quarter turn on the pitch adjustment makes a difference of 300rpm in the maximum revs achieved; a significant alteration. ■

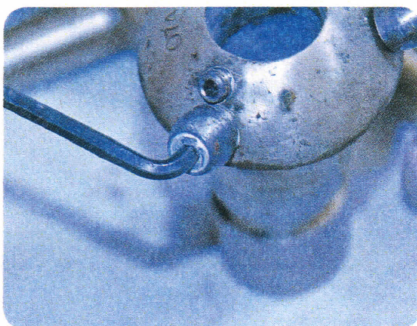
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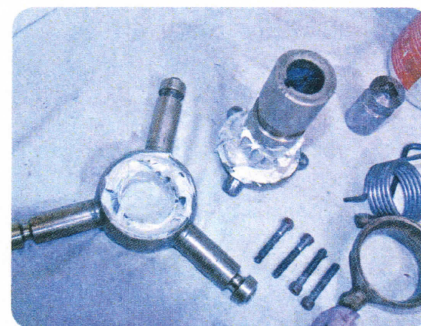
7. The propeller hub should slide off.



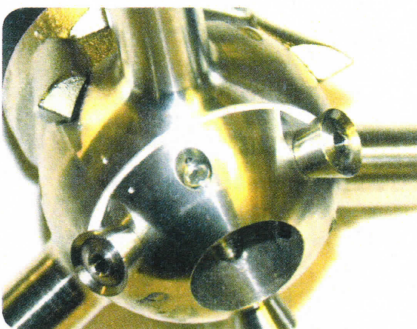
8. Modifications on new models include the addition of an extra seal; the white ring, and extra bushing; the black sleeve.



12. Tightening the reversing cones on the hub. They need to be really secure.



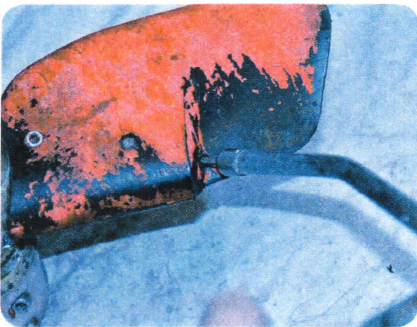
13. It is worth greasing the hub before reassembly, this saves much effort with the grease gun.



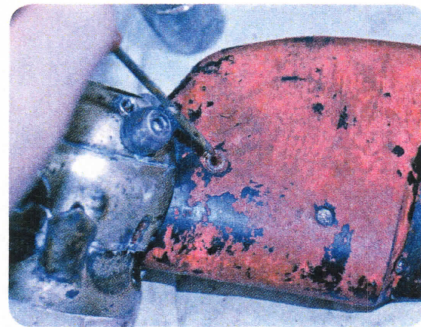
17. Alignment problems are a thing of the past with punch marks showing correct positioning. The grease point has also been moved.



18. The nose cone is also marked for correct positioning.



22. Blade grease points are behind these screws. Be generous with the grease as the blades are the parts most likely to wear.



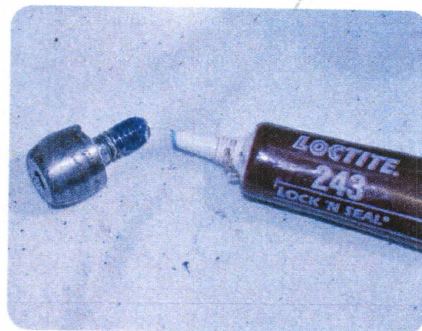
23. This allen screw is the adjustment for blade pitch. Each blade must be adjusted by exactly the same amount.



9. The internal components.



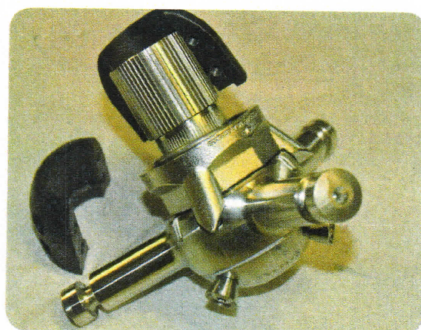
10. The only other parts for removal are the reversing cones.



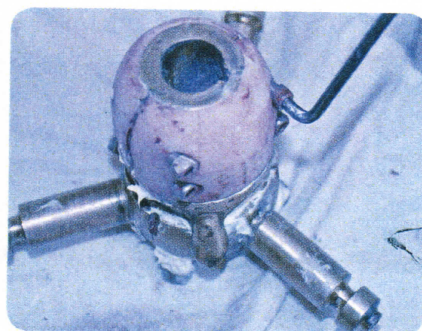
11. After ensuring they rotate freely, a little grease will do no harm although this is not used on these parts at the factory.



14. The spider in place. Note that there is no grease where the nose cone fits. A good grip is needed.



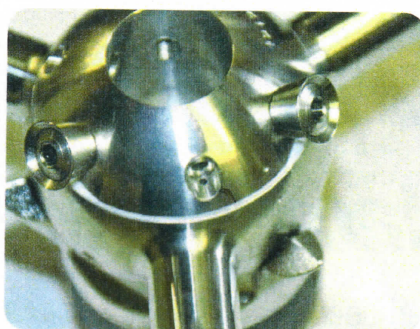
15. The problem of potential slipping has been removed in new units with the addition of these machined grooves in the main shaft.



16. After replacing the spring and nose cones the bolts are replaced, but note that pretension of the spring is important.



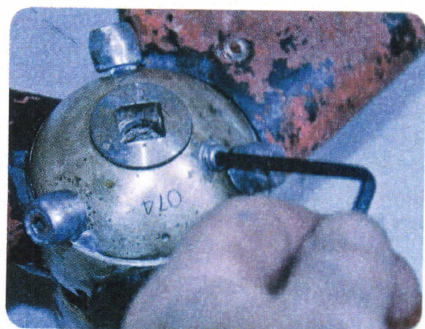
19. New model blades are fitted with improved seals.



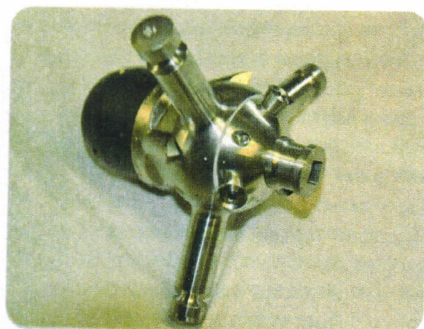
20. There is a grease point on the main shaft hub. Note the grease hole and the addition of the white nylon seal on newer units.



21. Don't forget the locking bolt on the spider.



24. This allen screw locks the main shaft nut in place once the propeller is back on its shaft.



25. New units now have two locating screws for the main shaft nut.



26. Sealant around the nose cone helps to seal the unit. New KiwiProps have this done in a special process at the factory.