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**Installation Instructions for 3-blade folding propeller for saildrive.****Please read these instructions thoroughly before you start working with the propeller.**

The propeller consists of the following parts:

- 1) Retaining cap
- 2) Inner hub
  - 2.1) Bushing
  - 2.2) Flexible bushing
  - 2.3) Bushing
- 3) Nut
- 4) Washer for nut-locking bolt
  - 4.1) Nut-locking bolt
- 5) Lock bolts for retaining cap (3 pcs.)
- 6) Blade housing
- 7) Zinc anode
- 8) Fixing bolt for zinc anode
- 9) Threaded pin on 18" and 20" diameter propellers
- 10) Fixing bolt for pins on 18" and 20" diameter propellers
- 11) Pins (3 pcs.)
  - 11.1) Outside locking bolts for pins on 18" and 20" diameter propellers
- 12) Propeller blades (3 pcs.)
- 13) Gear-wheel
- 14) Spacer
- 15) Flexible stops (3 pcs.)
- 16) C-spanner
- 17) Zinc ring anode (2 half moons)
  - 17.1) Fixing bolts for zinc ring anode (4 pcs)
- 18) Allen key 4 mm
- 19) Allen key 5 mm
- 20) Allen key 6 mm
- 21) Locking glue

**Fitting of the propeller:**

Take 1-5 apart by loosening the 3 lock bolts for the retaining cap (5) with the 5 mm Allen key (19). Use the C-spanner (16) for turning off the retaining cap (1). Turn the retaining cap clockwise, when looking from the blade end.

**Remember** that the blade housing and the blades (6-7-8-9-10-11-11.1-12-13-14-15-17-17.1) should not be taken apart as they have been assembled and the bolts have been locked with locking glue (21).

Push the retaining cap (1), bushing (2.1), inner hub (2), flexible bushing (2.2) and bushing (2.3) on to the shaft.

Fit and tighten the nut (3) tight. Typically tightening torque is 9 - 10 kg-m.

Smear locking glue on the thread of the nut-locking bolt (4.1) and fit it together with the washer (4) and tighten the nut-locking bolt (4.1) tight with the 5 mm Allen key (19). Typically tightening torque is 1,5 kg-m.

Push the blade housing including the blades (6-7-8-9-10-11-11.1-12-13-14-15-17-17.1) on to the flexible bushing (2.2) so that the 2 security cams slide into the grooves in the flexible bushing (2.2). Push the blade housing slowly until the thread of the retaining cap (1) and the blade housing (6) are opposite each other and turn the retaining cap (1) anticlockwise, seen from the blade end, with the C-spanner (16) until it is tight and the 3 holes of the retaining cap (1) are in line with the 3 half circle cut outs of the blade housing (6).

Fit and tighten the lock bolts for the retaining cap (5) with the 5 mm Allen key (19). Smear the thread of the lock bolts (5) with locking glue (21) to secure them.

Check that the propeller blades move freely from closed to open position and that the clearance from the blade tip to the hull is at least 10% of the propeller diameter.

**Removing the propeller:**

Don't remove the blades (12)!

Remove the lock bolts for retaining cap (5) with the 5 mm Allen key (19).

Turn the retaining cap (1) clockwise, when looking from the blade end, with the C-spanner (16) until it is clear of the blade housing (6).

Remove the blade housing and the blades (6-7-8-9-10-11-11.1-12-13-14-15-17-17.1) from the flexible bushing (2.2).

Unscrew the nut-locking bolt (4.1) and washer for the nut-locking bolt (4) with the 5 mm Allen key (19).

Unscrew the nut (3).

Pull the inner hub (2), flexible bushing (2.2), bushings (2.1 and 2.3) and retaining cap (1) off the shaft.

### **Dismantling of blades and gear-wheel from the blade housing:**

This must only be done in case of cleaning and servicing.

Remove the fixing bolt (8) and the zinc anode (7) with the 5 mm Allen key (19).

On 18" to 20" diameter propellers: Remove the threaded pin (9) with the 6 mm Allen key (20).

On 18" to 20" diameter propellers: Remove the lock bolt (10) with the 5 mm Allen key (19).

On 18" to 20" diameter propellers: Remove the outside locking bolts for pins (11.1) with the 4 mm Allen key (18).

Dismantle the blade pins (11) and the blades (12) with the 6 mm Allen key (20).

Remove the gear-wheel (13).

Remove the spacer (14).

Remove the flexible stops (15) with a pair of pliers or similar.

When remounting the parts it is important to smear the treads on the fixing bolt for zinc anode (8), the threaded pin (9) on 18" to 20" diameter propellers, the lock bolt for pins (10) on 18" to 20" diameter propellers, the pins (11) and the outside locking bolts for pins (11.1) on 18" to 20" diameter propellers with locking glue (21) to secure them.

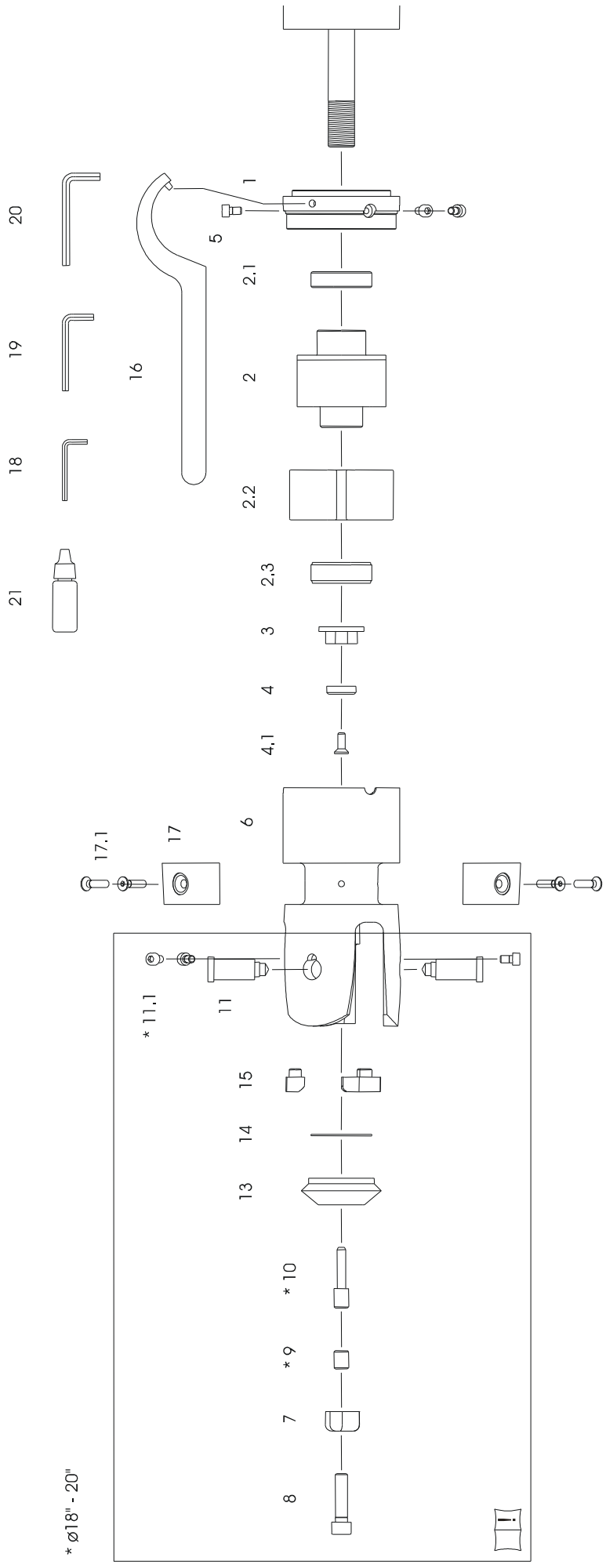
The blade housing (6), the pins (11) and the propeller blades (12) are numbered, and besides the blade housing (6) and the pins (11) on propellers from 15" to 16,5" diameter are marked with a line, and everything must agree with each when remounting the parts.

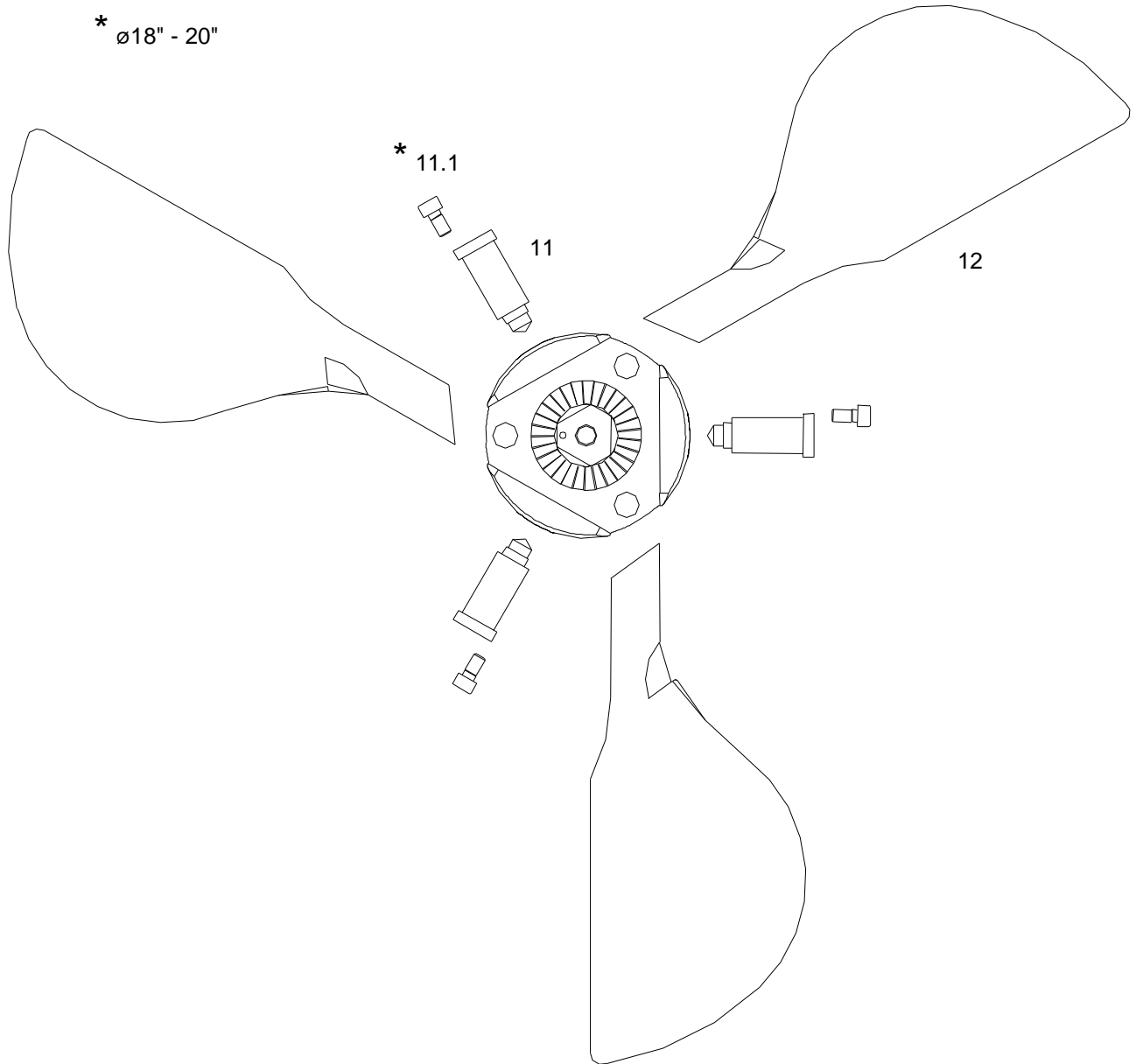
### **REMEMBER**

- If more than 50% of the zinc anode (7) and zinc ring anode (17) has eroded, it should be replaced.
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- If the gear-wheel (13) has been damaged or worn, it should be replaced.
- If the flexible stops (15) have been damaged or worn, they must be replaced.

**WARNING !**

- **Do not start the engine when the boat is out of the water.**
- **The propeller has sharp edges. Be careful not to cut your fingers !**
- **Make sure that the propeller blades do not suddenly open or close and trap your fingers for example.**
- **Do not turn the propeller/engine shaft until the boat is in the water.**
- **Stop the engine before diving or swimming in the vicinity of the boat.**
- **The propeller blades are like knives and can cause considerable damage when rotating. Be careful !**
- **Do not attempt to remove fishing net or ropes from the propeller when the engine is in motion.**
- **Check that the propeller works in both forward and reverse before starting each trip.**
- **If any strange sounds or vibration are noticed coming from the propeller, stop the engine immediately and solve the problem.**
- **In case of problems in connection with the mounting, use or function of the propeller, contact Gori Propeller or the importer in your country.**





## **Working instructions 3-blade Gori folding propeller**

Congratulations on choosing the 3-blade Gori folding propeller.

The 3-blade Gori folding propeller has been designed in such a way that if the propeller is in "overdrive" position, the boat will attain approximately the same speed at lower engine revolutions. Do not press the engine to the utmost as this will result in overloading. Do only use the overdrive function when motoring in calm weather and when using the engine under sail.

**Gori propeller – Steel Team A/S disclaim the responsibility for any damage caused by overloading the engine. In case of doubt about the loading of the engine, you should contact the authorised engine service organisation and Gori propeller.**

### **Under sail**

When sailing under sail the blades will fold, however, you should put the lever in reverse if the engine is not turned on. This will lock the shaft and ensure that the propeller folds and does not spin. You can then put the lever back into neutral.

### **Ahead**

The propeller usually opens in normal forward position, unless the boat has just been going astern. If you want to shift from "overdrive" to normal forward position, the lever will have to be put into neutral when the boat does more than 2 knots ahead, until the blades have folded again. If the propeller keeps spinning put in reverse for a short time, while the boat is still moving ahead. Then in forward position again.

In case of harbour manoeuvres the propeller might get into "overdrive" position. Therefore, before leaving the harbour, please always check the position of the propeller by means of the boat's tachometer so that the propeller is in the wanted position.

### **Astern**

In the reverse position the blades swing 180° opposite the forward position, which ensures the same blade leading edge and profile – resulting in high efficiency. If the boat has not been used for some time, you should shift cautiously between forward and reverse a few times before sailing in order to clean the teeth of the blades and the gears from fouling.

### **Ahead "Overdrive"**

In order to position the propeller in forward "overdrive" it is necessary to move the boat astern so that the blades are kept in reverse position. While the boat is still moving aft, the lever is put into forward. Don't try to make the propeller go from forward to "overdrive" position by quick shifts with the lever when the boat is sailing ahead in the water.

**Before going sailing, check that the propeller works in both forward and reverse.**

**For nearest Gori propeller importer please check [www.gori-propeller.dk](http://www.gori-propeller.dk)**