

INSTALLATION WARNINGS 'CHEAT SHEET'

First Warning – read the complete Installation Guide! However, for your convenience, here are some of the important 'WARNINGS' to help you get a sense of critical issues to bear in mind.

A. CONSIDERATIONS AND PREPARATIONS

Warning: If the installation is done in the water, keep lines on everything – the pieces are slippery, heavy, and valuable. Use strong tape and good knots.

Warning: 'OVER ENGINEER' to make a ROCK SOLID INSTALLATION – The loads on the Hydrovane brackets will be enormous at critical times. The weakest link need not be the timber pads (spacers), backing plates, or bolts – but that is what happens with poor installations. Use materials that are good quality and plenty strong. See the instructions for recommendations.

Warning: THE FLANGES MUST BE FLUSH WITH THE CONTACT SURFACE, or the aluminum casting could fracture. Use Pads to pick up the hull's camber. Please bear in mind that it is critical the brackets cannot 'work' – THEY MUST BE ABSOLUTELY RIGID. Therefore, properly shaping the pads – if needed – is an important step, and many admit it is the most time-consuming part of the installation.

Warning: BOLT THREAD GALLING occurs when pressure and friction cause bolt threads to seize to the threads of a nut or tapped hole. Heat caused by tightening too quickly or too hard is usually the trigger. Be sure to follow our outlined best practices to help prevent galling of all stainless steel bolts and nyloc nuts.

Warning: DO NOT OVER-TORQUE THE BOLT. Please be very careful not to over-torque any of the bolts. The result would be a cracked casting. If by chance you have a torque wrench, please refer to the recommended torque settings within. That being said, a torque wrench is not required and we have never used one in our installations. Tighten bolts to your usual snug tightness with a socket wrench. Please be very conscious not to crank too hard.

Warning: When unpacking the boxes, know that the Tiller/Fork Arm Assembly and Counter Weights are under separate flaps. Be sure not to throw these out with the box!

Warning: Shaft bearings can be knocked out of place during shipping. No damage done – usually only the two bearings need knocking back in place. See instructions to knock back in place.

Warning: Tightening brackets onto the shaft with INCORRECT SHAFT SLEEVE will result in cracked castings. If you are installing an older unit, be wary not to mix them up.

Warning: In planning the installation, pay careful attention to nearby aerial obstructions, as well as the maximum and minimum distances for bracket clamps on the Shaft Assembly.

B. FITTING THE BRACKETS AND SHAFT

Warning: Warning: Tighten bolts to your usual snug tightness with a socket wrench. Please be very conscious not to crank too hard as the result can be a cracked casting. If using a torque wrench, refer to torque setting provided in the instructions.

Warning: For each bracket, follow the BOLT TIGHTENING SEQUENCE. The most common mistake, typically made by skilled tradesmen who do not read instructions, is to not follow the sequence.

Warning: THE BRACKET MUST BE WELL ALIGNED. Misaligning the castings and struts cannot be solved by cranking into place when bolting together. The bracket must fit perfectly before bolt tightening. If bolted in place in other than its natural position (ie, forced into place) then there will be constant stress on the casting(s) which inevitably ends in a 'stress fracture' – a broken casting.

Warning: If using, be careful with the 'OPENERS' – excessive force can crack the casting. Open one quarter turn at a time only.

C. ATTACHING THE DRIVE UNIT

Warning: Again, if using the 'OPENER', be careful – excessive force can crack the casting.

D. REMOTE COURSE SETTING

No warnings.

E. FITTING THE VANE COVER

Warning: For the Extendable Vane, cinching on the round tube may result in breaking the weld. Be sure to attach the ties to the lower black frame tube.

F. FINAL INSPECTION TESTS

Warning: One MUST complete the final inspections tests as outlined in the Instructions and shown in our videos. Note: the Drive Sleeve test depends on the vintage of your Hydrovane and the Drive Sleeve specs.

G. SAFETY & MAINTENANCE

Warning: Keep tethers on everything! The Rudder does not float. A few are living at the bottom of the ocean... The Vane is lightweight and may try to fly away when being taken on or off

Warning: DO NOT GREASE ANYTHING! Every joint should rattle.