Hydradrive®

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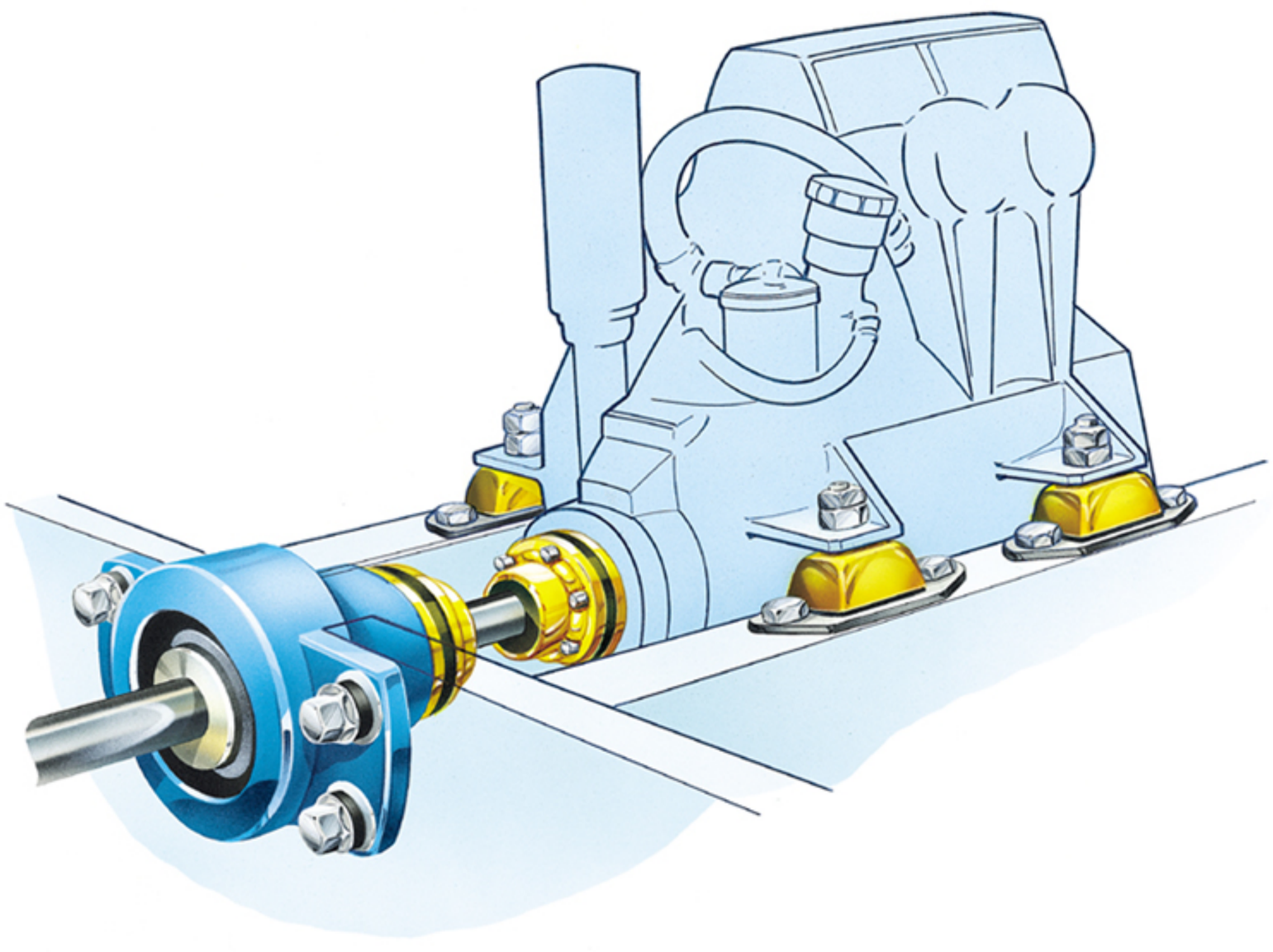
Assembly instructions



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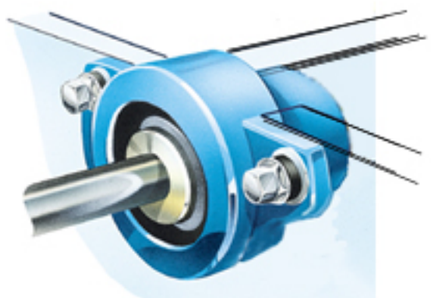
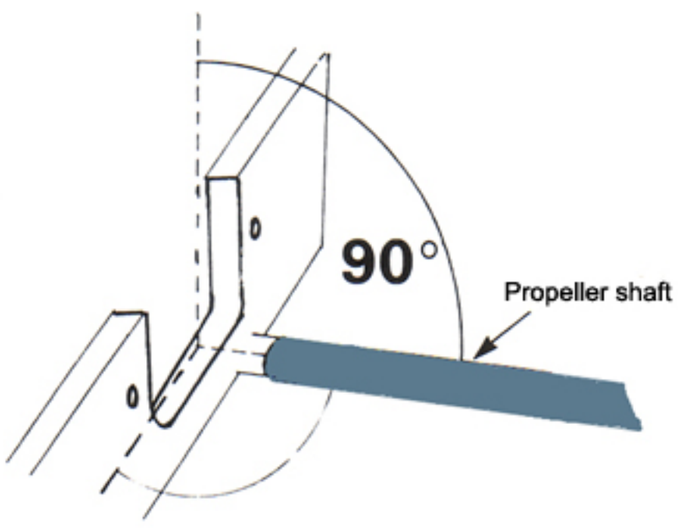
Mounting of thrust bearings in the hull.

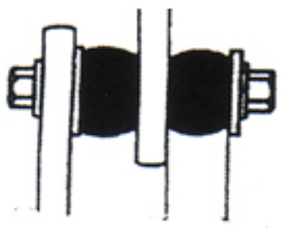


Hydradrive is not delivered with any form of bulkhead or frame, because every boat calls for its own induvidual cross brace solution. The cross brace can be made of different materials, for example: steel, aluminium or fiberglass - reinforced - resin with at least 5 - 6 layers of fiberglass on plywood. The thrust bearing cross brace must not move at full load. It has to be strong enough to absorb the full propeller thrust.

The propeller thrust force can be calculated from a simple formula: Approximatly 75x Kw value (f.ex.: 75 x 100 Kw). The total amount being 7500 Newton or approx. 750 kg.

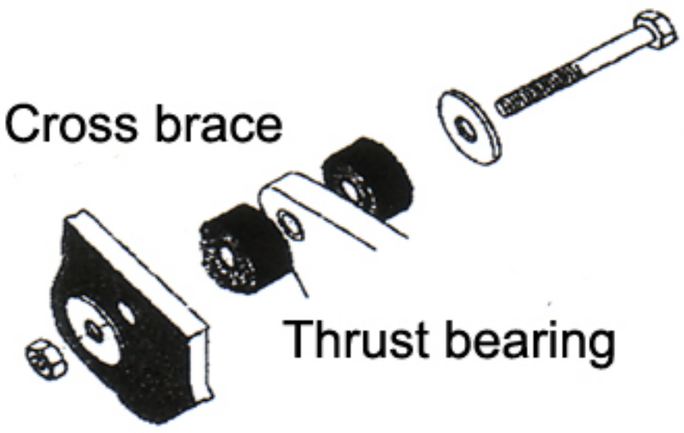


The cross brace is to be mounted in 90° to the propeller shaft. A deviation of 3 - 4° is acceptable. The Hydradrive is delivered with a spherical outer ring to simplify the alignment at installation. Check the distance between the gearbox flange adapter to the cross brace before the final fastening.



The rubber must be pre strained.

The rubber blocks (dampers) are to be installed on each side of the thrust bearing units. The tightening torque of the bolts cannot be indicated with a special value. Tighten till the rubber bulges slightly.
After one month in service, the bolts should be re - tightened approx. one turn each.



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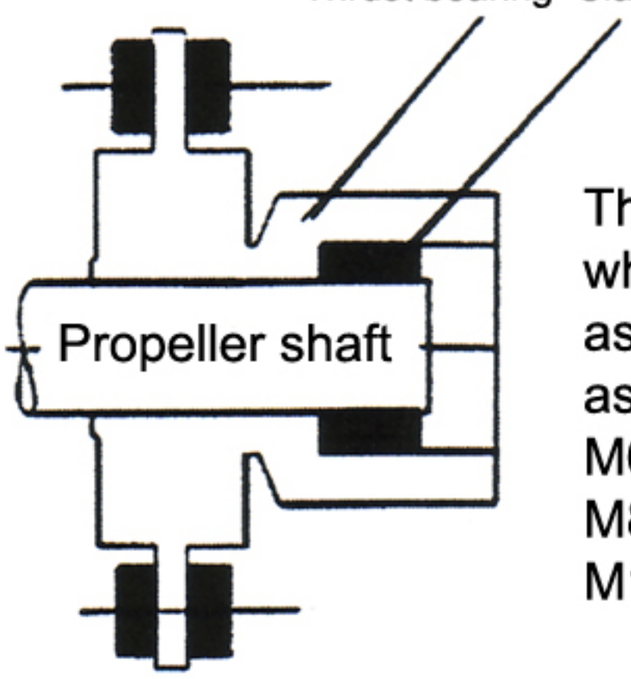
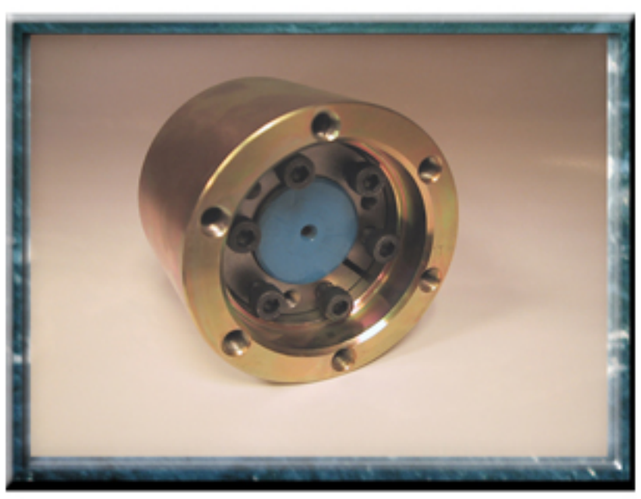
Assembly of propeller shaft.



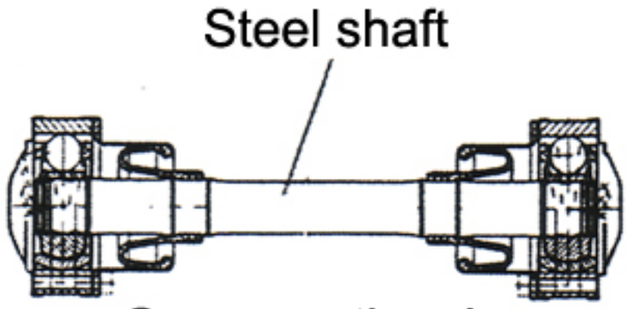
The propeller shaft should be situated some mm in front of the clamping unit when tightening up. The clamping unit has to be oiled before assembly, and the bolts have to be tightened diagonally with a torque as follows:

M6 = 17 Nm
M8 = 41 Nm
M10 = 80 Nm



(M6, M8 and M10 indicate the diameter measured over the threads)
We recommend to take out one of the bolts for measuring.

Mounting the CV - shaft.

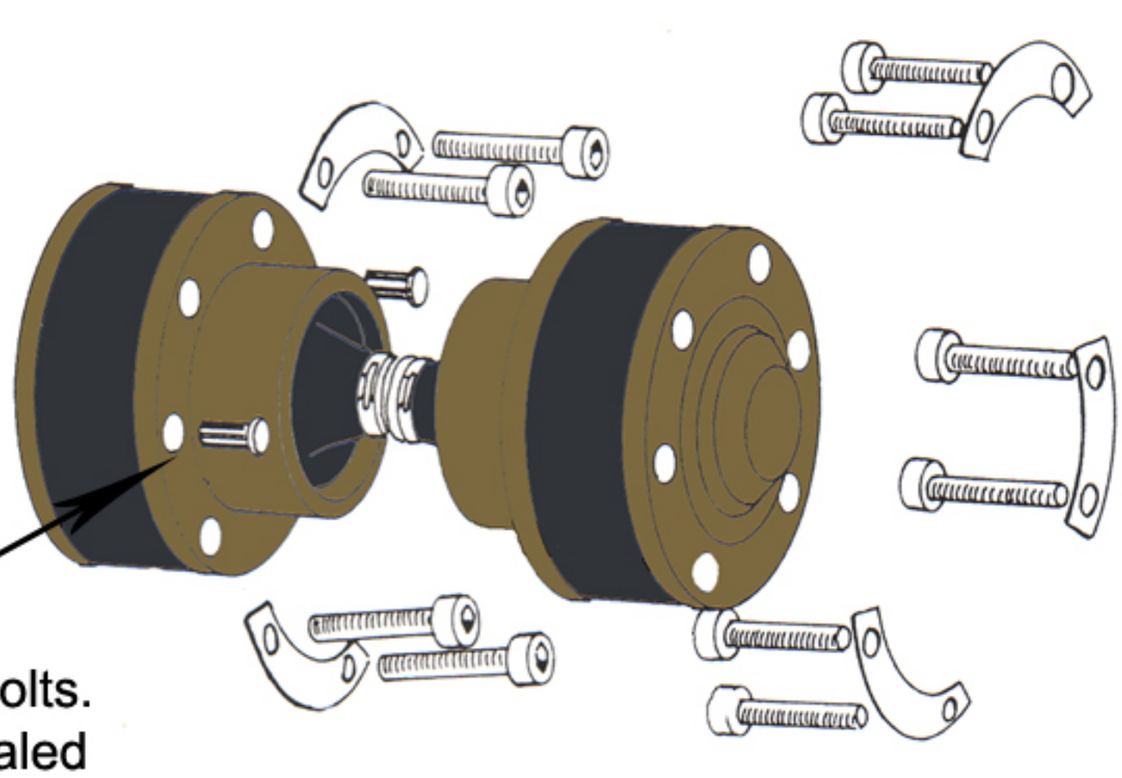


Cross sectional view of drive shaft

When the steel shaft, after mounting can be moved back and forth by hand a few mm, the mounting is done correctly.

The 6 bolts on each side shall be tightened with the following torques:

M8 (108 and 113) = 41 Nm
M10 (115) = 70 Nm
M12 (125 og 130) = 120 Nm



Some models have to be assembled with only 4 bolts. The two remaining holes are in that case to be sealed with plastic plugs.

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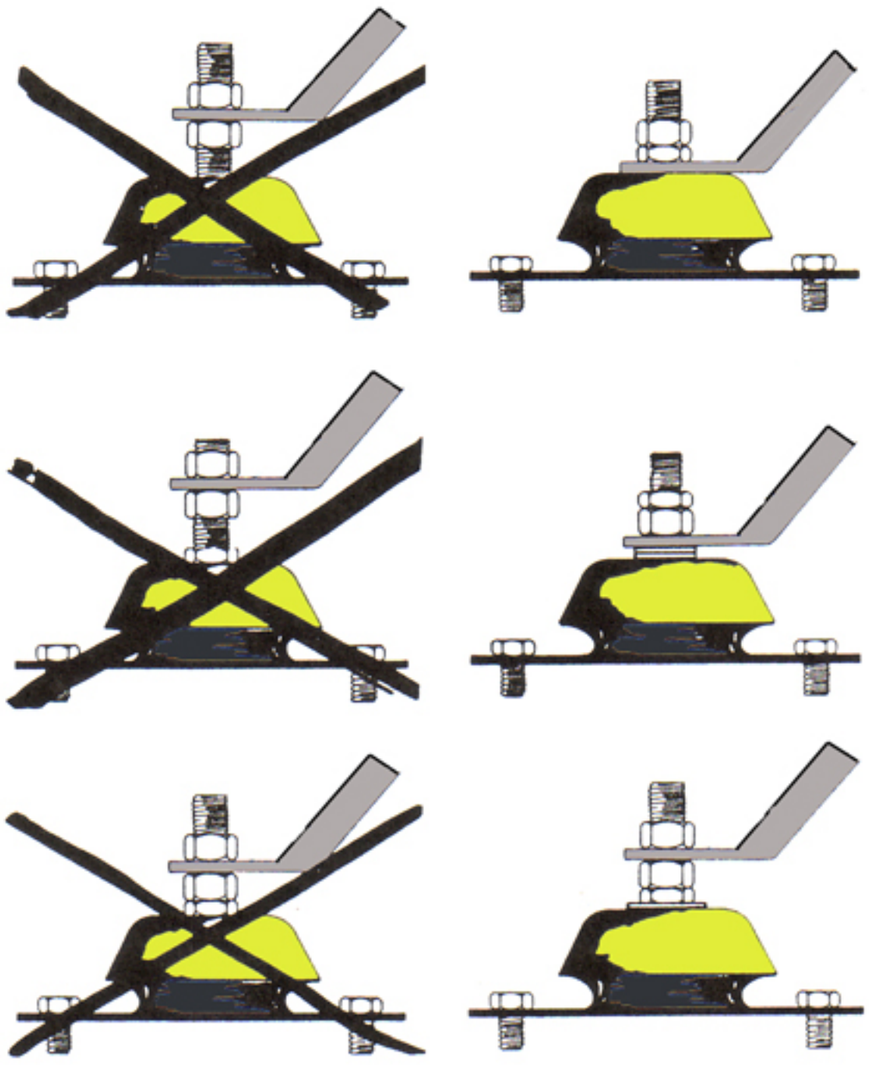
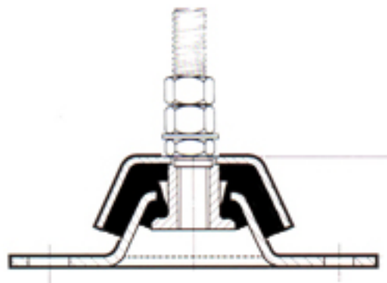
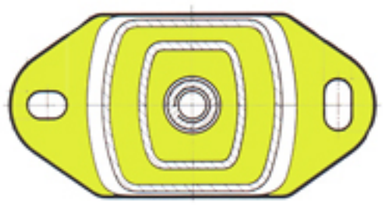
Engine mounts.



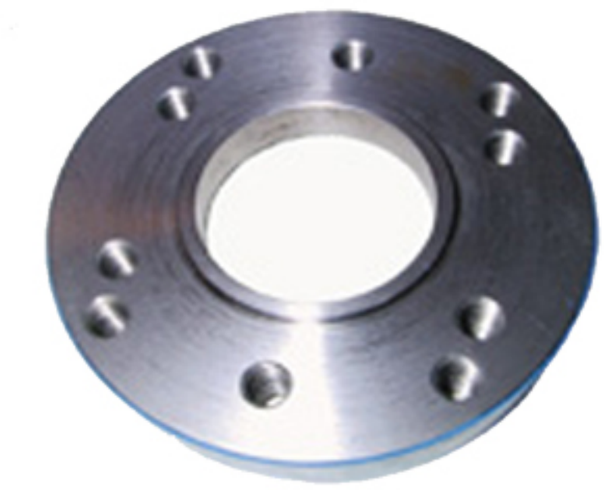
The engine mounts must be installed as shown on the drawings. It is important that the height is reduced to a minimum. It is better to build up under the engine mount than to adjust the height on the bolt.

Max. height between the engine mount and the engine feet is 20 mm. With especially soft mounts, the distance is only 10 mm.





Adapter ring.



The adapter ring for the gearbox is mounted first to the gearbox output flange. The applied torque depends on the dimension of the bolts:

M8 = 41 Nm
M10 = 70 Nm
M12 = 120 Nm

The length of the bolts have to be adjusted with some of the models.

Good luck with the mounting !