DMBC – Motor and Propshaft Alignment

Everyone is aware that in the drive line between the motor and propshaft of a model boat the there is a universal of flexible joint of some description. The function of this `joint' is to allow for the slight flexing or twisting of the hull which is likely to occur with age. It is important the when the model is being built that the motor shaft and the propshaft are set so that they are both on the same axis. If this is not undertaken, the joint is prone to noise and vibration and may lead to premature failure.

Personally, due to the models that I build, I have only ever used a Huco type coupling but I am aware that some modellers due to the type of model being built, use what I term as a flexible joint usually containing a rubber block to provide flexibility. Whatever type of coupling/joint is used I would suggest making (or obtaining) an “alignment tool” or “dummy joint” which replicates the joint *but is solid*. Briefly, once correct alignment has been achieved the dummy is removed and the actual joint/coupling placed in position.

This is my dummy joint for use when fitting Huco type couplings.

This is simply a piece of ½ inch diameter aluminium. The length being identical to the red plastic joint and the ends are drilled so that the two brass inserts are a “snug fit” i.e. they fit into the aluminium with just finger pressure and can be removed in the same way. The brass inserts providing the interface between the motor and propshaft.

The motor and propshaft are aligned using the dummy. Normally the location of the propshaft is fixed but the motor can be moved laterally (side to side) and vertically (up and down), possibly by inserting packing e.g. thin pieces of Plasticard under the motor mount. Once alignment has been achieved the set-up has to be dismantled to remove the dummy and insert the actual coupling. So it is imperative that the motor returns to the same position after this process has taken place. The suggested method is that before dismantling takes place and using a metal scriber or sharp pencil the location of the motor mount is marked onto the mounting block or surface within the hull.

I am aware that with some applications it is easier to mount the motor into a model using epoxy resin (Araldite etc.). If you intend going down this route please ensure there is a “pre-planned escape” to allow removal of the dummy and insertion of the coupling. Normally as the motor mount is fixed this would mean partially retracting the propshaft.

If you cannot get a purpose made dummy or alignment tool made, then proprietary items can be purchase from model shops or via eBay.

The image is of a type advertised on eBay and available in a number of configurations to suit different propshaft/motor set ups e.g. M4 at one end and 6mm plain at the other. These are about £8 each.

Mobile Marine Models also offer an item called a Protorlign (trade name) This is a universal type i.e. with a selection of interchangeable inserts which fit into a common body. This type costs about £13.

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