Depth Sounder Transducer Installation

0il Bath Method

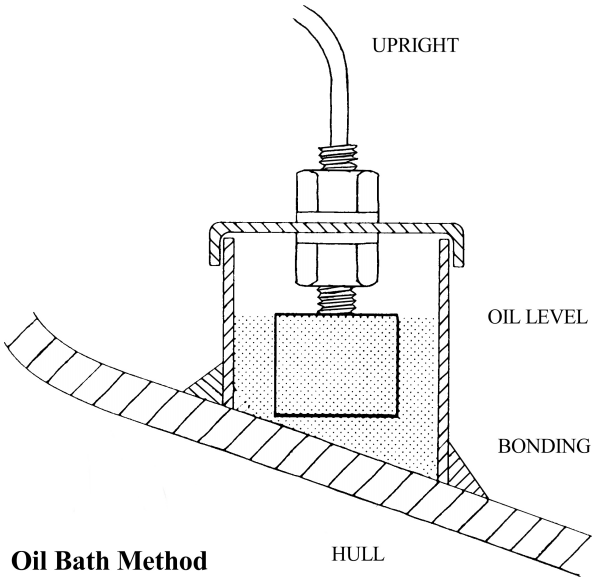
This is the best mounting method for most boats. It works well on single skin G.R.P .hulls but is not suitable for sandwich construction, steel, aluminium, ferrocement or wooden hulls.
The ultrasonic signal produced by the transducer passes easily through liquids and solids but is greatly attenuated in air. It therefore follows that air inclusions in the fibreglass or a stream of air bubbles on the outside of the hull will both affect performance. The signal will pass through up to $^{3}/_{4}$`` thickness so avoid siting the transducer over spray rails or reinforcements.

The signal from the transducer is in the shape of a cone (approx. 22 degrees). If it is mounted too close to the keel it can pick up an echo from the keel, so ensure adequate clearance.

The optimum installation site can be found by temporarily mounting the transducer in a blob of grease, or placing it in a polythene bag of water (wet on the outside too) and holding the bag against the hull.

A Fitting Kit is available comprising a tube and cap, twin pack epoxy adhesive.

If not using our Fitting Kit remember the following points - the transducer must not be a tight fit in the tube ($^{1}/_{4}$`` clearance is ideal), it should not touch the hull and the glue used to bond the tube to the hull should be applied to the outside of the tube (not in the inside).



Oil Bath Method

The most vital point to remember with the Oil Bath Method is that the oil will need regularly topping up. The commonest cause of Depth Sounder problems is no oil around the transducer. **Any oil will do!**

Mount the transducer vertically and do not cut the cable.

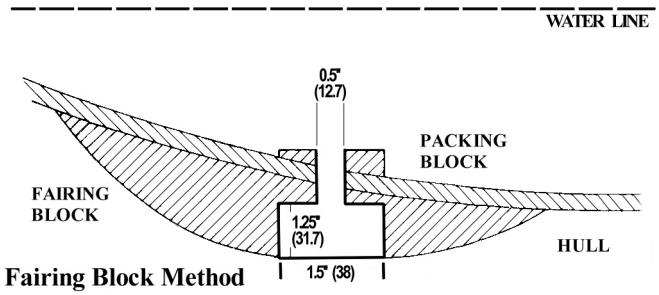
Pierced Hull Method

This method is suitable for all types of hull construction. A wooden fairing block protects the transducer and smoothes the flow of water over it. We do not manufacture a fairing block as it would usually be tailor made for your boat.

Remember that there must be adequate clearance in the fairing block around the cup portion of the transducer. If it is constrained then performance will suffer as the piezoelectric crystal within the cup must be free to physically pulse. Wood will swell when immersed, so allow for this. For the same reason use flexible sealants.

Do not hammer the face of the transducer as physical shock will damage it, and do not over tighten the nuts on the threaded stem. The standard transducer has a $2^{1}/_{2}$" threaded stem, but a 6" stem version is available.

Mount the transducer vertically and do not cut the cable.



Fairing Block Method

Paddle Wheel Transducer Installation

Pierced Hull Fitting method only

The Transducer should be immersed in an area free from turbulent aerated water, and where there is least risk of external damage. Accurate readings can be only obtained when there is a flow of water across the face of the transducer and where this flow represents the speed of the boat through the body of water.

Avoid the bow and stern area where the ships contours modify the water velocity, and in power boats anywhere in the vicinity of the propellers.

Do not choose a position close to the toilet, bilge or cooling outlets, or earthing plates. On most power and sailing craft a convenient position about midships, immersed as deeply as possible, will usually be found suitable. On planing craft mount as far aft as possible. When the position has been determined the hull should be pierced and the skin fitting assembled as shown in the sketch. Drill a 44.5mm (1.75'') hole in a suitable position off set from the centre line but as deep as possible. Insert the flanged fitting through the hole after a generous application of bedding compound and secure with the nut on the inside. Do not overtighten.

Leave enough room inside the hull (and enough cable) to permit withdrawal of the transducer for cleaning purposes. This does not result in much water being shipped if undertaken afloat (but not underway). More care is necessary if the transducer is deeply immersed i.e. over lm (3feet) and a second person should be present in case of accidents. The cable should run clear of the bilges along a protected route and be secured at regular intervals. The 'O' rings should be kept greased at all times with waterproof grease.

Log transducers are available in 2 forms. Low speed transducers have a 16mm wide impeller blade and cover the range 0. 1 - 28 knots. For faster boats the high speed transducer has an 8mm wide impeller blade and will record speeds of 1 - 40+ knots. High speed transducers must be fitted with the point on the handle facing forward.