

IN HULL TRANSDUCER MOUNTING KIT (Suitable for Glass fibre hulls only)

This kit contains all the necessary components required for the installation of a standard size TRANSDUCER (38 mm 1½"), inside the hull of a vessel constructed of glass fibre. Although the thickness of the hull is not generally critical, some loss of deep water performance may be experienced. This kit is not recommended for use on glass fibre hulls over 19 mm (¾") in thickness, nor is it for use on aluminium, steel or wooden hulls.

READ THROUGH THESE INSTRUCTIONS AT LEAST ONCE BEFORE ATTEMPTING TO USE THIS KIT

MOUNTING POSITION

To determine the most effective position of the TRANSDUCER, prior to permanent installation, a little experimentation is required. With the TRANSDUCER plugged in to an operational ECHO SOUNDER, and the vessel in a known depth of water (approx. 6 Metres), press the face of the TRANSDUCER against the inside of the hull. Check the reading obtained from the ECHO SOUNDER against the known depth. For best results the face of the TRANSDUCER should be bedded into a medium such as chewing gum or the like to ensure that no air bubbles exist between the face of the TRANSDUCER and the hull.

During tests, ensure that the engine(s) of the vessel are running and that the COAXIAL cable is as near to its final position as practicable. **DO NOT FINALLY INSTALL THE CABLE YET.** If electrical interference is induced into the cable by the engines and associated equipment (exhibited on the instrument by random flashes or readings), move the cable and TRANSDUCER until a suitable position is found.

METHOD OF INSTALLATION

CAUTION !!! IT IS ESSENTIAL THAT THE CHOSEN MOUNTING POSITION IS CLEAN, DRY AND FREE FROM OIL, GREASE, PAINT & DIRT etc. Avoid choosing an area of the bilge that is known to fill up with contaminated water, i.e. fuel oil etc. The success of the installation depends on **GOOD PREPARATION.** The filler to be used WILL NOT ADHERE to POORLY PREPARED SURFACES.

DO IT WELL -- DO IT ONCE

- 1 Using a straight edge parallel to the hull, and with the tube held upright, observe and mark the angle on the tube to match the angle of the hull. (see Fig 1)
Cut the tube with a fine toothed saw, such as a hacksaw. Avoid cutting large slices from the tube. Test the angle against the hull. Remember that some small discrepancies can be made up for in the seating of the tube in the filler. When satisfied with the angle, clean the rough burrs from the inside and the outside of the tube.
- 2 To provide a good " key " for the filler, score the outside of the newly sawn end of the tube with the blade of a hacksaw (or use very coarse sandpaper) for approx. 38mm (1½") along its length. (see Fig 2)
- 3 Prepare the inside surface of the hull in a similar manner having regard for the CAUTION note above. Make sure that all dust particles created are thoroughly removed.

CAUTION !!! PRIOR TO USING THE FILLER, IT IS ESSENTIAL TO READ AND FOLLOW THE MANUFACTURERS INSTRUCTIONS, TAKING SPECIAL NOTE OF THE * IRRITANT and * HARMFUL PRECAUTION INSTRUCTIONS

- 4 Prepare a small amount of filler, and locating the tube in the chosen position, apply the filler in 4 equidistant positions around the outside of the tube at its base. (see Fig 3) Do not mix up too much filler at this stage, as all that needs to be achieved, is to retain the tube solidly enough in the upright position to enable subsequent mixes to be applied confidently without any danger of the tube moving out of position.
- 5 Once the tube has been fixed rigidly, proceed to build up a substantial " bead " of filler around the base of the tube. Do not mix up more filler than can be used in 5 minutes. Small, careful applications of the filler, building up to the final desired shape will give a much more satisfactory result than attempting to do the job in one application. (see Fig 4)

REMEMBER THAT WHAT YOU ARE TRYING TO ACHIEVE MUST BE OIL TIGHT

- 6 Thread the HOUSING CAP & the ADDITIONAL NUT over the plug end of the COAXIAL cable, down to the transducer. Assemble and adjust the position of the HOUSING CAP by moving the nuts up or down the TRANSDUCER thread to achieve the position shown in the cutaway drawing. (see Fig 5) Do not over tighten the nuts. The TRANSDUCER face should be close to, but not touching, the hull.
- 7 Pour the oil supplied in the pot, into the tube, until the tube has approx. 25mm (1") of oil in depth. Let the oil settle and check that there are no oil leaks.
- 8 Remove the SELF TAPPING SCREW from the top of the HOUSING CAP to relieve the " hydraulic " effect of pushing the transducer into the oil and also to allow any excess air displaced to vent. Push the TRANSDUCER assembly into the tube GENTLY, allowing the oil to seep up around the sides of the TRANSDUCER body until the HOUSING CAP is pushed fully home. It is essential that the transducer is not forced into the oil as the hydraulic effect may damage the oiltight seal formed by the filler. Whilst holding the HOUSING CAP screw the SELF TAPPING SCREW fully home, this will fix the HOUSING CAP and will prevent the ingress of dirt etc.

The TRANSDUCER will now be fixed upright, with **air free** oil between its face and the hull, and will be ready to be plugged into the ECHO SOUNDER.

MAINTENANCE

Periodically, check the oil level (at least at the beginning of every season), and top up if necessary.

If removal of the TRANSDUCER is found to be necessary, first remove the SELF TAPPING SCREW to allow air into the tube.

USE OF ANY FLUID OTHER THAN THAT PROVIDED MAY DAMAGE THE TRANSDUCER, FOR WHICH THE MANUFACTURERS WILL ACCEPT NO RESPONSIBILITY OR LIABILITY.

THE KIT CONTAINS:

- 1 X POT OF OIL
- 1 X ADDITIONAL NUT
- 1 X HOUSING CAP
- 1 X TUBE (100mm NOM LENGTH)
- 1 X FILLER KIT
- 1 X SET INSTRUCTIONS



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