



Since my wife has finished with sailing it was necessary to find a way of continuing single-handed at an advanced age. Going below for the keels when in a congested part of the lake is fraught with peril. (*Bernard sailed for years on Lake Geneva – Editor*)

I purchased the various pieces for the keels and installed them. Not being too experienced in mechanical things I made a few errors; but this year is the second season the system is 'run-in' and for me is very satisfactory.

This system has changed my method of sailing A89. With the furling jib and this mechanism she can be sailed more according to the force of the wind - i.e. upright without too much heel, or using one keel down only. Normally the keels are just outside of the boxes. The keels drop on their own weight by slightly opening and closing a small tap on each pump. For lifting the taps are closed and one pumps. The time for lifting each keel is slightly less than it was with the handles. The pumps are small and the piston stroke about 10mm. The time for-raising and lowering both keels is about half of that taken by hand.

The photo shows the fixation of the cylinders and connection by hoses through the keel cases to the 2 pumps at the side of the tiller (see page 3).

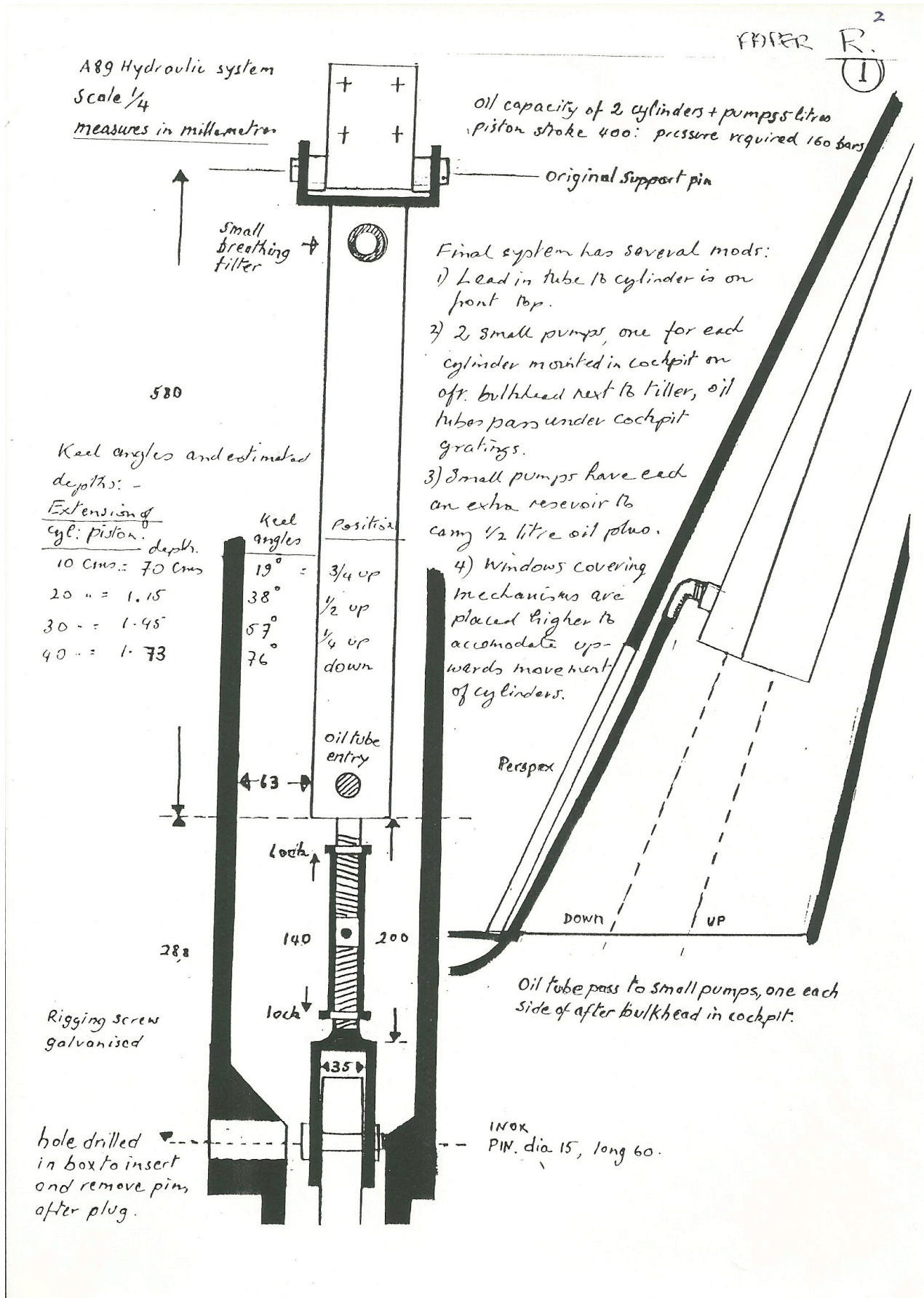
There are several methods available for hydraulic action. Charles Currey knows about them, e.g. the A31 s' have electrically operated pumps. My original thinking was to have one pump with 2 taps, thus both keels could be raised together or independently; but this pump was large, required an extra reservoir and was heavy and its weight had to be compensated on the opposite side of the boat. So 2 small pumps each with an additional reservoir were chosen. Total weight is about same as original mechanism. The cylinders have a piston stroke of 40cms but it is possible to increase by extending the rigging screws on each keel, which are useful for dropping the keels well outside of the hull.

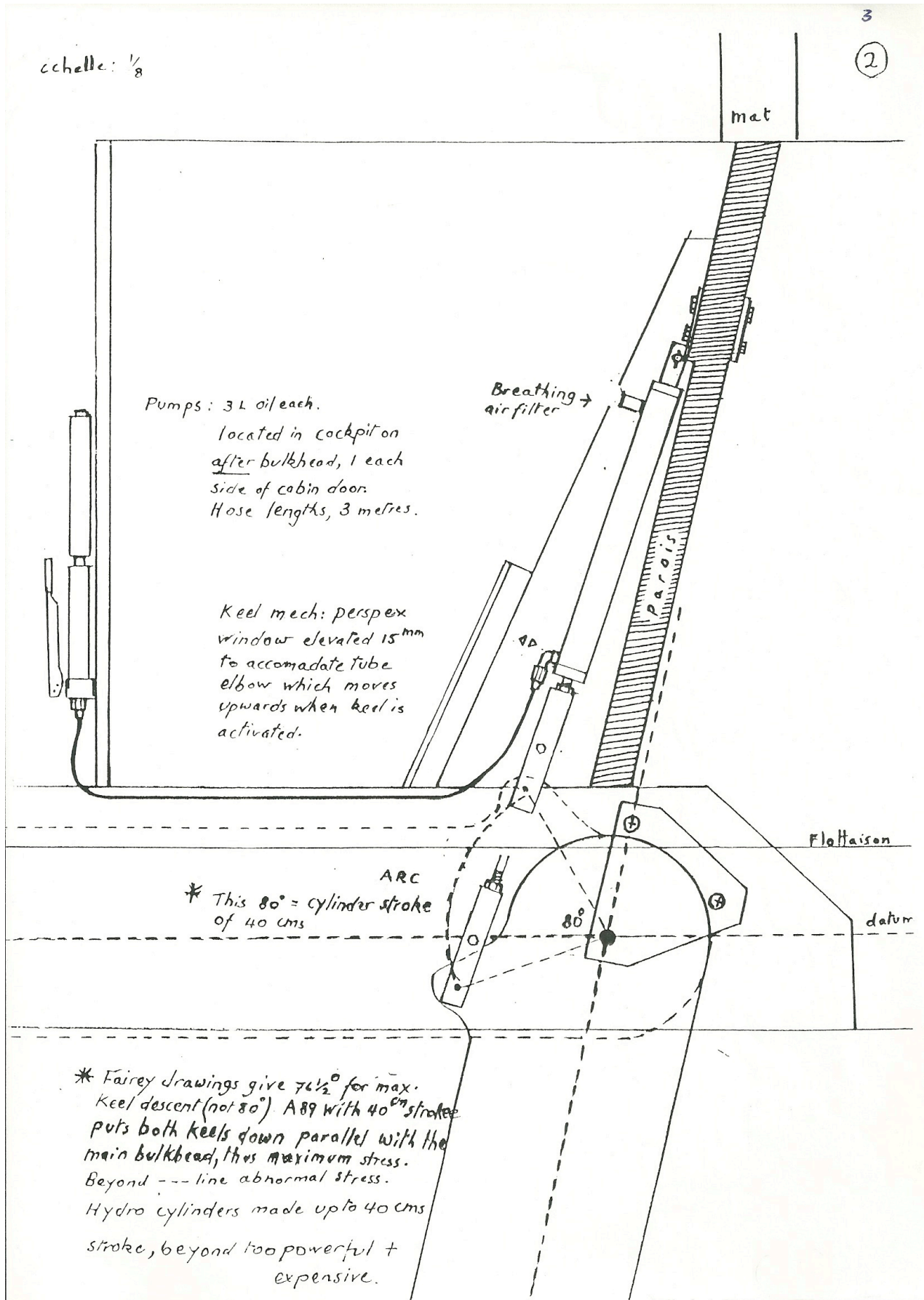
I have made drawings to scale with exact measurements from which you will note that the boxes enclosing the mechanism required new perspex fronts to permit the oil tube and connection to the cylinder to lift forward. This could probably be avoided if the connection was on the side of the cylinder and in the form of a sharp right angle and not a curve which takes up space.

Another point, it is beneficial to have the port keel pump to starboard and vice versa so that when operating one can see easily the keel movement without stretching body. I failed on this but it could be rectified by adding 50cms of hose to each side.

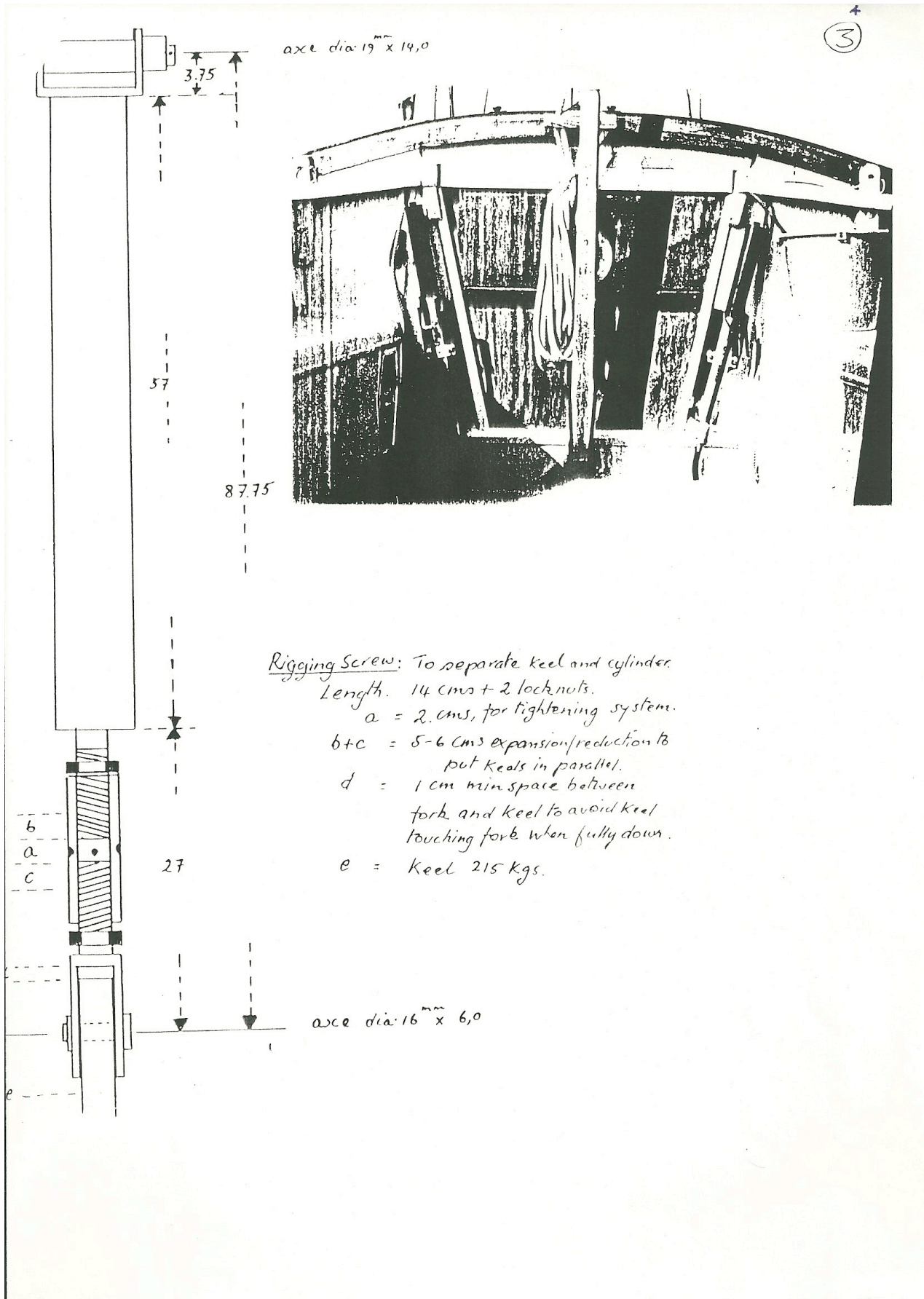
There is also one small alteration for the keel bolt entry ports:- instead of the small screws holding the metal ports in position each plate is held in position by a screw bolt forcing down on the centre of each plate. Thus worn screw holes are avoided.

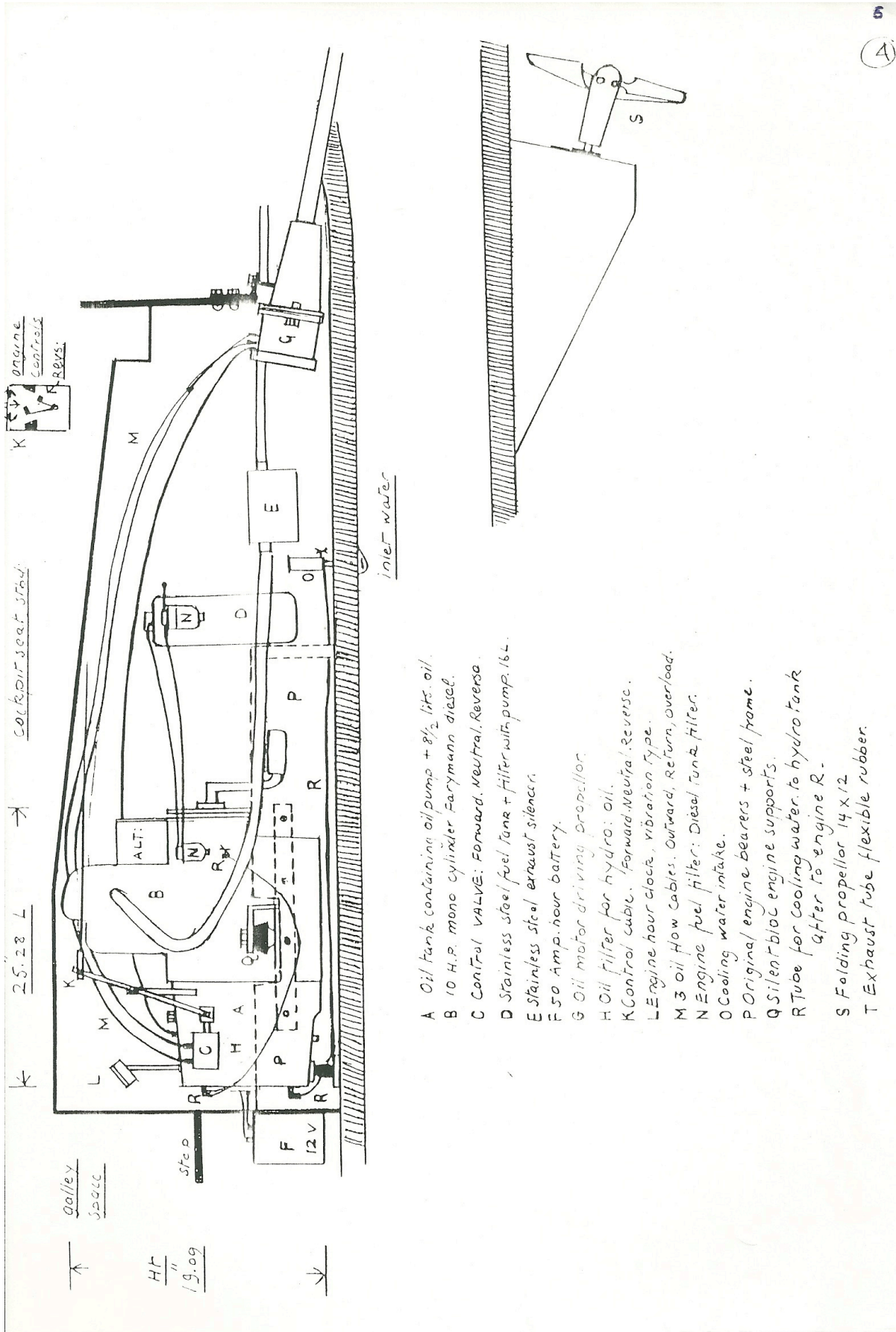
Under each plate is the `polyzoate joint recommended by Donovan.











- A Oil Tank containing oil pump + 8 1/2 lts. oil.
- B 10 H.P. mono cylinder Farymann diesel.
- C Control VALVE: Forward, Neutral, Reverse.
- D Stainless steel fuel tank + filter with pump. 16 L.
- E Stainless steel exhaust silencer.
- F 50 Amp. hour battery.
- G Oil motor driving propeller.
- H Oil filter for hydro. oil.
- K Control cable. Forward, Neutral, Reverse.
- L Engine hour clock. Vibration type.
- M 3 oil flow cables. Outward, Return, overload.
- N Engine fuel filter: Diesel Tunz Filter.
- O Cooling water intake.
- P Original engine bearers + steel frame.
- Q Silent-bloc engine supports.
- R Tube for cooling water to hydro tank after to engine R.
- S Folding propeller 14 x 12.
- T Exhaust tube flexible rubber.