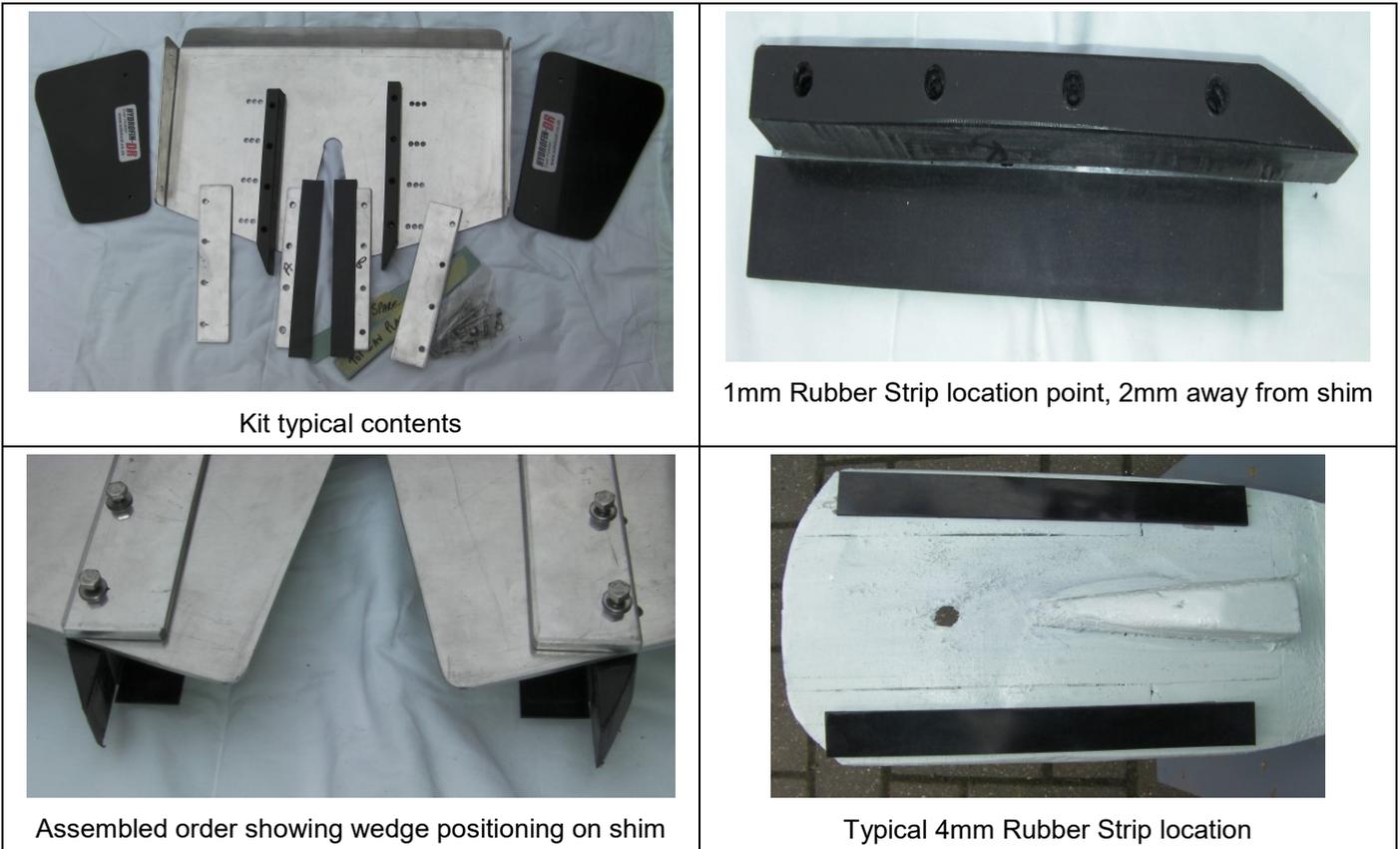


# Hydrofin DRLVP - Volvo Penta 280/290 SP/DP

## DIY Fit Instructions to transform your boats handling

**Please read all pages before you start to fit this DIY kit.**

The DIY Kit comes ready to assemble in 15 minutes, then test fit for any adjustments.



Look at the clamp set: **4 x Large Plates** and **2 x Plastic Shims** and choose the best surface on the large plates to be the upper plates “seen” on top of the fitted Hydrofin. (This as handmade and marks / sanding). Take the bottom plates and fit the 1mm Rubber Strip to each. Locate so it hangs over edge slightly approximately 2mm away from the plastic wedge shim. *See picture above, top right.*

The Hydrofins we have fitted to Volvo Penta 280/290, both single and duo prop versions, have used the set of holes one hole in from the outside on the Hydrofin main body.

The order of initial loose assembly is 65mm Bolt, 14mm washer, Top Plate, Hydrofin body, Plastic wedge shim underneath and then Bottom Plate with the 1mm Rubber Strip applied, 14mm Washer and Nyloc Nut. (We fit the Nyloc Nuts underneath). *Plastic shims positioned for water flow, see picture.*

Stick the 4mm sticky backed rubber strips to the top of the clean and dry cavitation plate, along the edge and about 10mm in from the side edge. Or if surface too rough, or fitting in the water, stick in correct position under the Hydrofin body instead, so as to line up with the same position when fitted. Clean any slime and loose material off the cavitation plate while in the water. *See picture above lower right as a guide.*

The Rubber “sandwich” to protect the cavitation plate is complete.

Fitting the Plastic Rudder fins: Fins are handed and holes drilled. Fit with the sticker on the outside. Fixings order: 20mm Bolt, 25mm washer, thru plastic and metal then standard 12mm washer and Nyloc Nut.

Plastic fins are fitted on the horizontal for all Hydrofin units

For bathing platforms that are too low to bring up the drive unit without hitting the Hydrofin body upward metal fins. Then fit Hydrofin body "upside down" and re fit the plastic rudders downward too.

The tracking fin under your cavitation plate should be set to straight for initial trials.

Locate the completed unit, adjust for square positioning. Check underneath for propeller clearance.

The design to hold the Hydrofoil Rudder is a tried and test method using pressure and a rubber strip on each surface for both the clamping grip and protection for your Stern Drive surfaces.

Tighten the 4 x outer corner bolts to just under hand tight so you can final position the Hydrofin on the rubber sandwich. Tighten a little more when happy to stop the unit moving out of position. Tighten the 4 x inner bolts to hand tight plus. This will loosen the outer fixings so readjust them to match the hand tight plus torque. Check positioning and tighten all the 8 x fixing nuts to 5 Newtons of torque. This is similar to maximum tightness when holding a quarter inch racket with your hand over the centre line and NOT at the handle end. Then a final overall check of 10% of a turn to nip up all nuts to equal "feel". You will feel that the bolts are tight enough.

You will be surprised with the snug fit. You may like to trim down the bolts

We trust "feel" more than just a torque wrench setting. This completes the installation.

**Old pictures below show improvements made** since from early days of the Hydrofin Dual Rudder. Now fitted on the horizontal, a different shape, to give back the surface area. Good for slow & fast use.



Fitting video to workshop model showing more detail is on the Safeboat web site, [www.safeboat.co.uk](http://www.safeboat.co.uk).

This should now complete the fitting for your DIY Volvo 280/290 SP/DP stern drive DIY kit.

All parts are available as spares by contacting us: **E:** [steve@safeboat.co.uk](mailto:steve@safeboat.co.uk) **T:** (+44) 01638 721509

*Designed here using Formula 1, rear hydrofoil knowledge, in June 2019.*

*The NEW Hydrofin, that will lift, stabilize and with Dual Rudder, give controlled steering.*

***It will transform your boat handling characteristics to handle well. Now enjoy your boat more!***