# Can a flap improve my boat's performance?

Cost £300

Troubled by stern squat on his Saga 27 motorboat, Trond Schjoelberg adds a stern flap

**The canoe-stern of my 1976 Saga 27 motorboat had a tendency to dig in when running at hull speed. This made the bathing platform, which had been mounted a little low by a former owner, submerge by about 10cm, creating a lot of drag and doing the platform's teak planking no good at all.**

To prevent this, and in the hope of getting a little more speed out of her, I decided to make a flap (essentially a large, one piece fixed trim tab) to lift the stern.

I bought a board of 18mm water resistant plywood to fit beneath the hull, which flattens out just enough to provide a suitable surface to glue the board after I had cut a curved V shape in it to follow the canoe stern.

After checking the fit I angled and sanded the forward end of the board to make the transition to the hull smoother and reduce drag. After I had made sure everything would fit into place I laid two layers of polyester and glassfibre over the board to strengthen it and painted it with epoxy to make it waterproof.

I mixed up enough epoxy filler (two litres) to glue the plate to the hull. I used half on the hull and half on the plate, smeared it out and then used supporting boards and a pair of car jacks to bring the plate up into contact with the hull, adding enough pressure to just start to lift the boat from the cradle. Before it hardened I removed the excess filler which squeezed out.

I added two stainless steel struts to support the outer corners of the flap, filled the joints with more epoxy filler and painted the flap with four more coats of epoxy paint to keep any water out. Finally, two coats of antifouling finished the job before she went back into the water for testing.

My results were mixed. The stern lifted about 20cm, easily raising the platform from the water as I'd hoped, but top speed remained the same. There is another benefit, however, in that I can now reduce engine revs by 200rpm at cruising speed. Others who have bigger engines have gained a few knots by adding a flap and I had hoped for the same, but I am happy with the result since the main idea was to get the platform out of the water.

The cost was about £300, mostly epoxy filler and the struts.



View of the flap showing its position in relation to the prop and rudder



The flap was held in place with jacks while the epoxy set


Stainless steel struts help support the outer corners

# No stink, no swearing

Cost £16.80 per metre

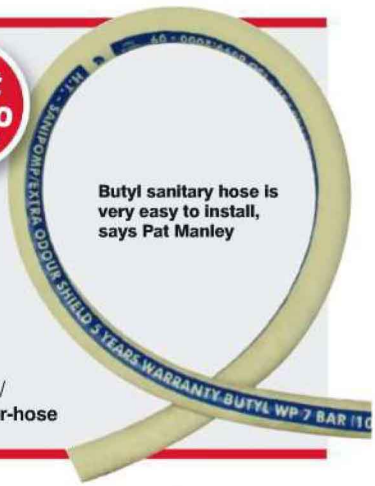
Pat Manley finds a solution to tricky toilet plumbing

**I recently replumbed the heads system on my Nimbus 320, adding a diverter valve to allow toilet waste to be pumped directly overboard as well as into the 10 gallon holding tank.**

When I fitted a holding tank to my previous boat, I had used the sanitation hose commonly available from chandleries. It was a nightmare. The hose was almost impossible to get on fittings, and it wasn't very flexible.

This time I used butyl sanitary hose. It was a pleasure to work with, took only a fraction of the time to fit and there was absolutely no swearing. I would never use any other pipe in the future, and if I were installing sanitar hose professionally I would refuse to use the cheap stuff. It would save the customer a lot of labour cost. The hose is double the price of the cheap stuff but worth every penny.

■ Pat bought his hose from ASAP Supplies: **www.asap-supplies.com/marine/sanitation-and-waste-water-hose**




Butyl sanitary hose is very easy to install, says Pat Manley