

One of the most common problems to afflict marine diesel engines is impeller failure in the raw-water cooling pump, frequently caused by either forgetting to open the raw water seacock before starting the engine, or by ingestion of debris from the sea causing a blockage or damage to the tips of the impeller blades. All of these will cause the engine to overheat – possibly inflicting lasting damage.

Although a large number of boat owners remove their impellers during the winter lay-up, or replace them with new at the start of the new season, many avoid doing it due to the sheer difficulty in removing the impeller. On some boats the raw-water pump is mounted so the cover is facing aft, back towards the engine, which means changing the impeller requires the whole pump to be removed just to get the cover off. Trying to remove the six bolts on the cover plate with the pump in situ is a nightmare and a recipe for disaster when one or more of the bolts drops into the murky bilge below!

Alex Parker from Speedseal became aware of this problem some years ago, which is why he invented the Speedseal pump cover. The standard Speedseal's bronze cover does away with two of the six bolts and provides the remaining four as knurled, hand-tightened bolts. Furthermore, two of the bolts remain permanently in place, acting as guide lugs for the locating slots in the cover plate, with the other two inserted and tightened afterwards. This means only two bolts ever have to be completely removed, greatly lessening the chance of dropping one in the



bilges. To ensure a perfect seal the new cover has a groove in it to take the sealing O-ring provided. Since its launch, Parker has been looking at ways of improving his product and recently produced this 'Life' version of the Speedseal pump cover. From the outside this unit looks identical to the standard kit. However, unlike the standard kit, the Speedseal Life's cover is counter bored to take a PTFE bearing pad and brass pressure plate supplied in the pack. This means that, instead of the impeller running directly against the brass plate and wearing it down, it actually runs against the pressure plate, which in turn rotates against the bearing pad, so wear is reduced to a minimum.

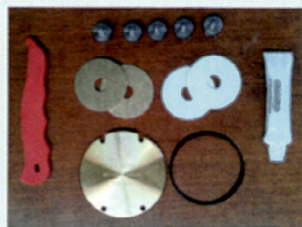
Tests carried out by the UK's main Yanmar diesel engine importer, proved that the

Speedseal Life cover allowed the pump to run dry for up to 10 minutes without damaging the impeller.

INSTALLATION

I installed our test Speedseal Life on the brand-new 43hp Beta Marine diesel, which had been installed in my Nicholson 32 as an upgrade. The engine is too large, really, for the engine compartment (not my choice!), so everything is a very tight squeeze – including the raw water pump. Fitting the Speedseal means I won't have to fiddle around with a stubby or modified screwdriver to get the cover plate off in the event of a blockage or damaged impeller, and the impeller itself should last a good deal longer as well.

The instructions are quite straightforward and, once you understand the logic behind it, replacing your existing cover creates no problems. You can dispense with the old gasket, which often caused problems with drips if not replaced



Above: It comes with spare bearing, plate, O-ring and bolt

regularly, as the O-ring does a much better job of sealing the cover against the pump housing. Three tubes of silicon grease are also provided for you to apply generously over the pad and plate, guaranteeing an even more slippery surface for the impeller to work against when first started.

Two extra knurled screws are also provided, just in case one does drop into the bilge. *DK*

WE LIKE

- Well made
- Simple to install
- Makes impeller changing much quicker and easier

WE DON'T LIKE

- Nothing not to like!

VERDICT



The kit is well engineered and easy for an amateur to install. It is ideal for pumps that are difficult to access and should allow you to go much longer on an impeller before needing to change it. Furthermore, its ability to stand being run dry for 10 minutes means that, should you get a blockage that takes a few minutes to discover, you won't necessarily have to replace the impeller. When I was motoring through the French canal system to the Med I would have willingly paid a small fortune for one of these.

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