

# Practical projects

Great ideas and tips from PBO readers

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## Bleeding fuel the easy way

John Tylor eases the pain of bleeding the fuel supply to his diesel engine

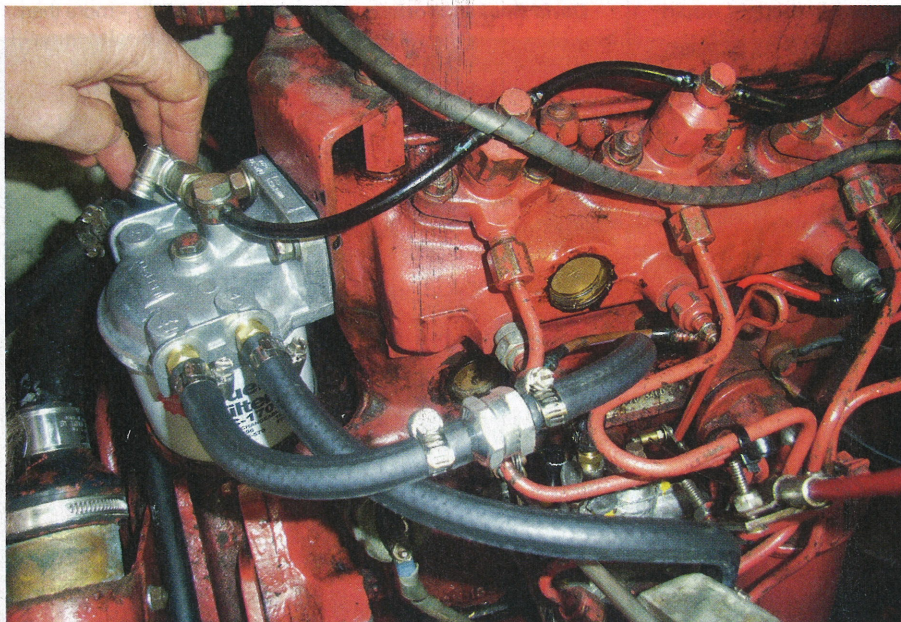
**H**igh pressure injection pumps don't like air in the system, it stops them working. So when we run out of fuel or change a dirty filter, we need to bleed (remove) air which has been introduced to the system.

Newer engines are now being fitted with electric pumps which makes the job very simple, open a bleed screw, turn on the ignition and fuel is pumped to the system to displace entrapped air through the bleed screw.

However, a lot of older engines have lift pumps which have an operating arm running on a lobe on the cam shaft of the engine.

After changing the fuel filters on my old BMC New Age Captain diesel engine I naturally need to bleed the line to eliminate any air that may have crept in. Unfortunately, and this is far from uncommon, the main lift pump is on the opposite side to the injector pump and filters so it is impossible to manually operate the pump while reaching the bleed nuts.

Friends were co-opted but that was not a reliable source of help so I bought and



**The location of the secondary filter on the starboard rear of the engine**

installed an electric fuel pump. This is permanently plumbed into the fuel line from the tank. I have run an electric lead so it can be plugged in to the boat's 12V supply when I need to bleed the system.

The main mechanical engine pump draws fuel through the inline electric pump easily for

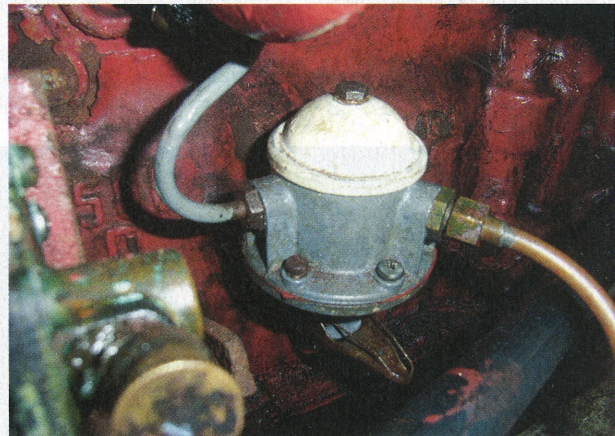
normal operation; the electric also operates as a spare should the mechanical pump ever fail.

### Stu Davies comments:

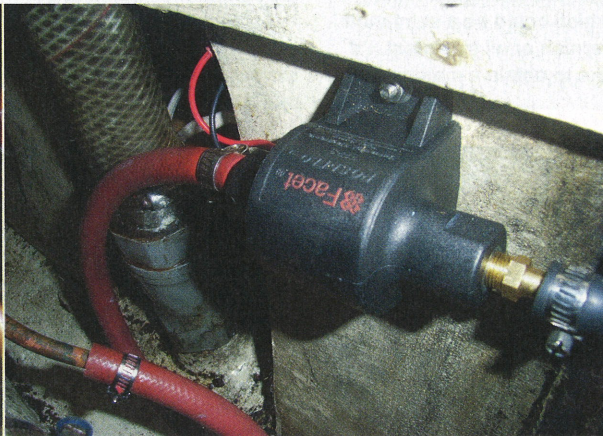
Another very simple solution to this common problem is to install a squeeze bulb, as commonly found in outboard engine fuel systems. These can be fitted, like the electric

pump, between the fuel tank and the system and a quick squeeze or switch on gets fuel through to the injection system to bleed the air out of it via the bleed screws.

Pumps can be bought brand new but clever clogs like me go to a scrappy and buy a second-hand one! They were fitted as standard to Peugeot diesels. I have a squeeze fitted to my Beneteau.



**The mechanical lift pump is on the port side front of John Tylor's BMC diesel engine**



**The electrical lift pump on the front of the engine, plumbed in before the mechanical pump**