

Incorrect tank indication due to fitting error

Replacing a fuel pump is relatively simple, but fitting errors may occur, due to the design of modern fuel tanks. Fuel tanks are now generally irregular in shape, to maximise the space within the vehicle design, and often contain numerous other components inside the tank. Incorrect alignment of the fuel delivery module, can obstruct the fuel level sensor's float, causing incorrect or stuck tank indicator values. Pierburg provides help to avoid possible problems.

The fuel delivery module combines both a low pressure fuel pump and a fuel level sensor. It contains an electric pump, controller, and fuel level sensor that work together to deliver fuel to the engine. The fuel pump controller communicates with the vehicle's ECU, to ensure that the fuel is delivered at a steady rate, while the fuel level sensor reports the fuel levels to the ECU, as the float attached to the sensor rises and falls.

The most common causes of fuel delivery module failure include contamination, overheating, and general wear and tear from age. Symptoms of a faulty module include sputtering at high speed, loss of power while accelerating, sudden loss of power while driving uphill, sudden unexpected acceleration, and failure to start.

Motors and diaphragms are particularly prone to deterioration and age-related failure. In some cases, the entire fuel delivery module may need to be replaced.

When fitting a new fuel delivery module, it's important to ensure that the sender float is able to move freely. The pump should be fully seated within the tank and then rotated clockwise until it is secure. The top flange cover of the pump will usually have markings in the form of an arrow that should be aligned with the arrow marking on the fuel tank.

If the fuel delivery module is incorrectly installed in the fuel tank, the fluid level sensor may get caught on these installed components. If this happens, the tank indicator remains constant despite the decreasing fuel level.

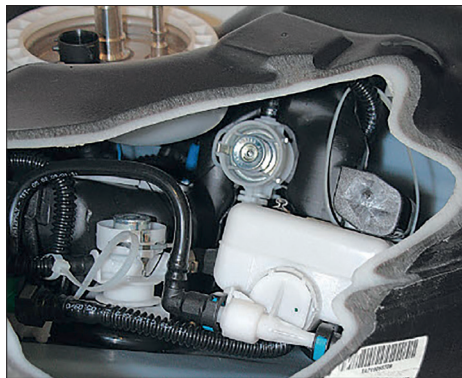
Note

Markings are present on the tank and on the flange cover in many cases, to ensure that the sender unit is in the correct position after installation.

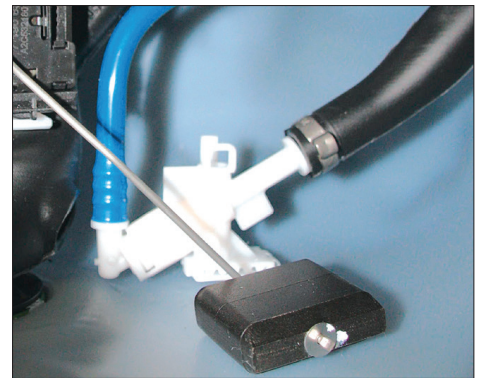
During installation, always fit fuel delivery modules, so that these markings are opposite each other or align.



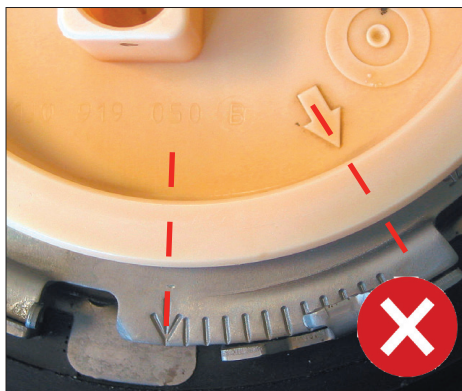
Many modern fuel tanks have odd shapes to maximise their volume



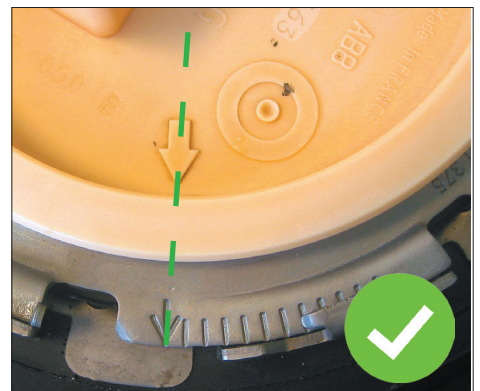
Numerous components may be located inside the fuel tank



The fluid level sensor must be free to move inside the fuel tank



This fuel delivery module is not properly installed and the level sensor may be stuck



This fuel delivery module is properly installed