



Tank indicator errors

Detached cables due to defective fuel tank ventilation

Vehicles: Volvo	Product: Fuel delivery module	
Vehicle applications	PIERBURG no.	Ref. no.*
S40/V40 1.6i/1.8i/2.0i	7.00468.66.0	30630538; 30630593; 30865670
S40/V40 1.9i/2.0i Turbo	7.00468.67.0	30630033; 30630536; 30630594; 30899079

Potential complaints:

- Tank indicator errors
- Cable has become detached from fuel delivery module
- Loud hissing when opening tank cap

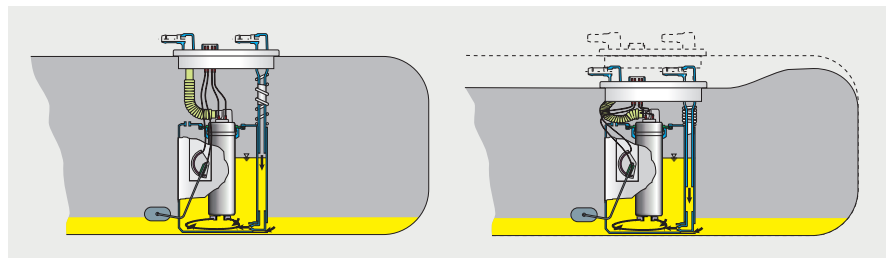


Fig. 1: The fuel delivery module can compensate for changes to fuel tank size.

If there is a problem with the fuel tank ventilation system, a strong vacuum can develop inside the fuel tank, causing it to start collapsing in on itself.

The fuel delivery module comprises a flange cover and the reservoir with the sender unit and fuel pump. Thanks to this two-part construction, the fuel delivery module can compensate for changes in the size of the fuel tank up to a certain degree (Fig. 1).

However, if the vacuum becomes too strong during cold weather, for example, and the fuel tank shrinks too much, the sender unit's cables can become detached (Fig. 2).



Fig. 2: The cable is pulled off if the compression of the fuel delivery module is too extreme.



Fig. 3: Typical damage symptoms: the sender unit's cable is detached and the electrical contacts are bent.



Fuel tank ventilation system (background information)

The fuel tank ventilation system prevents the emission of harmful hydrocarbons by binding fuel vapours with an activated carbon filter (ACF) in a special receptacle or canister (7). For this reason, the fuel tank ventilation system is also known as an activated carbon filter system or ACF system.

In certain operating states, the ACF canister is flooded with fresh air via the open canister purge shut-off valve (8). The accumulated hydrocarbons are channelled in a controlled manner for combustion via the regeneration valve (4).

The fuel tank ventilation system also provides air to the fuel tank, for example if a vacuum forms in the tank when fuel levels fall or the ambient temperature is low.

Possible causes of faults in the fuel tank ventilation system may be:

- Defective solenoid valves
- Blocked activated carbon canister
- Blocked venting valve in the fuel tank cap (1)
- Bent or blocked connections

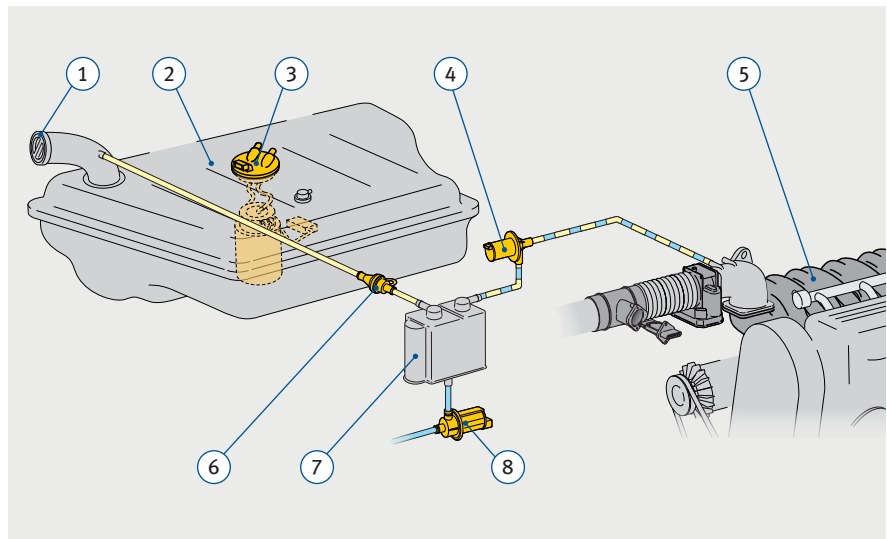


Fig. 4: Fuel tank ventilation system (schematic)

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|---|---------------------------------|
| 1 Fuel tank cap, poss. with venting valve | 5 Intake manifold |
| 2 Fuel tank | 6 Fuel tank pressure valve |
| 3 Fuel pump | 7 ACF canister |
| 4 Canister purge valve/regeneration valve | 8 Canister purge shut-off valve |