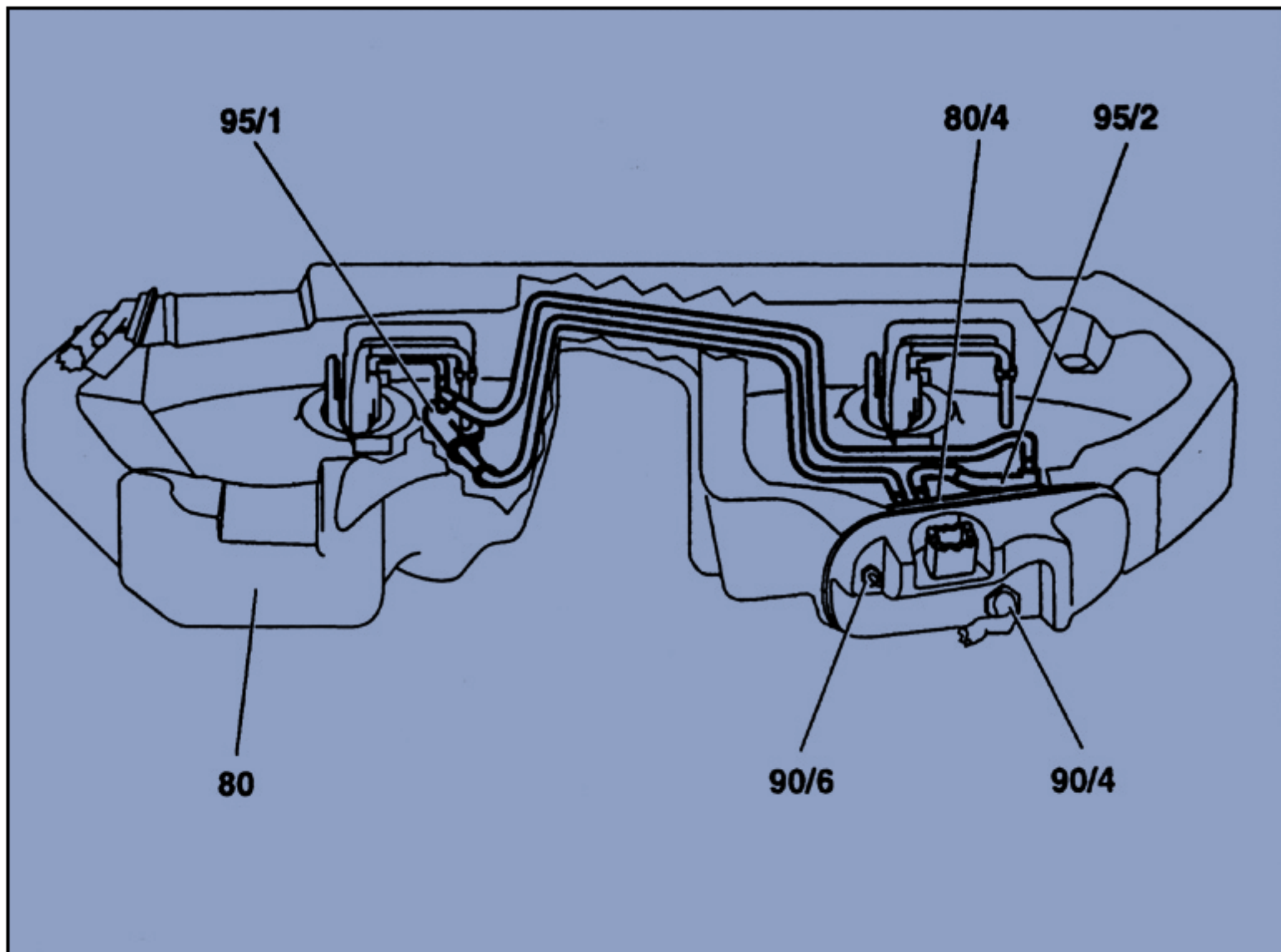


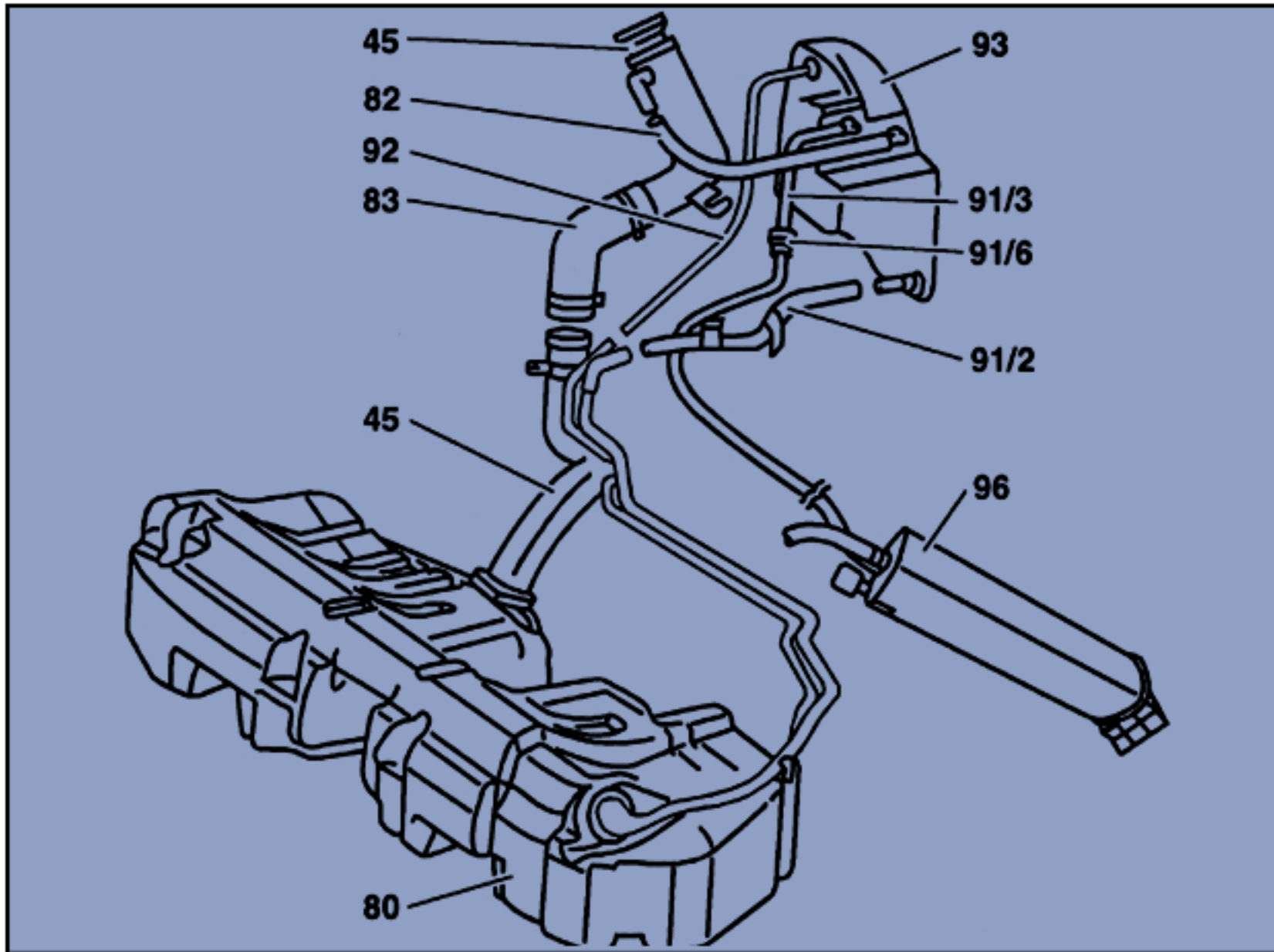
Function diagram



80/4 Anti-splash container
90/4 Fuel line (to fuel pump)
90/6 Fuel vapor bleed connection/fuel pump return
flow (engine 111 only)

95/1 Left venturi syphon
95/2 Right venturi syphon

Component locations



45	Fuel filler neck
80	Fuel tank
82	Vent line to filler neck
83	Formed hose
91/2	Vent line
91/3	Vent line (to vent valve)

91/6	Vent valve
92	Vent line (from fuel tank)
93	Expansion tank
96	Charcoal canister

Anti-splash container

Purpose

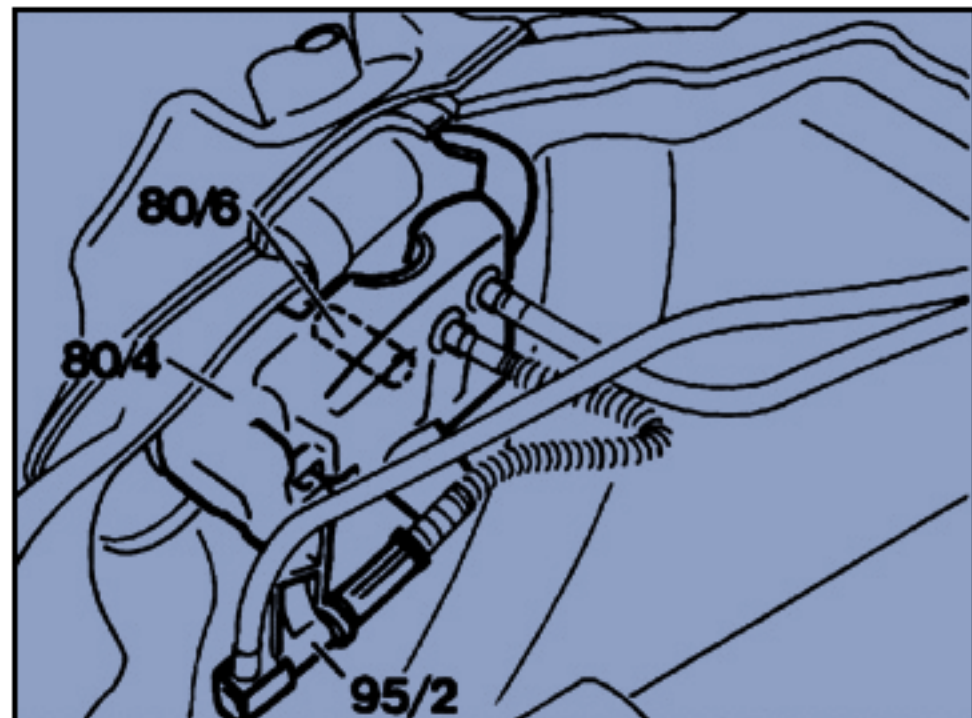
The anti-splash container is required as a fuel reserve container when driving on winding roads or with low fuel level.

Location

The anti-splash container is welded into the right chamber of the fuel tank.

Function

Two fuel lines, one from each fuel tank chamber, and the fuel filler neck end in the anti-splash container (80/4). A screen (80/6) is screwed into the housing of the anti-splash container. The right venturi syphon (95/2) is mounted on the housing of the anti-splash container.



Cover plate

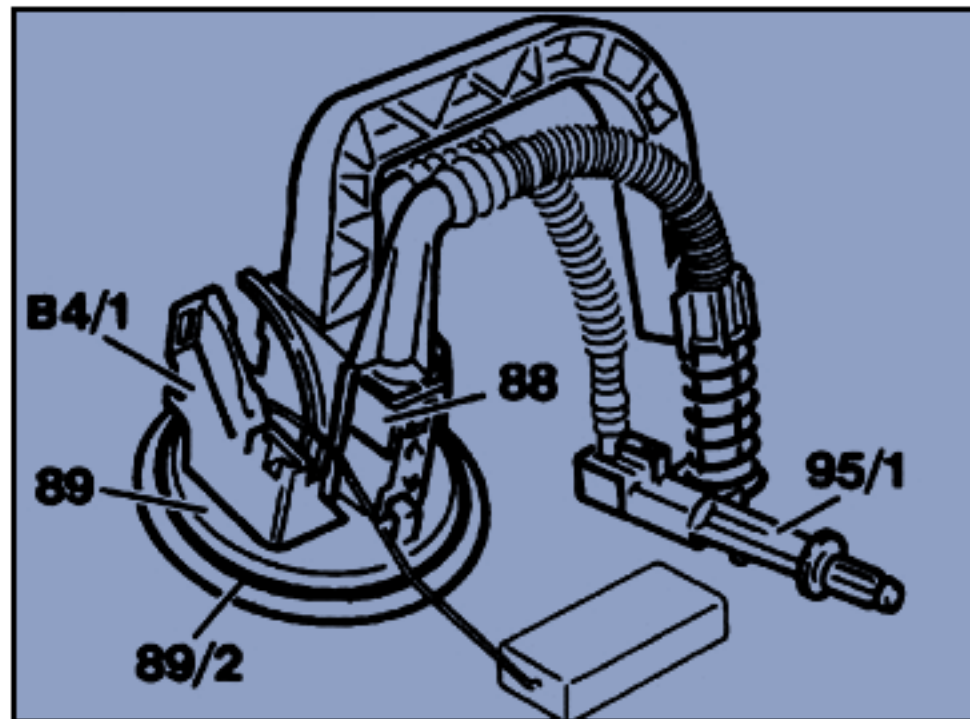
Purpose

- Mounting platform for fuel level sensor, drain valve and venturi syphon (left).
- Sealing of fuel tank with profile seal ring.

Construction

Each fuel tank chamber is provided with one cover plate. The fuel level sensor (B4/1) is located on the cover plate (89), to which the venturi syphon (95/1) and the drain valve (88) are also attached.

Sealing between the fuel tank and the cover plate is provided by the profile seal ring (89/2) .



Drain valves

Purpose

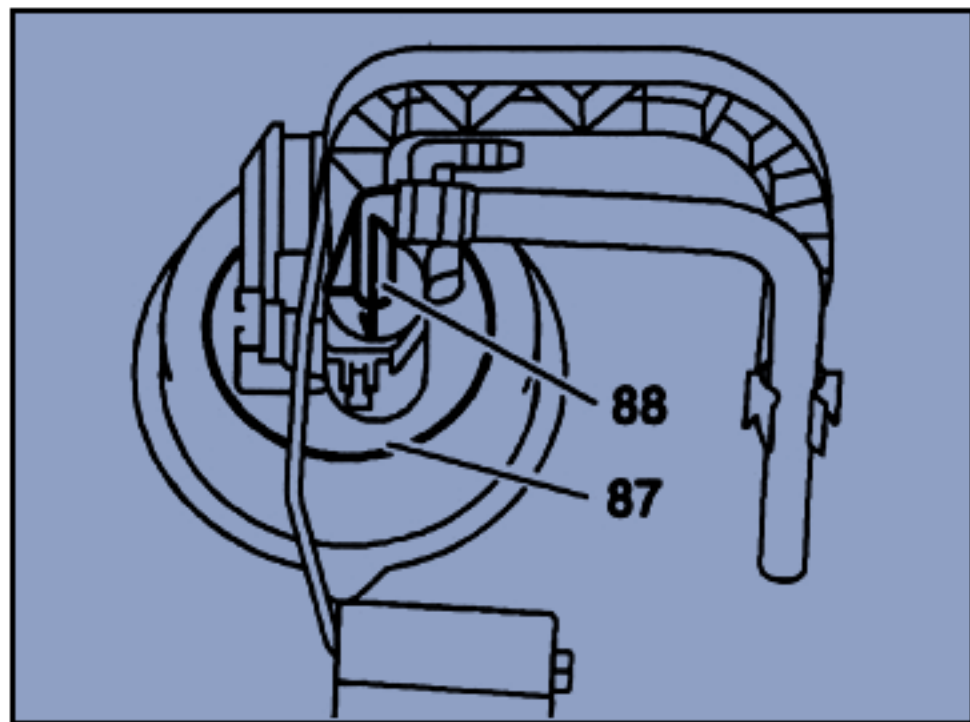
To drain both chambers of the fuel tank.

Location/construction

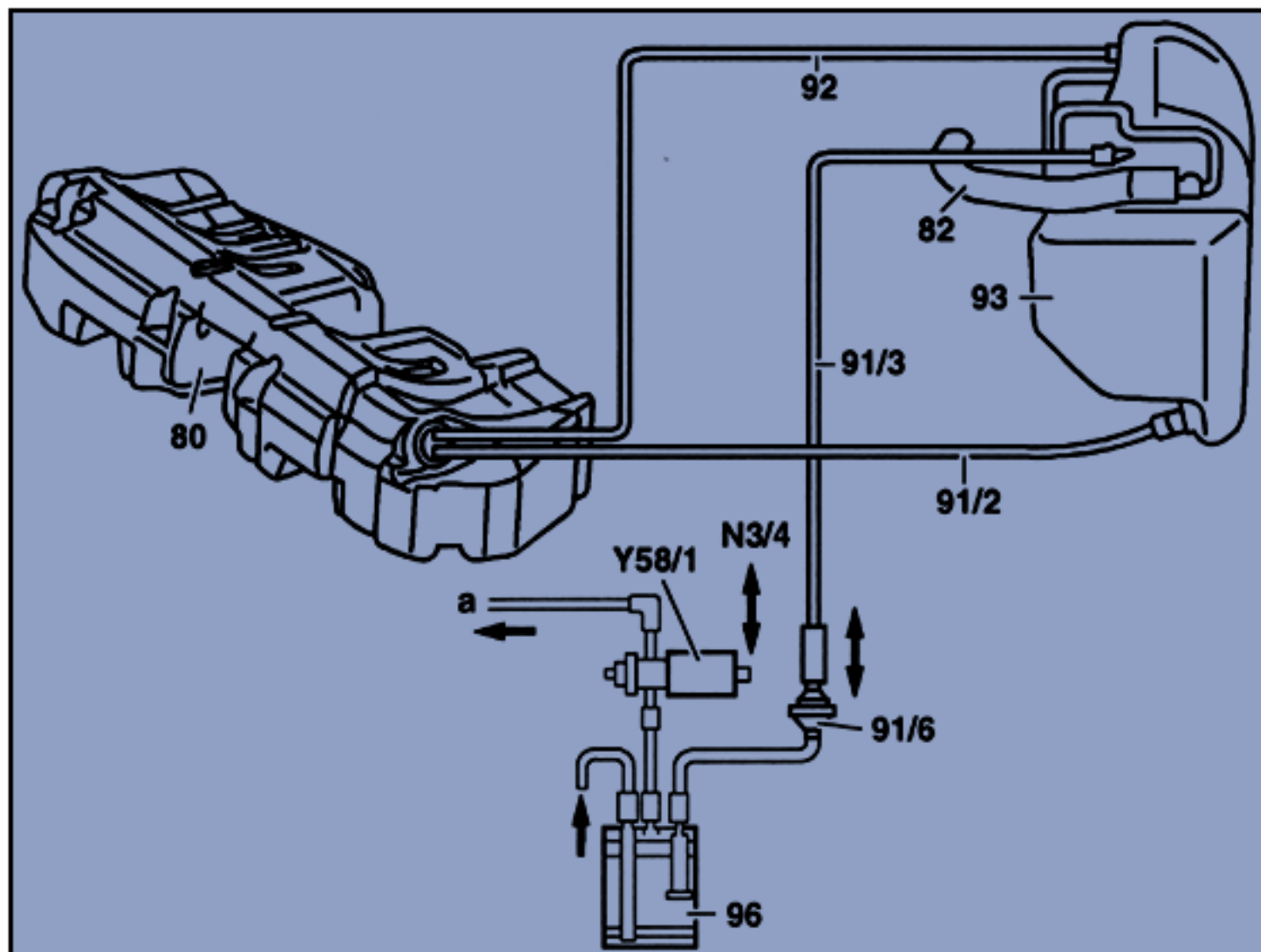
The drain valves (88) are mounted on the left (89) and right (87) cover plate and consist of a valve seat with spring, a suction tube and a plug.

Repair note:

The fuel tank can only be drained via the drain valves (88) (see SMS Job no. 47-4001).



Function diagram



Engines 104.941, 111.961

80	Fuel tank	N3/4	Engine control module (HFM-SFI)
82	Vent line to fuel filler neck	Y58/1	Purge control valve
91/2	Vent line for filling the tank	a	To EA/CC/ISC control actuator (M16/1) or ISC actuator (M16/6)
91/3	Vent line to vent valve		
91/6	Vent valve		
92	Vent line from fuel tank		
93	Fuel expansion tank		
96	Charcoal canister		

Function

Also see function diagram for fuel evaporation control system.

Increased fuel volume in the fuel tank as well as fuel vapors are routed via the vent lines (91/2 and 92) to the fuel expansion tank (93).

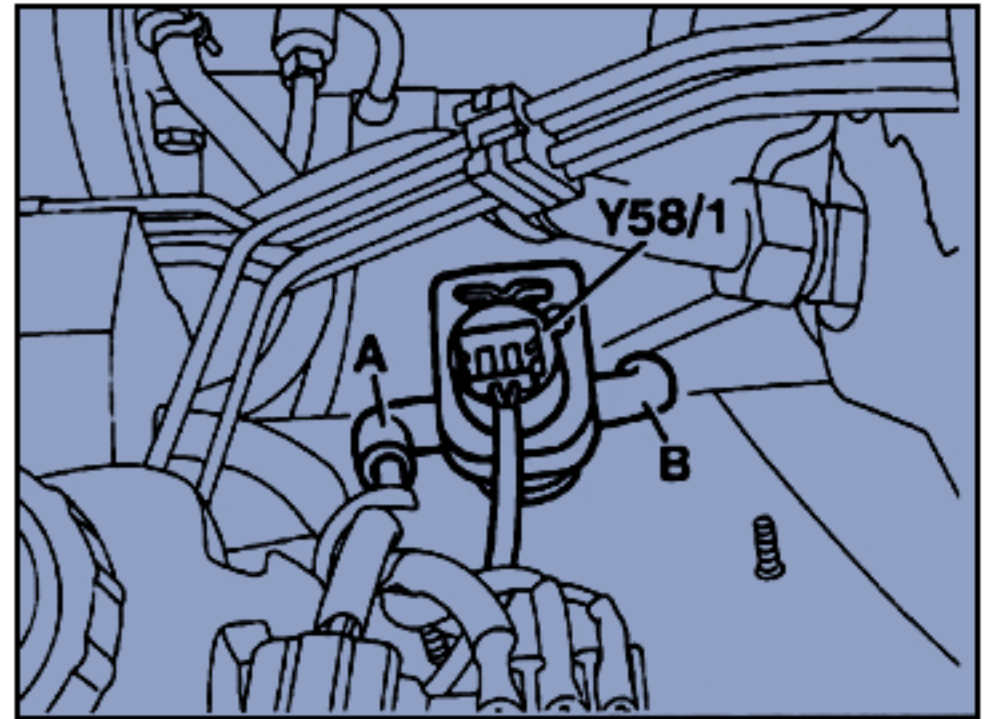
The fuel vapors are routed via the vent line (91/3) and the vent valve (91/6) to the charcoal canister (96).

Evaporative emission control system (EVAP)

The fuel vapors stored in the charcoal canister are drawn off via the purge control valve (Y58/1) at an ECT above 80 °C and are burned in the engine (not while coasting).

For this purpose, the following information is processed in the engine control module:

- Engine speed (rpm),
- Air mass,
- Engine coolant temperature (ECT),
- Intake air temperature (IAT).



Y58/1 Purge control valve
A To charcoal canister
B To engine

For the control of the regeneration quantity, the purge control valve (Y58/1) is activated with a frequency of 5, 10 or 20 Hz (cycled) from the engine control module from an engine rpm dependent map. This distributes the fuel vapors equally to all cylinders. The regeneration quantity is determined by the continuous opening and closing of the purge control valve (Y58/1) in on and off switching times of various length.

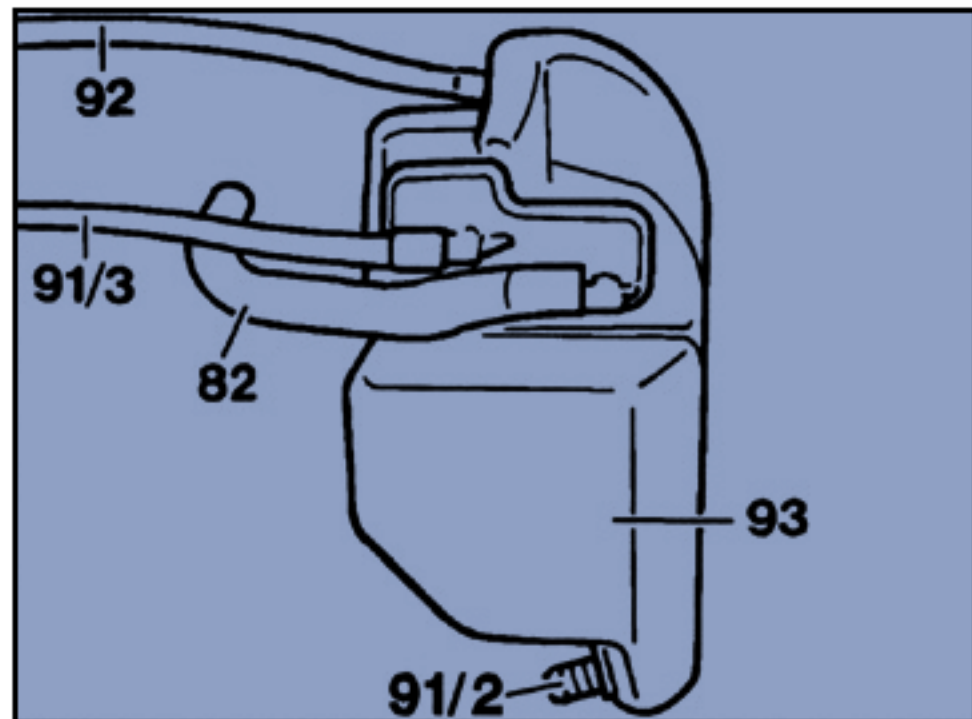
Fuel expansion tank

Purpose

- Catch container for fuel when driving winding roads and when temperature increases.
- Venting of fuel tank

Location

The fuel expansion tank is installed in the right rear wheelhousing.



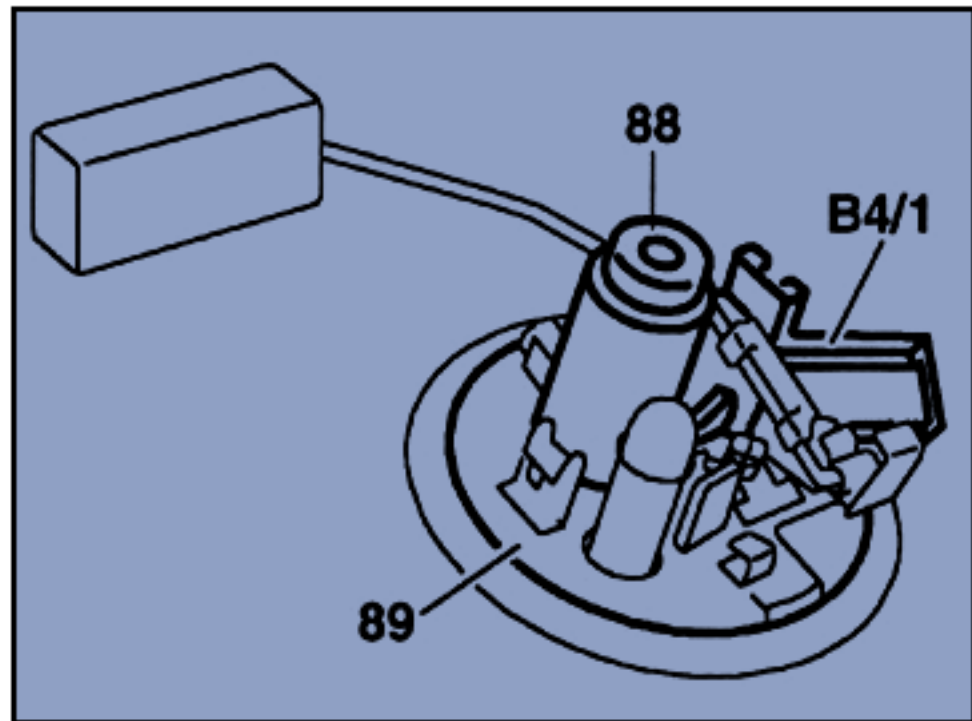
- 82 Vent line to fuel filler neck
- 91/2 Vent line (when filling the tank)
- 91/3 Vent line to vent valve
- 92 Vent line (from fuel tank)
- 93 Fuel expansion tank

Fuel level sensor

Construction

The fuel level sensor (B4/1) is a lever-type sensor with sliding contact. One fuel level sensor is installed in each fuel tank chamber.

- 88 Drain valve
- 89 Left cover plate
- B4/1 Left tank chamber fuel level sensor



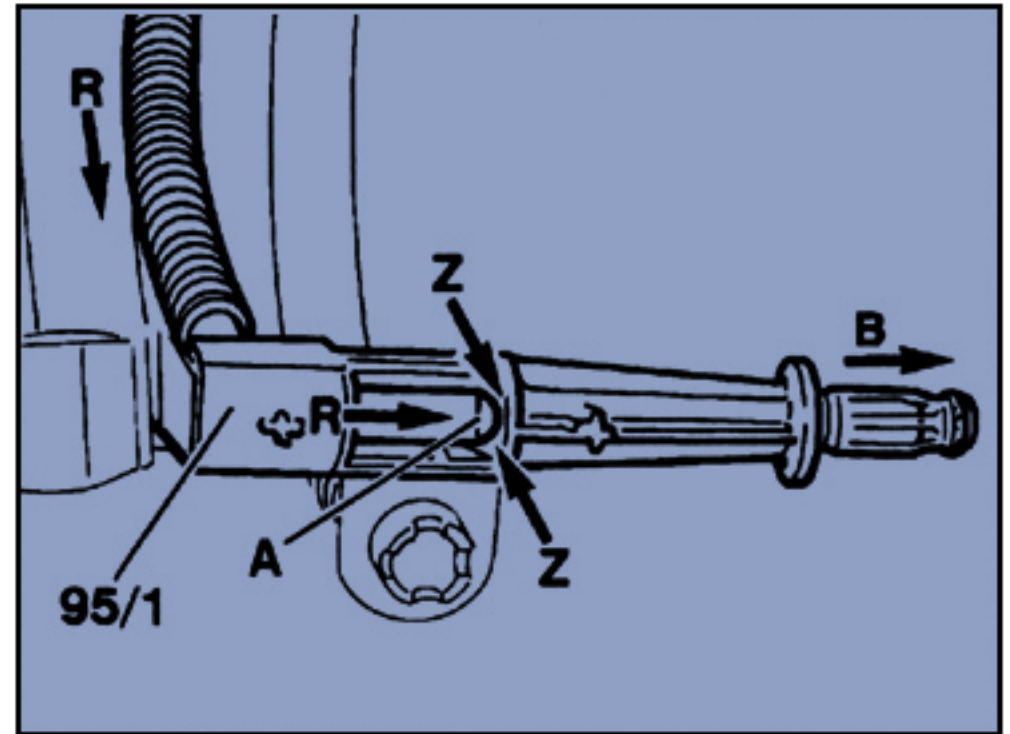
Venturi syphon

Purpose

The venturi syphons deliver fuel from the left and right fuel tank chambers to the anti-splash container.

Construction

The venturi syphon has a venturi, through which the fuel return flow is accelerated. The return flow jet out of the venturi flows with high speed into the line to the anti-splash container. This draws the fuel around the venturi along into the line and fills the anti-splash container.



95/1	Left venturi syphon
A	Venturi
B	To anti-splash container
R	Fuel return flow
Z	Drawn-in fuel

Function

A part of the fuel return quantity flows through the venturi syphon in the left fuel tank chamber and the remainder through the second venturi syphon in the right fuel tank chamber. Both venturi syphons fill the anti-splash container (80/4, see function diagram).

47.00 Fuel System, General

47.10 Fuel Tank

ORVR (Models 129, 170, 202, 208, 210)

The above listed models are equipped with On-board Refueling Vapor Recovery (ORVR).

Function Description:

On-board Refueling Vapor Recovery (ORVR) is part of the vehicle's emission control system that captures fuel vapors from the vehicle gas tank during refueling. These vapors are later burned in the engine.

The gas tank and fill pipe are designed so that when refueling the vehicle, the gas tank vapors travel to the charcoal canister, which absorbs the vapor. When the engine is in operation, it draws the gasoline vapors into the engine intake manifold and is used as fuel.