

2009 Mercedes-Benz E63

2008-09 ENGINE Fuel System - E63 (211.077)



2008-09 ENGINE

Fuel System - E63 (211.077)

GENERAL INFORMATION

GENERAL NOTES: PASSENGER CARS: FUEL SYSTEM - AH47.00-Z-9999AZ

MODEL all


	Information on fuel gage sensor	MODEL 203, 209...	AH47.10-P-7000-02A
	Information on fuel level sensor	MODEL 219.322 with ENGINE 642	AH47.10-P-7000-02TQ
	Information on fuel level sensor	MODEL 211 with ENGINE 642	AH47.10-P-7000-02TI

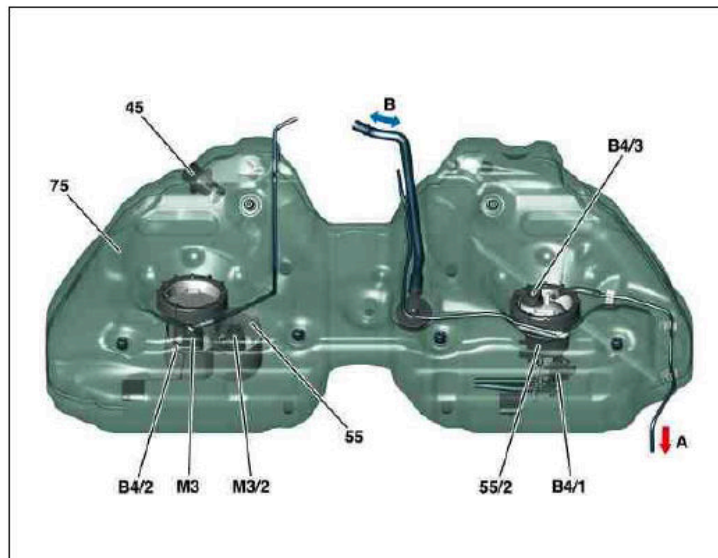
BASIC KNOWLEDGE

COMPONENT DESCRIPTION FOR THE FUEL TANK - GF47.10-P-2000AT

MODEL 211 with ENGINE 156.983

MODEL 219 with ENGINE 156.983

- 45 Fuel filler neck connection
- 55 Fuel delivery module
- 55/2 Fuel filter with pressure limiting valve
- 75 Fuel tank
- B4/1 Left fuel level sensor
- B4/2 Right fuel level sensor
- B4/3 Tank pressure sensor (ON )
- M3 Right fuel pump
- M3/2 Left fuel pump
- A Fuel line to fuel manifold
- B Aeration and vent line via expansion reservoir to the activated charcoal canister



P47.10-2392-76

Fig. 1: Identifying Fuel Tank Components
Courtesy of MERCEDES-BENZ OF NORTH AMERICA.

Location

2009 Mercedes-Benz E63

2008-09 ENGINE Fuel System - E63 (211.077)

The saddle-shaped fuel tank with a fill quantity of around 80 liters is located on the underbody in front of the rear axle.

Design

The fuel tank is made of double-layer plastic. Due to the "U"-shaped cut-out, the fuel tank is divided into two interconnected chambers.

Aeration and venting of the fuel tank takes place via the expansion reservoir with the upwards pointing rollover valve.

The rollover valves closes off the ventilation system in the event of an accident to prevent fuel leaking from the tank.

Both fuel pumps are installed in the fuel feed module.

Each fuel tank chamber contains a fuel level indicator for detection of the fuel level.

Emptying

The fuel tank has no outlet valves. It emptying takes place through fuel pumps via the fuel line in the engine compartment or via a corresponding air extractor system.

Function

Fuel supply is controlled and monitored by the ME-SFI [ME] control unit (N3/10) and the left and right fuel pump control units (N118/3, N118/4). The fuel pressure is regulated to be variable from between 4 and 5.5 bar depending on the power requirements.

A fuel strainer is installed at the bottom in the fuel delivery module at the feed to the respective fuel pump.

Fuel pumps draw the fuel at the bottom out of the fuel feed module and deliver it through fuel filter with pressure limiting valve to the fuel injection valve (Y62) on the fuel manifold (single-line system). In doing so, the fuel pressure is limited by the pressure limiting valve to approx. 6.0 bar.

A junction in the fuel line upstream of the fuel filter provides the suction jet pump in the left fuel tank chamber with part of the flow the fuel feed. The suction jet pump delivers the fuel out of the left fuel tank chamber into the fuel feed module (right fuel tank chamber).

The housing of the fuel delivery module serves as a swirl pot. The swirl pot prevents the fuel pump from drawing air while cornering with a low level of fuel in the fuel tank.

COMPONENT DESCRIPTION FOR THE FUEL LEVEL SENSOR - GF47.10-P-2010AMG

MODEL 164, 251 with ENGINE 156.980 up to Model Year 8

2009 Mercedes-Benz E63

2008-09 ENGINE Fuel System - E63 (211.077)

MODEL 209 with ENGINE 156.982

MODEL 211, 219 with ENGINE 156.983

MODEL 216, 221 with ENGINE 156.984 up to Model Year 8

Location except model 216, 221 (shown on fuel tank model 164)

75 Fuel tank
B4/1 Left fuel level sensor
B4/2 Right fuel level sensor

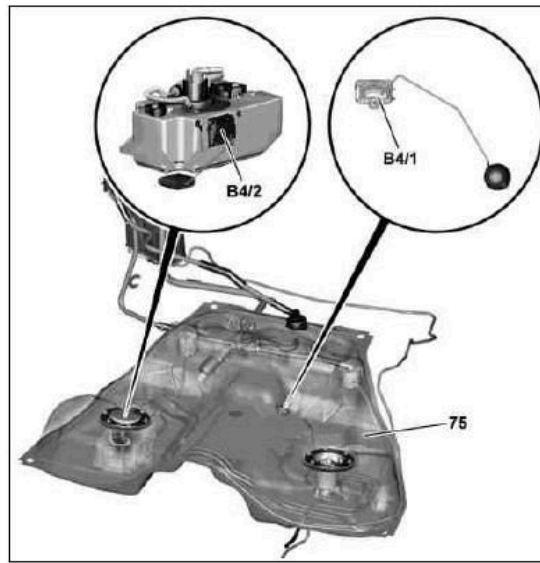


Fig. 2: Locating Fuel Level Sensors - Except Model 216, 221
Courtesy of MERCEDES-BENZ OF NORTH AMERICA.

Each chamber of fuel tank contains a fuel gage sensor.

Location on model 216, 221

- 75 Fuel tank
B4/1 Left fuel level sensor
B4/2 Right fuel level sensor



P47.10-2410-12

Fig. 3: Locating Fuel Level Sensors - Model 216, 221
Courtesy of MERCEDES-BENZ OF NORTH AMERICA.

The right fuel level sensor is located in the right fuel tank chamber. The left fuel level sensor (with float in the left fuel tank chamber) is located in the middle of the fuel tank.

Task

Determines the fuel level for the following functions:

- Fuel level indicator
- Leaktightness test of the regeneration system (for **USA**)
- Combustion misfire detection

Function

The float changes the position of the lever (with the double potentiometer) in line with the fuel level. This changes the resistance value of the double potentiometer and thereby influences the output voltage, which is a measure for the fuel level.

i Both sliding contacts of the double potentiometer are switched in parallel.

Model 164, 251

Each fuel tank chamber has a fuel level indicator sensor. Both the voltage signals are transmitted separately to the rear SAM control unit (N10/8) which processes the signals accordingly and transmits them to the instrument cluster via the CAN data bus.A1

Model 209, 211, 216, 219, 221

2009 Mercedes-Benz E63

2008-09 ENGINE Fuel System - E63 (211.077)

Each fuel tank chamber has a fuel level indicator sensor. Both voltage signals are transmitted separately to the rear SAM control unit with fuse and relay module, (N10/2) which processes the signals accordingly and transmits them to the instrument cluster over the CAN data bus (A1).

Both sliding contacts of the double potentiometer are switched in parallel.

ON-BOARD REFUELING VAPOR RECOVERY FUNCTION - GF47.10-P-3004AMG

MODEL 164, 251 with ENGINE 156.980

with CODE (494) USA version

up to Model Year 8

MODEL 209 with ENGINE 156.982 with CODE (494) USA version

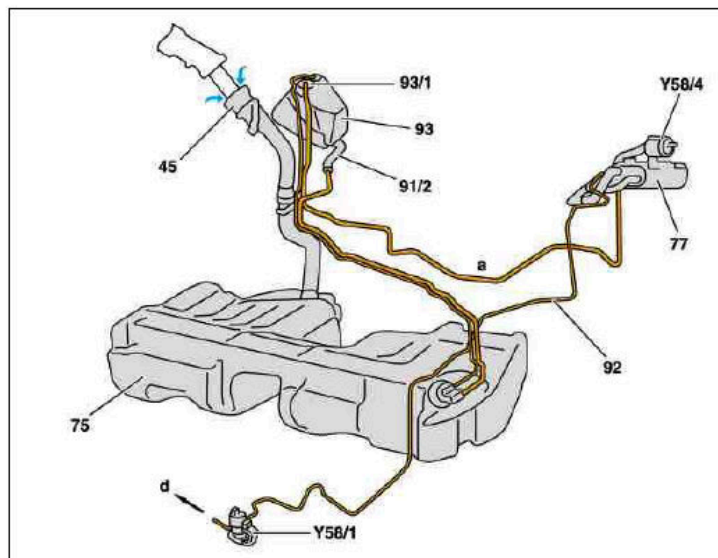
MODEL 211, 219 with ENGINE 156.983 with CODE (494) USA version

MODEL 216, 221 with ENGINE 156.984

with CODE (494) USA version

up to Model Year 8

- 45 Fuel filler neck
- 75 Fuel tank
- 77 Activated charcoal canister
- 91/2 Vent line (refueling vapors to expansion reservoir)
- 92 Purge line
- 93 Expansion reservoir
- 93/1 Safety valve (rollover valve)
- Y58/1 Purge control valve
- Y58/4 Activated charcoal filter shutoff valve
- a Air line from expansion reservoir to activated charcoal canister
- d EVAP line to engine



P47.10-2010-76

Fig. 4: Identifying On-Board Refueling Vapor Recovery Components
Courtesy of MERCEDES-BENZ OF NORTH AMERICA.

The legislator demands: