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shows you how

**BMW 3-Series and Z4 (99-05) Includes 2006 325ci/330ci Coupe and Convertible models Haynes Online Manual.**

## 9 Fuel pump/fuel level sensors - removal and installation

### Warning:

Refer to the **Warning** in Section 1 before proceeding.

### Note:

On 2003 and later 325i models with an M56 engine, the fuel pump and other components are permanently sealed within the fuel tank and cannot be serviced. The fuel tank must be replaced if the pump is faulty; refer to [Section 1](#) of this chapter for more information.

## Removal

1 There are two level sensors installed in the fuel tank - one in the left-hand side of the tank, and one in the right-hand side. The pump is integral with the right-side sensor, and at the time of writing can only be replaced as a complete unit.

### Right-hand sensor/fuel pump

2 Relieve the fuel system pressure (see [Section 8](#)). Before removing the fuel pump/level sensor, all fuel should be drained from the tank. Since a fuel tank drain plug is not provided, it is preferable to carry out the removal operation when the tank is nearly empty. If necessary, siphon the fuel into an approved fuel container. **Warning:** *Do not start the siphoning action by mouth. Use a siphoning kit (available at most auto parts stores).*

3 Remove the rear bench seat as described in [Chapter 11](#) .

4 Unclip the rubber wiring grommet, and fold back the rubber matting to expose the access cover.

5 Remove the four nuts and detach the access cover from the floor (see illustration) .

**9.5 Unscrew the four nuts and remove the access cover**



6 Slide out the locking element to disconnect the wiring connector, then cut the original metal hose clamp from place using side-cutters (or equivalent) and disconnect the fuel hose (see illustration) . Be prepared for fuel spillage.

**9.6 Slide out the locking element (arrow) to disconnect the connector, then snip the hose clamp**



7 Unscrew the fuel pump/level sensor unit locking ring and remove it from the tank. Although a BMW tool 16 1 020 is available for this task, it can be accomplished using a large pair of pliers to push on two opposite raised ribs on the locking ring. Alternatively, a home-made tool can be fabricated to engage with the raised ribs of the locking ring. Turn the ring counterclockwise until it can be unscrewed by hand (see illustration) .

### 9.7 Using a home-made tool to unscrew the locking ring



8 Carefully lift the fuel pump/level sensor unit from the tank, taking care not to bend the sensor float arm (gently push the float arm towards the unit if necessary). Recover the sealing ring. If necessary the strainer on the base of the pump can be unclipped for cleaning (see illustrations) , but no further dismantling is recommended.

### 9.8a Carefully lift the assembly from the fuel tank



### 9.8b Depress the clip, and remove the strainer from the base of the pump



## Left-hand sensor

9 Removal of the left-hand sensor is almost identical to the right-hand sensor described previously, except that the wiring connector is clipped into place. When lifting out the sensor unit, depress the detent and disconnect



the expansion tank line from the unit (see illustration).

### 9.9 Press in the detent and disconnect the wiring connector



## Installation

10 Installation is a reversal of removal, noting the following points:

- A. Use a new sealing ring.
- B. To allow the unit to pass through the aperture in the fuel tank, press the float arm against the fuel pick-up strainer.
- C. When the unit is installed, the locating lug on the unit must engage with the corresponding slot in the fuel tank collar (see illustration).
- D. Use a new hose clamp to secure the fuel hose.

### 9.10 Note the slot in the fuel tank collar

