



SIB 13 11 10

2024-09-16

## DIESEL FUEL CONTAMINATED WITH GASOLINE: REPAIR GUIDELINES

This Service Information Bulletin (Revision #3) replaces SI B13 11 10 **dated September 2015**.

**What's New:**

- Models Updated
- Situation, Procedure, and the Claim Information sections updated

<input type="checkbox"/>	THIS REPAIR IS MOBILE FRIENDLY
--------------------------	--------------------------------

**MODEL**

E90 (3 Series Sedan)	E70 (X5)	F30 (3 Series Sedan)	F31 (3 Series Sports Wagon)
F25 (X3)	F10 (5 Series Sedan)	F15 (X5)	F02 (7 Series)
G30 (5 Series Sedan)			

With the M57Y, N47T, N57T and B57O diesel engines

**SITUATION**

BMW Advanced Diesel vehicles are equipped with a fuel-filler neck that incorporates a **mis-fueling protection system** to prevent gasoline from being mistakenly pumped into a diesel engine vehicle's tank.

**If a diesel engine vehicle is filled and operated with gasoline, internal engine damage, fuel delivery and emission control system failures will occur.**

Only fuel nozzles with the recommended "specified" diameter for diesel engine passenger vehicles can be inserted into the filler neck. Most fuel stations have their diesel fuel pumps fitted with this recommended diameter fuel nozzle.

However, if the vehicle's filler-neck misfuelling protection system has been disabled, or the incorrect diameter fuel nozzle has been installed on the diesel fuel pump, the vehicle's diesel fuel system can be contaminated by filling the diesel engine vehicle with gasoline.

If the diesel fuel system has been contaminated with gasoline, follow the repair guidelines below:

**PROCEDURE****1. The vehicle has been mis-fueled, but the engine has not been started:**

- Drain the fuel tank completely.
- Remove the in-tank pump and check for magnetic swarf in the tank.

**NOTE:** Fine braded brass particles in the tank are considered a normal byproduct of the operation of the low-pressure fuel pump.

**NOTE:** Ultrafine abraded brass material in the fuel tank will be from either the fuel level sensor or electric fuel pump but will not have any effect on the service life of the components.

- If there is no magnetic swarf:
  - Fill the intake side of the fuel tank with 5 liters of diesel fuel.
  - Then re-install the fuel level sensor.

- Flush out the fuel system very thoroughly to the high pressure pump (feed and return line) with diesel fuel to ensure that no gasoline can find its way into the high pressure pump nor into the high-pressure fuel system.
  - Use the service function in ISTA for the fuel system and activate the pre-supply pumps.
  - Then renew the fuel filter and fill up the fuel tank with fresh diesel fuel.
- If magnetic swarf is present: Continue to Step 3.

## **2. The vehicle has been driven with gasoline contamination for a short time (less than 5 miles):**

- Drain the fuel tank completely.
- Remove the in-tank pump and check for magnetic swarf in the tank. **NOTE:** Fine braded brass particles in the tank are considered a normal byproduct of the operation of the low-pressure fuel pump and fuel level sensor.
- Remove the quantity control valve from the HPP and check for swarf.
- If magnetic swarf is present: Continue to Step 3.
- If there is no swarf:
  - Fill the intake side of the fuel tank with 5 liters of diesel fuel.
  - Then re-install the fuel level sensor.
  - Flush out the fuel system very thoroughly to the high pressure pump (feed and return line) with diesel fuel to ensure that no gasoline can find its way into the high pressure pump nor into the high-pressure fuel system.
  - Use the service function in ISTA for the fuel system and activate the pre-supply pumps.
  - Then replace the fuel filter, High Pressure Pump, and fill up the fuel tank with fresh diesel fuel.
  - Perform the bleeding procedure in ISTA for the HPP

## **3. Vehicle has been driven, magnetic swarf in the fuel system.**

- Inspect the HPP for damage at the tapered shaft/timing gear (frictional welding).
- If there are signs of welding beginning to occur, the valve timing of the engine must be checked. The sprocket for the HPP must be replaced.
- If the extent of the damage to the timing gear is greater than expected, proceed as described in Step 4
- If the shaft/gear show no damage (frictional welding):
  - The complete fuel system including the fuel tank must be replaced.
  - Then fill up the fuel tank with fresh diesel fuel.
  - Perform the bleeding procedure in ISTA for the HPP

## **4. Vehicle has been driven, high pressure pump has seized up, camshafts fractured, timing chain broken.**

- The taper on the high pressure pump should be checked for frictional welding.
- If there are visible traces on the taper, both timing chains and the sprocket of the high pressure pump must be replaced.
- If the camshafts cannot be rotated, a damage assessment of the valvetrain on the cylinder head

- For example: lower timing chain broken, cam follower breakage, camshaft breakage, bent valves, piston damaged, etc.
- Determine the extent of the damage and assess if an exchange engine would not be more cost neutral (for the customer) or cheaper than repairing the engine (apply 75% rule).
- The complete fuel system including the fuel tank must be renewed.
- Then fill up the fuel tank with fresh diesel fuel.
- Perform the bleeding procedure in ISTA for the HPP

Important: The customer should be informed that for any repair performed which deviates from this SIB will not be covered by warranty for possible subsequent damages.

**Mis-fueling is not covered by the warranty.**

**If the customer insists on a repair which deviates from this SIB, the vehicle data must be transmitted to BMW NA via a TSARA case.**

**Additional Information regarding the bacterial contamination of the fuel system:**

- On very rare occasions, (predominantly) in coastal regions due to the higher air humidity, the fuel system may suffer from a bacterial contamination - also known as the "diesel bug".
- This causes the diesel fuel to become a jelly-like mass which clogs the fuel filter.
- The clogged fuel filter can initially lead to a lack of power and finally to engine cutoff.
- In this case, drain and flush the fuel system as described in Case 1.
- The fuel filter must be renewed in this case.
- Then fill up the fuel tank with fresh diesel fuel.
- Perform the bleeding procedure in ISTA for the HPP

**Fuel contamination as described above is not covered by the warranty.**

**CLAIM INFORMATION**

This Service Information Bulletin provides technical and repair-related information should a diesel mis-fuel with gasoline event occur.

Any repairs to address the resulting damage to the engine, the fuel supply system (including draining, flushing, replacing filters and refilling), and/or the vehicle’s emission control system components which are caused by mis-fueling and operating a diesel engine vehicle with gasoline are not covered under the BMW limited warranties.

**FEEDBACK REGARDING THIS BULLETIN**

Technical Feedback	To submit feedback for the technical topic of this bulletin: Submit your feedback in the rating box at the top of this bulletin
Warranty Feedback	To submit feedback for the CLAIMS section of this bulletin: Submit an IDS ticket to the Warranty Department, or use the chat available in the Warranty Documentation Portal
Parts Feedback	To submit feedback for the PARTS section of this bulletin: Submit an IDS ticket to the Parts Department



