



Improper Fuel Found in M/B Sprinter Common Rail Diesel Engines

The AERA Technical Committee offers the following information on improper fuel found in 1995-2016 Mercedes Benz common rail diesel engines. The improper fuel may be the result of an accidental fill while re-fueling.

Models effected: All year models of OM612, OM642, OM647 and OM651 diesel engines.

The following procedure should be followed when the above model diesel powered vehicles with a common rail injection system have been refueled with an incorrect fuel type such as gasoline, kerosene, water, biodiesel, AdBlue/DEF, and/or other mixtures thereof. In addition, biodiesel fuel above 5% (B5) in the fuel tank is not permitted for use in the above model vehicles. Please follow the procedure below.

If the fuel tank is filled with the wrong type of fuel this may not be submitted as a warranty claim. See examples at the bottom of the document.

If the engine was NOT started after the fuel tank was filled with the wrong type of fuel, then emptying the tank and cleaning the fuel low-pressure lines should be enough to resolve the problem.

If the engine was started after the fuel tank was filled with the wrong type of fuel, disconnect the Y-distributor unit (return line high pressure pump/rail) at the output and with the ignition ON collect the fuel in a clean container. Check fuel for shavings.

If there are no shavings in the injection system and the high pressure pump is not damaged, emptying the fuel tank, cleaning the low pressure lines and changing the fuel filter should resolve the condition.

If metal shavings are found in the injection system and/or the high pressure pump is damaged, replace the following components to ensure there are no metal particles in the fuel system. Refer to Mercedes Benz for the applicable part number for the engine model affected.

- Fuel Tank
- Low Pressure fuel pump
- Fuel Filter
- High Pressure pump
- Rail (Including Pressure regulating valve and the rail pressure sensor)
- High pressure lines and the leak lines
- Injectors

The low pressure lines need to be thoroughly cleaned, at least twice or replaced.

If there are no shavings in the injection system and the high pressure pump is damaged, the reason for the damaged high pressure pump must be found and resolved prior to replacing the high pressure pump.

Exhaust system needs to be inspected for damage caused by incorrect fuel, see examples.

Gasoline in Diesel Fuel:



Melted Temperature Sensor Insulation
(before DPF)



Melted NOx Sensor



Melted NOx Sensor



Melted Temperature Sensor Insulation
(near Turbo)



Exhaust Temperature
Sensor



O2 Catalyst



SCR Catalyst

Water in Diesel Fuel:



Rail Pressure Sensor



Pressure Control Valve



Fuel Injector Inlet



High pressure rail



Fuel Filter



High Pressure Pump



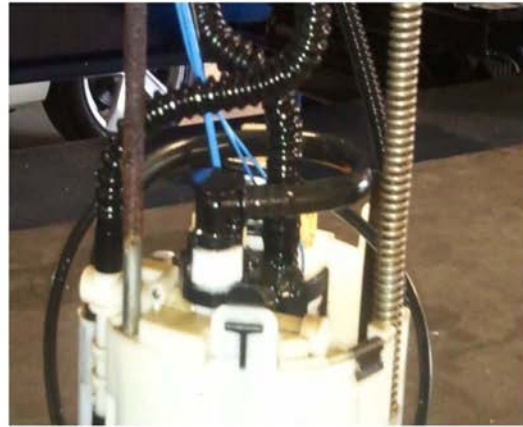
High pressure pump Fitting



High pressure pump Fitting



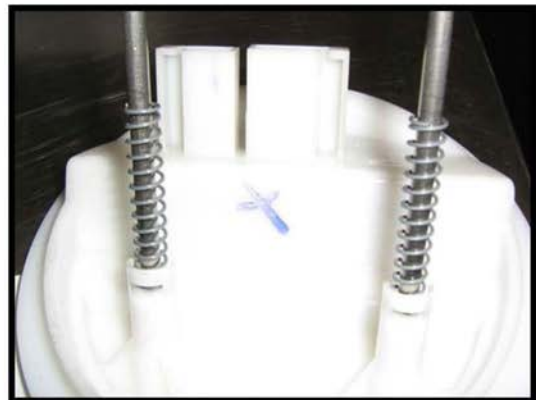
Pre-filter clogged



Contaminated Springs



Particles in fuel cup



Uncontaminated Springs