



This Service Information bulletin supersedes SI B16 03 10 **dated March 2010**.

NEW designates changes to this revision

SUBJECT

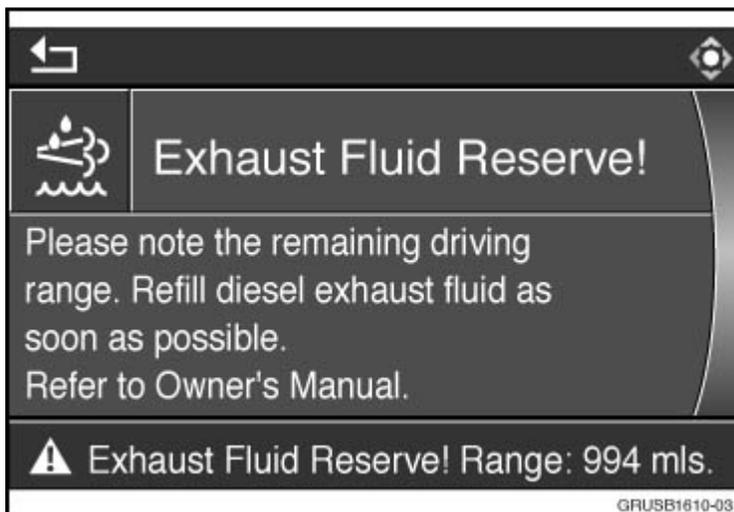
"Exhaust Fluid Low" Warning Displayed Before Oil Service

MODEL

E70 and E90 with M57Y engine

SITUATION

The customer receives a warning message stating that the diesel exhaust fluid level is low, and the engine will not restart in 999 miles or less. The warning comes a few thousand miles prior to the recommended oil service being due.



CAUSE 1

Diesel exhaust fluid (DEF) was never drained and refilled completely during a previous oil service, or the system was not properly refilled during the service. The SCR system has used up the remaining DEF.

CAUSE 2

NEW There was no DEF transfer from the passive tank to the active tank. Fault Code 46EB "Reducer inter-tank pump unit" may also be stored in the DDE.

PROCEDURE 1

Follow [SI B16 01 09](#) to properly drain and/or refill the active and passive tanks of the Selective Catalyst Reduction (SCR) system. Current BMW models require approximately 6 gallons of DEF during refill. The system must be drained and filled with fresh DEF at every oil service.

PROCEDURE 2

Check the fill levels of the passive and active tanks, using ISTA/D 2.21 Test plan **NEW**

"B1365_D7SCRRES-Nachtankerkennung Activate Refuel Detection". If the active tank is empty and the passive tank is full, there has been no transfer of DEF. There could be several reasons for a no-transfer condition:

1. The DEF transfer pump is not working properly.
 - Check the operation of the transfer pump using ISTA/D test plan B1365_D7USTANK-Active tank functions M57U2TOP US diesel. Does the pump run? Does it transfer the DEF? Are there signs of DEF leaking out of the electrical connector on the pump (internal seal failure of the pump)? On new cars with low mileage, there is the possibility that the transfer pump is dry and will not create enough suction to transfer the DEF **NEW** (fault code 46EB will also be stored). Run the above test plan to activate the transfer pump, but with the feed line to the active tank disconnected from the transfer pump. The pump will be able to create enough suction at this point to start transferring DEF. Once the pump does transfer DEF, it will no longer need this priming action to pump DEF.
2. There is a break or disconnection in one of the DEF lines to or from the transfer pump.
 - Check the DEF lines and connections at the passive tank; from the passive tank to the transfer pump; and from the transfer pump to the active tank. Check for loose connections, cut or pinched lines.
3. There is a restriction or blockage at the check valve on the transfer line at the active tank.
 - The amount of DEF transferred is based upon a given flow rate of the pump, not by volume. If there is a restriction or blockage in the line, the correct amount of DEF will not be transferred.
4. The DEF in the passive tank is frozen.
 - If the outside temperature is 25°F or lower, the DEF will freeze. If this lower temperature lasts for an extended period of time, the DEF in the passive tank will never fully thaw, and transfer of fluid will cease. Only the DEF in the active tank will be utilized for the SCR injection. A full active tank will have enough DEF for approximately 3,000 miles of driving. If freezing is found to be a root cause, inform the customer that he or she may be required to top up the active tank periodically until the DEF in the passive tank has thawed.

WARRANTY INFORMATION

For information only

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