



SUBJECT

N54 - Diagnosis for DME Fuel Injector Faults

MODEL

E60, E61, E90, E92, E93 with N54 engine

SITUATION

The Service Engine Soon light is illuminated. A combination of various fault codes related to fuel injectors may be stored in the DME control module:

- 2E30, 2E31, 2E32, 2E33, 2E34, and 2E35 – "Injector, cylinder 1-6, short circuit or line brake"
- 30BA and 30 BB – "DME internal fault; Injector driver circuit failure bank 1-3; bank 4-6".

CORRECTION

The appropriate DIS/GT1 test module for diagnosing these types of DME fault codes will be available from DIS V53 (planned release March '08).

In the case of a customer complaint and until the DIS version V53 is available, follow the procedure below when diagnosing N54 injectors-related faults:

- FC 2E30, 2E31, 2E32, 2E33, 2E34, or 2E35 is stored:
 1. Check the corresponding injector wiring harness (short to power/ground; wire continuity).
 2. If the wiring harness is OK, replace the injector indicated by the fault code.
- FC 30BA or 30BB is stored:
 1. If an additional injector fault code is stored (e.g., 2E30, 2E31, etc.) together with 30BA and/or 30BB, go to step #1 of the procedure above.
- If only 30BA or 30BB fault is stored:
 1. Disconnect the harness connectors from the two injectors of the relevant engine bank (e.g., from cylinder number 2 and 3 for FC 30BA related to bank #1).
 2. Clear the DME fault memory.
 3. Start the engine.
 4. Read the DME fault memory. Ignore the injector-related faults (e.g., 2E31 and 2E32).
 5. In case the driver circuit fault 30BA (or 30BB) **is still present**, replace the injector which was connected on the concerned bank (e.g., cylinder #1 in our example case).
 6. In case the fault code 30BA (or 30BB) **is not present**, disconnect the harness connector from the injector previously connected (e.g., cylinder #1 in the example case) and reconnect the next injector

in the bank (e.g., cylinder #2 in our example case).

7. Clear the DME fault memory and start the engine. Read the fault memory, ignoring injector related-faults (e.g., 2E30 and 2E32).
8. Go to step # 5 and repeat the procedure until the defective injector is identified.
9. In the unlikely event that injector replacement of the affected cylinder does not correct the problem (fault code 30BA or 30BB comes back after the engine start-up), the DME needs to be replaced.

Important Note:

On vehicles equipped with the N54 engine and produced between 06/10/07 and 08/18/07, if DME fault code 30BA/30BB is stored together with complaints of poor running and/or engine misfire, refer to [SI B12 18 07](#) (October '07) for the correct diagnosis.

WARRANTY INFORMATION

For information only.