

SB-10029104-8107



SI B 13 04 09
Fuel Systems

March 2009
Technical Service

SUBJECT

N54 - Cold Start Rough Running with Misfire Faults

MODEL

E82, E88, E90, E92, E93, E60, E61 with N54 engine

SITUATION

The customer may complain that during the cold start in the morning, the engine runs very roughly and the Service Engine Soon lamp is illuminated.

Various misfire fault codes (e.g., 29CC, 29D2, 29D1, 29D0, 29C0, 29CF) may be stored in the DME control module.

The engine rough running complaint can be reproduced on a cold start in the workshop. During the course of diagnosis, the spark plugs, removed from the misfiring cylinders after the problem was reproduced, are found to be soaked ("wet") with fuel, while the injector tips are covered with a layer of carbon deposit.

CAUSE

Possible cause: high pressure injector failure (leakage or incorrect spraying pattern), due to internal wear or unfavorable stack of tolerances

CORRECTION

In case of a reproducible "**cold start**" rough engine running with corresponding misfire faults, replace the high pressure injector of the affected cylinder, using the improved part (P/N 13 53 7 585 261). Follow TIS Repair Instruction RA 13 53 310 for injector removal and installation. If the spark plug from the misfiring cylinder shows wetness (fuel soaking) after cold start removal, then it should be replaced as well.

After an injector replacement, perform the individual injector calibration (adjustment) with the DME control module, as per [SI B12 26 08](#).

IMPORTANT:

If during a **cold start** rough engine running, the misfire faults are stored in more than one cylinder of the same bank, all three injectors from that bank need to be replaced.

In case the misfire faults are stored on three (or more) cylinders, then the complete set of injectors (6) needs to be installed.

IMPORTANT NOTE:

For N54 misfire fault complaints during normal engine operation (misfire faults not related to the engine's "cold start"), refer to the following Service bulletins:

- B12 05 09 - N54 (E6x) Misfire Faults due to DME Software Error

- B12 06 09 - N54 (E9x) Misfire Faults due to DME Software Error

PARTS INFORMATION

Part Number	Description	Quantity
13 53 7 585 261	High pressure injector	1

WARRANTY INFORMATION

For information only.

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