



SIB 12 09 20

2020-09-29

I01 REX: MISFIRES AT HIGH ALTITUDES USING WINTER-BLEND FUEL

MODEL

E-Series	Model Description
I01	i3 REx

SITUATION

The check engine light (MIL) is displayed, and in some cases the range extender (REx) engine will run rough for about 1 to 2 seconds during cold start.

It is also likely that one or more of the following fault codes are stored in the Range Extender Digital Motor Electronics (RDME) with a frequency of 5 or less with no other faults stored.

- 125001 - Combustion misfire, cylinder 1: Combustion quality too low
- 125002 - Combustion misfire, cylinder 2: Combustion quality too low
- 125003 - Combustion misfires, several cylinders: Combustion quality too low

CAUSE

The issue described above only occurs during the winter months with the use of high-octane winter-blend fuel at high altitude areas (≥ 3500 feet), such as Colorado & Utah. Specifically, when the REx engine is being operated while driving at or above this altitude because the remaining high-voltage battery charge has dropped below the specified level.

Fuel pumps may be labeled as dispensing winter fuel, based on state regulations.

CORRECTION

A new fuel additive (ADVANTEC Protect).

PROCEDURE

For conditions that are like the situation described above:

1. Perform diagnosis with the latest version of ISTA.
2. If the vehicle meets the winter fuel blend usage and high-altitude (≥ 3500 ft) operating criteria and the above vehicle operation situation is confirmed, drain the fuel from the fuel tank.
3. Add a full bottle (100 ml) of additive to the tank.
4. Refill the tank with the available winter-blend medium octane fuel (**Recommended 89 AKI**).
5. Perform the "Service Start Range Extender" Service Function via the path below:
 - Service functions > Drive > Range Extender Digital Motor Electronics > Service Start Range Extender

Select the option "operation at the standard rotational speed (2400 rpm)" and let run till completion.
6. Verify that the misfire is no longer occurring.
7. Please explain to the customer that they need to add a full bottle of additive every time they periodically refill the complete fuel tank.

This additive and the recommended octane fuel are only required while the winter fuel-blend is available and used.

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Note: The additive is only effective for the exact situation described above (i.e. high altitude together with winter fuel).

In all other misfire situations, please perform normal misfire diagnosis.

PARTS INFORMATION

Not eligible for claim submission (P/N or sublet)

Part Number	Description	Quantity
83 19 5 A2A 4B0	i3 REX fuel additive (2460609)	1

WARRANTY INFORMATION

The diagnosis portion of this issue only (PROCEDURE Step # 1 as shown below) is covered under the terms of the BMW New Vehicle Limited Warranty for Passenger Cars and Light Trucks, including Emissions when determined applicable.

Defect Code:	1011000900	Cold start goes out
:		
Labor Operation	Description	Labor Allowance
00 00 006	Performing vehicle test (with vehicle diagnosis system – checking faults) (Main work)	Refer to AIR
Or:		
00 00 556	Performing vehicle test (with vehicle diagnosis system – checking faults) (Plus work)	Refer to AIR
And:		
61 21 528	Connect an approved battery charger/power supply (indicated in AIR as Charging battery)	Refer to AIR
Or:		
61 21 529	Connect an approved battery charger/power supply (i3) (luggage compartment service cap removed to EME)	Refer to AIR
And:		
61 25 910	Recharging high-voltage battery unit (to high voltage charging socket)	Refer to AIR

Labor operation code 00 00 006 is a Main labor operation. If you are using a Main labor code for another repair, use the Plus code labor operation 00 00 556 instead.

As applicable to your center, please refer to **SI B01 01 20** or **B01 07 20** for claiming your diagnosis work time, job/repair work time (WT), WT and the repair-related explanation procedures.

QUESTIONS REGARDING THIS BULLETIN

Technical inquiries	Submit feedback at the top of this bulletin
Warranty inquiries	Submit an IDS ticket to the Warranty Department or use the chat available in the Warranty Documentation Portal
Parts inquiries	Submit an IDS ticket to the Parts Department