

**SUBJECT****N47T Oxygen Sensor Faults Caused By Thermal Shock Damage****MODEL**

F30 (3 Series Sedan)

F31 (3 Series Sport Wagon)

With the N47T engine produced from 7/2013 to 7/2015

**SITUATION**

Service Engine Soon (MIL) is illuminated with any of the following faults stored in the DDE:

- 282D00 - Oxygen sensor before catalytic converter, heating, activation: Short circuit to B+
- 282E00 - Oxygen sensor after catalytic converter, heating, activation: Short circuit to B+
- 283000 - Oxygen sensor after catalytic converter, heating, activation: Short circuit to ground
- 283300 - Oxygen sensor before catalytic converter, heating, activation: Open circuit
- 283400 - Oxygen sensor after catalytic converter, heating, activation: Open circuit
- 284E00 - Oxygen sensor after catalytic converter, Nernst voltage, signal: Open circuit
- 284F00 - Oxygen sensor before catalytic converter, pump current, signal: Open circuit
- 285000 - Oxygen sensor after catalytic converter, pump current, signal: Open circuit
- 285100 - Oxygen sensor before catalytic converter, virtual ground, signal: Open circuit
- 285200 - Oxygen sensor after catalytic converter, virtual ground, signal: Open circuit
- 285A00 - Oxygen sensor after catalytic converter, signal: Short circuit to B+

**CAUSE**

The oxygen sensor heating is active before normal moisture condensation in the exhaust has been eliminated during engine operation (dew point is not reached) resulting in incorrect sensor operation.

**CORRECTION**

Replace oxygen sensor, if directed, and update the DDE software.

**PROCEDURE**

1. Perform the recommended ISTA test plan(s).
2. Submit a Teile Clearing PuMA case to the SCR Gen II group.

3. Replace the faulted sensor(s) as recommended by the PuMA TC specialist.
4. Program the vehicle using the latest version of ISTA/P.

Target integration level: **F020-15-07-500** or higher

Note that ISTA/P will automatically reprogram and code all programmable control modules that do not have the latest software.

**Always connect a BMW approved battery charger/power supply**([SI B04 23 10](#)).

For information on programming and coding with ISTA/P, refer to Centernet / Aftersales Portal / Service / Workshop Technology / Vehicle Programming.

#### **WARRANTY INFORMATION**

Covered under the terms of the BMW New Vehicle Limited Warranty for Passenger Cars and Light Trucks.

<b>Defect Code:</b>	<b>11 78 02 15 00</b>	<b>Oxygen control sensor (before catalytic converter)</b>
	<b>Or:</b>	
	<b>11 78 03 15 00</b>	<b>Oxygen monitor sensor (after catalytic converter)</b>
<b>Labor Operation:</b>	<b>Labor Allowance:</b>	<b>Description:</b>
00 00 006	Refer to KSD2	Performing “vehicle test” (with vehicle diagnosis system – checking faults)
And:		
61 21 528	Refer to KSD2	Connect an approved battery charger/power supply (indicated in KSD 2 as Charging battery)
And, as necessary:		
61 00 006	Work time (WT)	Performing vehicle diagnosis – test module
And, if necessary		
13 62 651	Refer to KSD2	Replacing oxygen control sensor (before catalytic converter)
And/or		
13 62 664*	Refer to KSD2 (F30); 4 FRU (F31)	Replacing oxygen monitor sensor (after catalytic converter)

And:		
61 00 730	Refer to KSD2	Programming/encoding control unit(s)

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

Refer to KSD2 for the corresponding flat rate unit (FRU) allowances.

Work time labor operation code 61 00 006 is not considered a Main labor operation, however it does require an individual punch time and an explanation on the repair order and in the claim comment section.

**\*F31 Note:** Labor operation code 13 62 664 will be available for the “F31” in a future release of the KSD2.

### **Vehicle Programming and Encoding**

If a control module was working properly and it fails to program correctly or requires initialization, please claim this additional work with the applicable KSD2 labor operations under the defect code listed above.

The diagnosis and repair of vehicles “arriving” with failed control modules or stored faults which will cause them to fail during programming cannot be claimed under the defect code listed in this bulletin.

### **Other Repairs**

If other eligible and covered work is performed “prior” to programming and coding the vehicle, claim this work with the applicable defect code and labor operations listed in KSD2.

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