

SI B12 26 14  
Engine Electrical Systems

March 2016  
Technical Service

This Service Information bulletin supersedes SI B12 26 14 dated September 2014.

[NEW] designates changes to this revision

SUBJECT  
VANOS Faults Stored in DME (Bosch)

MODEL  
All models with the following engines and Bosch DME:

B38, N20, N26, N55, N63T, S55, and S63T

Produced to 10/31/15

SITUATION  
The Service Engine Soon (MIL) is on and the engine could go into a reduced power mode with the "Drivetrain Malfunction" message displayed.

[NEW] **NOTE:** Exception to the following statement is the N55 engine produced prior to October 2011 which may exhibit unusual clattering noises in the area of the VANOS.

One or more of the VANOS faults (listed in the attachment) are stored in the DME, although the engine is mechanically sound and no unusual noises can be heard from the VANOS area.

CAUSE  
Due to unfavorable Engine Position Management (EPM) parameters in the DME software, various VANOS control faults could be set.

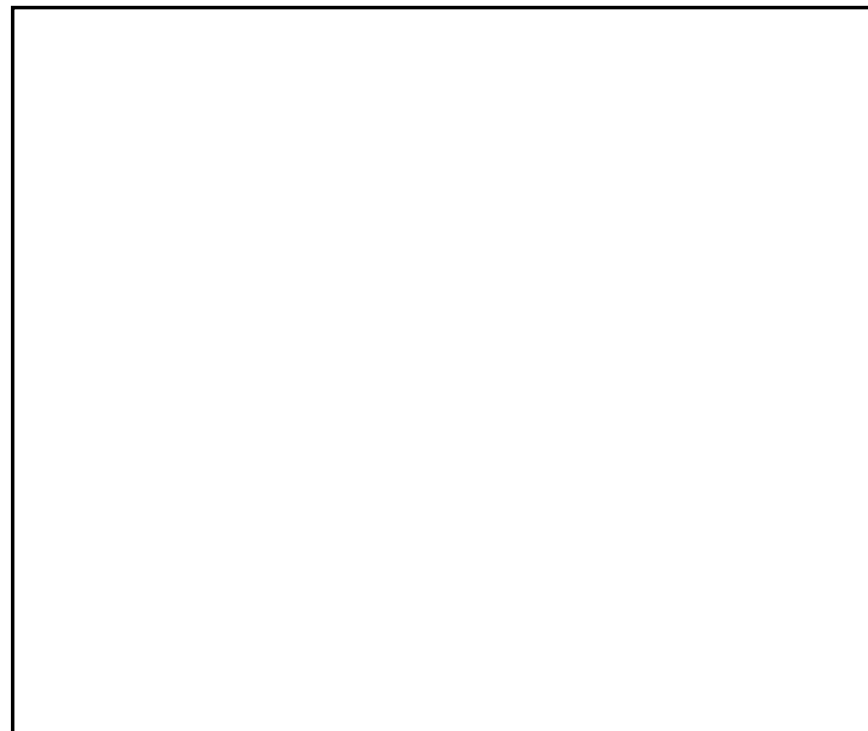
These control faults relate to implausible camshaft position (intake or exhaust), the camshaft stuck situation, or the camshaft angle offset to crankshaft outside the tolerance range.

[NEW] For vehicles with N55 engine produced up to October 2011 the bolts in the VANOS adjustment unit (intake or exhaust) may be loose or broken.

[NEW] CORRECTION  
ISTA diagnostic analysis and improved DME software if required

#### PROCEDURE

1. [NEW] Perform the recommended test plans using the latest version of ISTA (3.54 or higher). Correct any VANOS hardware issues found, as indicated by the test plan.



**NEW** Table 1 - Engine B38

Fault codes	Model	ISTA/P version / Target Integration Level
All (see attachment)	I12	2.53.0 / I001-14-07-500 or higher

**NEW** Table 2 - Engine N20 and N26

Fault codes	Model	ISTA/P version / Target Integration Level
All (see attachment)		
except faults 2D55 or 131501		
	E84, E89	2.53.0 / E89X-14-07-500 or higher
	F10	2.53.2 / F010-14-07-503 or higher
	F15, F25, F26	2.53.0 / F025-14-07-502 or higher
	F22, F23, F30, F31, F32, F33, F34, F36	2.53.0 / F020-14-07-502 or higher
Only faults 2D55 or 131501		
	E84, E89, F10, F15, F18	3.57.0 / XXXX-15-11-500 or higher
	<b>Produced to October 2015</b>	
	F22, F23, F25, F26, F30, F31, F32, F33, F34, F36- <b>Produced</b>	3.57.0 / F020-15-11-500 or higher
	<b>to February 2013 and</b>	

	<b>Produced March 2014</b>	
	<b>to October 2015</b>	
	F22, F25, F30, F31, F32, F33, F34 Produced from March 2013 to February 2014	3.58.0 / <b>F020-16-03-500</b> or higher

**NEW** Table 3 - Engine N55

<b>Fault codes</b>	<b>Model</b>	<b>ISTA/P version / Target Integration Level</b>
With <b>Continental</b> high pressure fuel pump*		
<b>All</b> (see attachment)		
<b>except faults 2D55 or 131501</b>		
	E70, E71	2.51.2 / <b>E070-13-07-506</b> or higher
	E82, E88, E90, E92, E93	2.52.0 / <b>E89X-14-03-500</b> or higher
	F07	2.53.2 / <b>F001-14-07-503</b> or higher
	F10, F12, F13	2.53.2 / <b>F010-14-07-503</b> or higher
	F25	



		2.53.0 / F025-14-07-502 or higher
Only faults 2D55 or 131501	All	3.57.0 / XXXX-15-11-500 or higher
With Bosch high pressure fuel pump*		
All (see attachment)		
except faults 2D55 or 131501		
	E70, E71	2.54.0 / E070-14-11-500 or higher
	E82, E84, E88, E92, E93	2.53.0 / E89X-14-07-500 or higher
	F01, F02, F07	2.53.2 / F001-14-07-503 or higher
	F06, F10, F12, F13	2.53.2 / F010-14-07-503 or higher
	F15, F25, F26	2.53.0 / F025-14-07-502 or higher
	F22, F30, F32, F33, F34, F36	2.53.0 / F020-14-07-502 or higher
Only faults 2D55 or 131501	All	3.57.0 / XXXX-15-11-500 or higher

**NEW** Table 4 - Engine N63T

Fault codes	Model	
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		<b>ISTA/P version / Target Integration Level</b>
<b>All (see attachment)</b>	F01, F02, F07	3.56.0 / <b>F001-15-07-501</b> or higher
	F06, F10, F12, F13	3.56.0 / <b>F010-15-07-501</b> or higher
	F15, F16	3.56.0 / <b>F025-15-07-501</b> or higher

**NEW** Table 5 - Engine S55

<b>Fault codes</b>	<b>Model</b>	<b>ISTA/P version / Target Integration Level</b>
All (see attachment)	F80, F82, F83	2.53.0 / <b>F020-14-07-502</b> or higher

**NEW** Table 6 - Engine S63T

<b>Fault codes</b>	<b>Model</b>	<b>ISTA/P version / Target Integration Level</b>
All (see attachment)	F06, F10, F12, F13	3.53.2 / <b>F010-14-07-503</b> or higher

2. [NEW] After performing necessary repairs, or in case the ISTA test plan is inconclusive, program the vehicle using the appropriate version of ISTA/P as specified in the tables to achieve defined target integration levels.

Fault codes Model ISTA/P version / Target Integration Level All (see attachment) F06, F10, F12, F13 3.53.2 / F010-14-07-503 or higher

The different N55 variants can be determined by the reading the vehicle's plant integration level.

N55 with a Continental HDP is older (less) than xxxx-12-03-500.

[NEW] N55 with a Bosch HDP is newer (equal to or higher) than xxxx-12-03-500.

[NEW] The exception being the F30 which was only produced with a Bosch HDP beginning with plant integration F020-11-11-500.

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.

**Note:**

If VANOS control faults continue to set with the improved DME software, further diagnosis will be necessary in order to identify the cause and make the correct repair.



Covered under the terms of the BMW New Vehicle Limited Warranty for Passenger Cars and Light Trucks or the BMW Certified Pre-Owned Program.

This repair is also covered by the terms of the State-specific Emissions Warranty (dependent on vehicle model year and state of registration) that applies to the BMW models listed.

The BMW Certified Pre-Owned Limited Warranty applies to BMW vehicles that have and are still within the BMW Certified Pre-Owned coverage period, but beyond Emissions Warranty coverage that applies.

<b>Defect Code:</b>	<b>11 36 01 96 00</b>	<b>Camshaft Adjusting Unit (VANOS) Fault code in diagnosis memory (Warn. lamp on)</b>
	Or:	
<b>Defect Code:</b>	<b>11 36 01 37 00</b>	<b>Camshaft Adjusting Unit (VANOS) Unpleasant noises</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, for the:

**E Series Vehicles**

<b>Labor Operation:</b>	<b>Labor Allowance:</b>	<b>Description:</b>
61 00 710	Refer to KSD2	

		Programming/encoding control unit(s) (not including CAS)
Or:		
61 00 720	Refer to KSD2	Programming/encoding control unit(s) (with CAS)

Or, for the:

**F Series Vehicles**

Labor Operation:	Labor Allowance:	Description:
61 00 730	Refer to KSD2	Programming/encoding control unit(s)

Or, for the:

**I12 (i8)**

Labor Operation:	Labor Allowance:	Description:
00 00 006	Refer to KSD2	Performing "vehicle test" (with vehicle diagnosis system – checking faults)
And:		
61 25 910	Refer to KSD2	Recharging high-voltage battery unit (to high voltage charging unit)
And, as necessary:		
61 00 006	Work time (WT)	Performing vehicle diagnosis – test module
And:		
61 00 730	Refer to KSD2	Programming / encoding control unit (s)
And:		
61 21 528	Refer to KSD2	Connect an approved battery charger/power supply(indicated in

		KSD2 as "Charging battery to EME")
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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 comments section.

**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.

## ATTACHMENTS

Revised March 2016

**SI B12 26 14****Erroneous VANOS faults are stored in the Bosch DME**

One or more of the following faults can be stored in the DME fault code memory:

**E Series vehicles (BN2000):**

2D54 – VANOS, exhaust, cold start not controllable  
2D55 – VANOS, intake, cold start not controllable  
2D56 – VANOS, exhaust, cold start: Position not reached  
2D57 – VANOS, intake, cold start: Position not reached  
2D5A – VANOS, intake: Control fault, camshaft stuck  
2D5B – VANOS, intake: Control fault, position not reached  
2D60 – VANOS, exhaust: Control fault, camshaft stuck  
2D61 – VANOS, exhaust: Control fault, position not reached  
2DA0 – Intake camshaft: Angle offset with respect to crankshaft outside tolerance range  
2DA2 – Exhaust camshaft: Angle offset with respect to crankshaft outside tolerance range

**F and I Series vehicles (BN2020)**

130104 – VANOS, intake: Control fault, camshaft stuck  
130108 – VANOS, intake: Control fault, position not reached  
130304 – VANOS, exhaust: Control fault, camshaft stuck  
130308 – VANOS, exhaust: Control fault, position not reached  
130E20 – Intake camshaft: Angle offset with respect to crankshaft outside tolerance range  
130F20 – Exhaust camshaft: Angle offset with respect to crankshaft outside tolerance range  
131401 – VANOS, exhaust, cold start not controllable  
131501 – VANOS, intake, cold start not controllable  
131808 – VANOS, exhaust, cold start: Position not reached  
131908 – VANOS, intake, cold start: Position not reached  
130504 – VANOS, intake 2: Control fault, camshaft stuck  
130508 – VANOS, intake 2: Control fault, position not reached  
130704 – VANOS, exhaust 2: Control fault, camshaft stuck  
130708 – VANOS, exhaust 2: Control fault, position not reached  
130E21 – Intake camshaft 2: Angle offset with respect to crankshaft outside tolerance range  
130F21 – Exhaust camshaft 2: Angle offset with respect to crankshaft outside tolerance range  
131601 – VANOS, exhaust 2, cold start not controllable  
131702 – VANOS, intake 2, cold start not controllable  
132808 – VANOS, exhaust 2, cold start: Position not reached  
132908 – VANOS, intake 2, cold start: Position not reached

View PDF attachment B122614\_VANOS\_Faults\_Revised.

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