




SI B11 11 18
Engine

January 2019
Technical Service

SERVICE ACTION: N63R ENGINE – CHECK AND REPLACE VANOS ACTUATORS, OIL FEED LINES, CHARGE AIR COOLERS AND THE MAP THERMOSTAT ELECTRICAL CONNECTOR

New information provided by this revision is preceded by this symbol .

Please perform the procedure outlined in this Service Information on all affected vehicles before customer delivery. In the event the customer has already taken delivery of the vehicle, please perform the procedure the next time the vehicle is in the shop.

This Service Information bulletin replaces SI B11 11 18 **dated October 2018**

What's New:

- Warranty labor operation table updated
- Parts section updated regarding cylinder head covers

MODEL

G12 (7 Series Sedan)

AFFECTED VEHICLES

This Service Action involves G12 vehicles produced from May 2015 to July 2016.

Vehicles which require this Service Action to be completed will show it as "Open" when checked either in AIR, the "Service Menu" of DCSnet (Dealer Communication System) or with the Key Reader.

SITUATION

This bulletin describes the procedures to inspect and if necessary replace the following components:

- Check VANOS System (vehicle test and review faults stored in the DME)
- Turbo charger oil feed lines (leaking)
- Charge air coolers (corrosion)
- Map thermostat and electrical harness (corrosion)

Also, make sure that Service Bulletin [B12 24 18](#) Service Action: Program Control Units, is completed when performing this Service Action.

PROCEDURE

Section 1: Check the VANOS Actuators

1. Connect a battery charger to the vehicle.
2. Connect to ISTA/D and perform a vehicle test.
3. If one of the following faults are stored in DME fault memory then replace only the VANOS Actuator that is associated with the fault. Refer to the applicable repair instruction(s) in ISTA/D.

Faults applicable to cylinder bank 1 intake VANOS Actuator (cylinders 1 - 4):

164040 - Intake camshaft: Faulty installation

130E20 - Intake camshaft: Angular offset of the crankshaft beyond tolerance

13070B - VANOS, intake, cold start: cannot be regulated

130709 - VANOS, intake, cold start: Position not reached

130713 - VANOS, intake: Control fault, position not reached

130715 - VANOS, intake: Control fault, camshaft jammed

Faults applicable to cylinder bank 1 exhaust VANOS Actuator (cylinders 1 - 4):

130716 - VANOS, exhaust: Control fault, camshaft jammed

130714 - VANOS, exhaust: Control fault, position not reached

13070A - VANOS, exhaust, cold start: Position not reached

13070C - VANOS, exhaust, cold start: cannot be regulated

130F20 - Exhaust camshaft: Angular offset of the crankshaft beyond tolerance

164041 - Exhaust camshaft: Faulty installation

Faults applicable to cylinder bank 2 intake VANOS (cylinders 5 - 8):

164042 - Intake camshaft 2: Faulty installation

130E21 - Intake camshaft 2: Angular offset of the crankshaft beyond tolerance

131701 - VANOS, intake 2, cold start: cannot be regulated

130717 - VANOS, intake 2, cold start: Position not reached

130508 - VANOS, intake 2: Control fault, position not reached

130504 - VANOS, intake 2: Control fault, camshaft jammed

Faults applicable to cylinder bank 2 exhaust VANOS (cylinders 5 - 8):

164043 - Exhaust camshaft 2: Faulty installation

130F21 - Exhaust camshaft 2: Angular offset of the crankshaft beyond tolerance

131601 - VANOS, exhaust 2, cold start: cannot be regulated

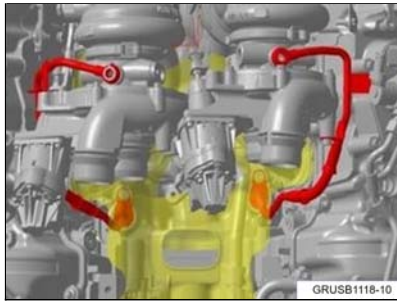
132808 - VANOS, exhaust 2, cold start: Position not reached

130708 - VANOS, exhaust 2: Control fault, position not reached

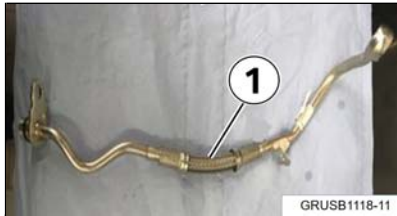
130704 - VANOS, exhaust 2: Control fault, camshaft jammed

Section 2: Inspect and Replace the Turbocharger Oil Feed Lines

Turbocharger oil feed line overview:	The oil feed line locations are shown with red highlight
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Oil feed line construction overview:



1. (Stainless steel flexible section. This is the new design and should not be replaced.



2. Black rubber flexible section. This line should be replaced.

1. Remove and install the engine acoustic cover as per Repair Instructions 11 12 070 "Removing & installing/replacing the acoustic cover"



2. Check the exhaust turbocharger oil feed line on bank 1.

If the flexible section of the feed line is made of braided stainless steel (see arrows) then take no further action. **Do not replace the line.**

If the flexible section is black rubber then the oil feed line will need to be replaced.

UPDATE! Refer to Repair Instruction 11 42 200 "Remove and install / renew the oil feed line for the exhaust turbocharger N63O2"
Do not remove the turbochargers!

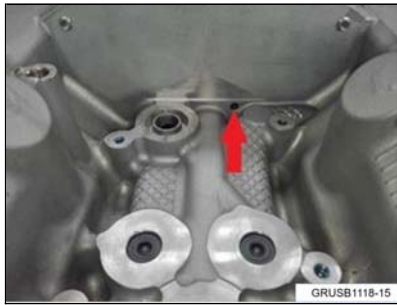
3. Check the exhaust turbocharger oil feed line on bank 2.

If the flexible section of the feed line is made of braided stainless steel (see arrows) then take no further action. **Do not replace the line.**



If the flexible section is black rubber then the oil feed line will need to be replaced.

UPDATE! Refer to Repair Instruction 11 42 200 “Remove and install / renew the oil feed line for the exhaust turbocharger N63O2”
Do not remove the turbochargers!



4. **UPDATE!** Only if the oil feed lines were actively leaking oil.

Check the engine block (V-space) for engine oil residue and clean as needed.

If there is leakage, the exhaust system, both exhaust turbochargers, the lower heat shield, the complete exhaust manifold and the oil-to-coolant heat exchanger needs to be removed to clean this area.

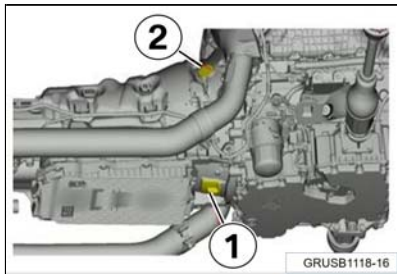
Refer to the following repair instructions:

11 62 060 “Removing and installing/replacing the left exhaust manifold (bank 5-8)”

11 62 065 “Removing and installing/replacing the right exhaust manifold (bank 1-4)”

11 44 000 “Removing and installing/replacing the oil-to-coolant heat exchanger”

Wipe dry with a shop towel and rinse the residual oil with cleaner via the drain hole and flush it out (see arrow).

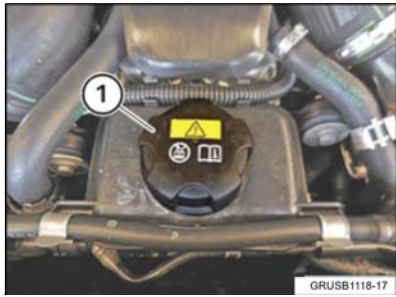


5. If the lower transmission housing also has oil residue present then it has to be cleaned via the opening (1). To do so, remove the sealing cap (1) and sealing cap (2) and flush out the excess engine oil residue. The sealing cap (2) may be located on the left or the right side of the transmission housing.

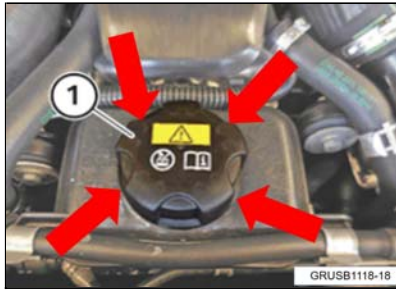
Reinstall both sealing caps when finished.

Section 3: Inspect and Replace the Low-Temperature Expansion Tank (For Charge Air Cooler)

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1. Locate and inspect the low temperature cooling system cap (1) for traces of overflowing.

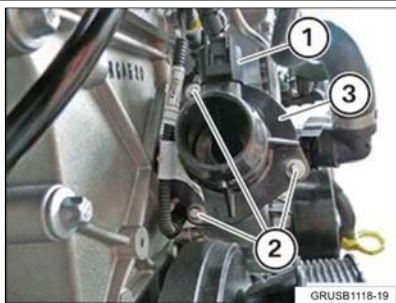


2. Do not remove the cap, if there are traces of wet or dried coolant around the cap surface then it is overflowing.

If found overflowing, replace both charge air intercoolers.

If not leaking, do not replace any parts and do not drain the cooling system.

Section 4: Inspect and Replace Map Thermostat and Electrical Harness



1. Locate the Map Thermostat Electrical Connector (1).



2. Remove the connector and check the pins in the connector for traces of water or corrosion.

Example: This connector is already corroded.

If the pins in the connector are corroded, the engine wiring harness and the characteristic map thermostat need to be replaced.

Refer to the following Repair Instructions:

12 51 300 "Removing and installing/replacing the wiring harness section of engine ignition control for cylinders 1-4".

11 53 000 "Removing and installing/replacing the coolant

thermostat”.

If no corrosion is found then do not replace any parts.

UPDATE! **PARTS INFORMATION**

Refer to the ETK and the applicable repair instructions for one-time use fasteners and/or component information regarding additional or replacement screws, gaskets, and seals that need to be installed and claimed.

Part Number	Description	Quantity
11 36 7 614 288	VANOS actuator	As needed up to 4

Section 2 Parts List:

Part Number	Description	Quantity
11 42 7 934 655	Exhaust turbocharger oil feed line, CYL 5-8	1
11 42 7 934 654	Exhaust turbocharger oil feed line, CYL 1-4	1
07 11 9 963 072	Sealing rings for oil feed line	4
07 11 9 963 201	Sealing rings for coolant line / exhaust turbocharger	6
07 14 7 413 212	Combination Allen bolt	2 (if needed)
13 71 7 601 067	Clean air pipe seal	2 (if needed)
11 42 8 627 197	Oil feed line banjo bolt	2
31 10 6 870 648	Screw with disc for stiffening plate	12 (if needed)
07 14 9 390 155	Screw with disc for strut brace	2
51 71 6 966 566	Screw with flange for strut brace	6
07 11 9 905 147	Screw with washer for bulkhead strut brace	4
11 15 1 726 339	Hose clamp for coolant line	2

Section 1 Parts List: (The failure rate is less than 2 percent, do not over order)

UPDATE! Do not replace the cylinder head covers.

Part Number	Description	Quantity
11 36 7 614 288	VANOS actuator	As needed up to 4

Section 3 Parts List: (The failure rate is less than 2 percent, do not over order)

Part Number	Description	Quantity
82 14 1 467 704	Antifreeze	As needed per the Repair Instructions

17 51 9 470 800	Charge air cooler, cylinder 1-4	1
17 51 9 470 801	Charge air cooler, cylinder 5-8	1

Section 4 Parts List: (The failure rate is less than 2 percent, do not over order)

Part Number	Description	Quantity
11 53 8 602 282	Characteristic map thermostat	1
12 51 8 654 414	Engine wire harness (Produced up to 10/2016 production)	1
or		
12 51 8 679 109	Engine wire harness (Produced from 10/2016 production)	1

All repairs, as needed (Sublet code 4):




Part Number	Description	Quantity
82 14 1 467 704	Antifreeze	As needed per the Repair Instructions
83 21 2 365 950	0W-30 LL01FE (12 x 1 Liter case)	As needed
	or	
83 21 2 405 849	0W-30 LL01FE (209 liter drum)	As needed
	or	
83 21 2 449 994	0W-30 LL01FE (Tanker Delivery – Liters)	As needed

UPDATE! All parts from these repairs are subject to 100% return and inspection at the WPRC to ensure appropriate usage of parts. Returned parts which do not meet the correct replacement criteria as described in the procedures, will be debited.

UPDATE! **WARRANTY INFORMATION**

Reimbursement for this Service Action will be via normal claim entry utilizing the following information:

Defect Code:	0011790400	
Labor Operation:	Labor Allowance:	Description:
00 66 785	Refer to KSD2/AIR	Checking the actuators; oil feed lines of the exhaust turbocharger; traces of overflow on the expansion tank; connector of thermostat (Plus work)
Or:		

00 66 786	Refer to KSD2/AIR	Checking the actuators; oil feed lines of the exhaust turbocharger; traces of overflow on the expansion tank; connector of thermostat, replacing both charge air coolers (Plus work)
Or:		
00 66 787	Refer to KSD2/AIR	Checking the actuators; replacing one oil feed line of the exhaust turbocharger; traces of overflow on the expansion tank; connector of thermostat, both charge air coolers and replacing one oil feed line (Plus work)
Or:		
00 66 788	Refer to KSD2/AIR	Checking the actuators; oil feed lines of the exhaust turbocharger; traces of overflow on the expansion tank; connector of thermostat, both charge air coolers and replacing both oil feed lines (Plus work)
Or:		
00 66 789	Refer to KSD2/AIR	Checking the actuators; oil feed lines of the exhaust turbocharger; traces of overflow on the expansion tank; connector of thermostat and replacing one oil feed line (Plus work)
Or:		
00 66 790	Refer to KSD2/AIR	Checking the actuators; oil feed lines of the exhaust turbocharger; traces of overflow on the expansion tank; connector of thermostat and replacing both oil feed lines (Plus work)
And, if needed:		
00 66 791	Refer to KSD2/AIR	Additional work, cleaning the engine block (V-space) and transmission housing (Associated work)
 And:		
00 66 792	Refer to KSD2/AIR	Additional work, replacing all actuators (right charge air cooler removed, left charge air cooler installed) (Associated work)
 Or:		
00 66 793	Refer to KSD2/AIR	Additional work, replacing all actuators (both charge air coolers removed) (Associated work)
 And/or:		
00 66 794	Refer to KSD2/AIR	Additional work, replacing the engine wiring harness and the characteristic map thermostat (Associated work)

Sublet – Bulk Materials

Sublet Code 4	Up to \$35.00	Reimbursement for the repair-related bulk materials (BMW part number, please do not use the part numbers for claim submission)
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Sublet reimbursement calculation for claiming the “used quantities” of repair-related bulk materials (BMW part numbers) is at dealer net plus your center’s handling.

Enter this material cost in sublet and itemize the amount on the repair order and in claim comment section.

One gallon (3.78 liters) of Antifreeze/Coolant provides 2 gallons or 8 quarts (7.57 liters) when mixed with water to create a 50/50 recommended mixture.

And, as applicable:

Alternative Mobility Solution (AMS) for Vehicle Owners

This Service Action repair qualifies for Alternative Mobility Solution (AMS) expense reimbursement, claim this item under the Defect Code noted above as follow:

- Sublet Code 2 - Itemize the AMS sublet amount on the repair order and in the claim comment section.

Please refer to SI [B01 29 16](#) for additional information.

Posted: Wednesday, January 30, 2019

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