



### **AFFECTED VEHICLES**

**MAKE** BMW

**MODEL** 1 (F21)

**VERSION** 116 d (B37 D15 A) 85KW 116HP 1496 Cm3



### **SYMPTOMS**

24CE 00 - Air mass meter. Air mass too high.

278A 00 - Throttle body motor.

Electrical/mechanical fault.

2909 00 - Exhaust gas recirculation. Air mass too low.

27F0 00 - Flexible charge air hose. Faulty flexible hoses.

290A 00 - Air system, plausibility of the relation between the air flow and the exhaust gas recirculation flow. The measurement of the air mass is too high compared to the theoretical value.

Fault codes recorded in the engine control unit.

The vehicle displays one or several of the above - mentioned fault codes.

Engine warning light (ML) ON.

Whistling noise coming from the engine compartment.

Smell of burnt plastic.

The following symptoms are observed in the workshop:

- In the intake pipe and intake manifold there are melted or deformed areas especially in the area of the exhaust gas recirculation valve (EGR).



### **CAUSE/S**

Possible causes:

- Defect in the bypass flap of the exhaust gas cooler.

- Carbon excess in the exhaust gas recirculation system.

- Carbon excess in the air intake system.



## SOLUTION

Repair procedure:

- Read the fault codes recorded in the control unit using the diagnostic tool.
- Confirm that one or several of the fault codes that appear in the field symptoms of this bulletin are displayed.
- Confirm that the symptoms that appear in the field symptoms of this bulletin are reproduced.
- Check if there are damaged or melted areas in the intake pipe and intake manifold especially in the area of the exhaust gas recirculation valve (EGR).
- Check if there are melted parts in the variable intake flap system.
- Check the compression of the cylinders if you clearly see that there are melted parts in the variable intake flap system.
- Repair the affected parts and even the engine if there are large differences between the cylinders in the result of the cylinder compression test.
- Replace the following components if NO differences are seen in the cylinder compression test:  
The air intake system together with the mixing tube (See image) if necessary.  
The exhaust gas cooler together with the exhaust gas recirculation valve (EGR) and the vacuum hoses (See image).  
The switching solenoid valve of the exhaust gas cooler bypass (See image).  
The damaged peripheral components.
- Clean the intake ducts of the cylinder head if high quantity of carbon is observed.
- Check possible damage to the electrical wiring of the switching solenoid valve of the exhaust gas recirculation bypass and check its operation, repair or replace it if necessary.
- Clear the fault codes recorded in the engine control unit using the diagnostic tool.
- Carry out a road test.

For the models 5 Series F10, 5 Touring F11 and Gran Turismo F07 with N57 engine and that are within a specific manufacturing date, additionally carry out the following steps:

- Check if the model has the latest version of the intake silencer fitted (resonator) See image.
- Replace the intake silencer (resonator) if the model is not fitted with the latest version.
- Reprogramme the engine control unit with updated software.
- Reset the injector flow correction values, once the engine control unit has been reprogrammed with updated software.

NOTE:If when carrying out the diagnosis one or several fault codes mentioned in the field symptoms of this bulletin are displayed but NO damages in the mentioned components are seen, the codes should be dealt with individually.

NOTE:If in the diagnosis appear faults different from the fault code/s mentioned in the field symptoms of this bulletin, they should be dealt with individually.

NOTE:Do not replace the intake silencer (resonator) if you have not reprogrammed the engine control unit with updated software before that.

See image 1:

- A - Air intake system.
- B - Mixing tube.
- C - Intake silencer (resonator).

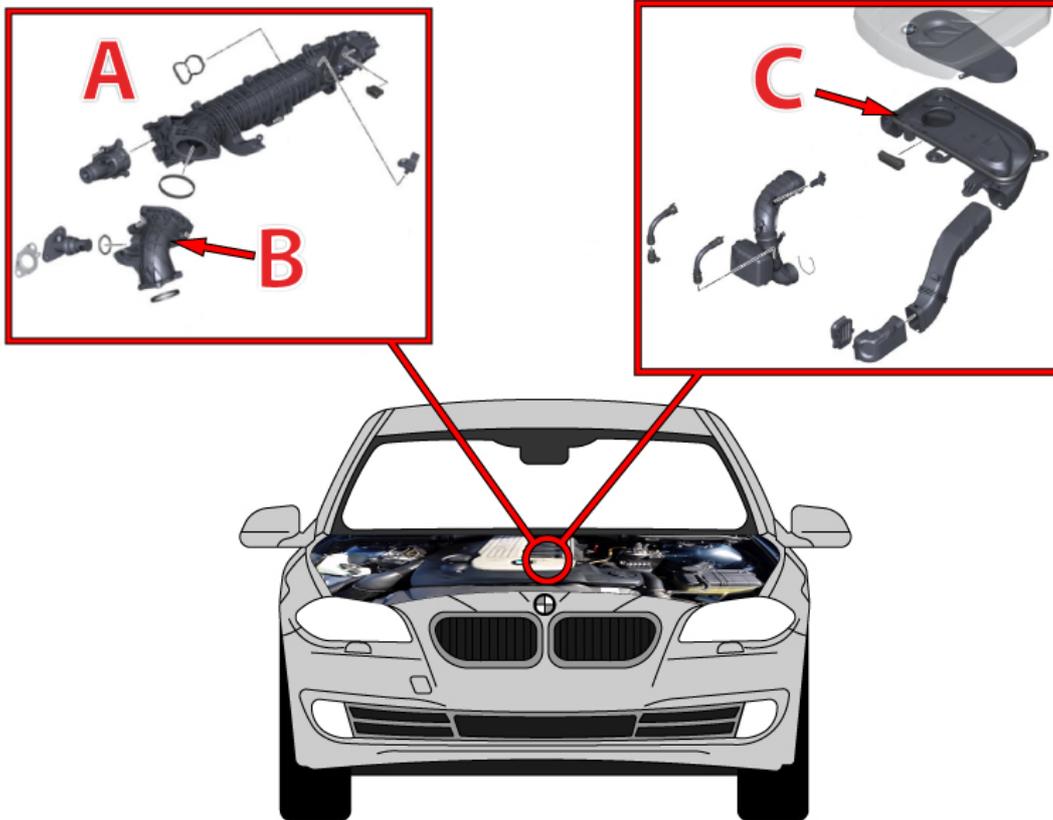
See image 2:

- Intake silencer (resonator).
- A - Switching solenoid valve.
- B - Exhaust gas cooler.

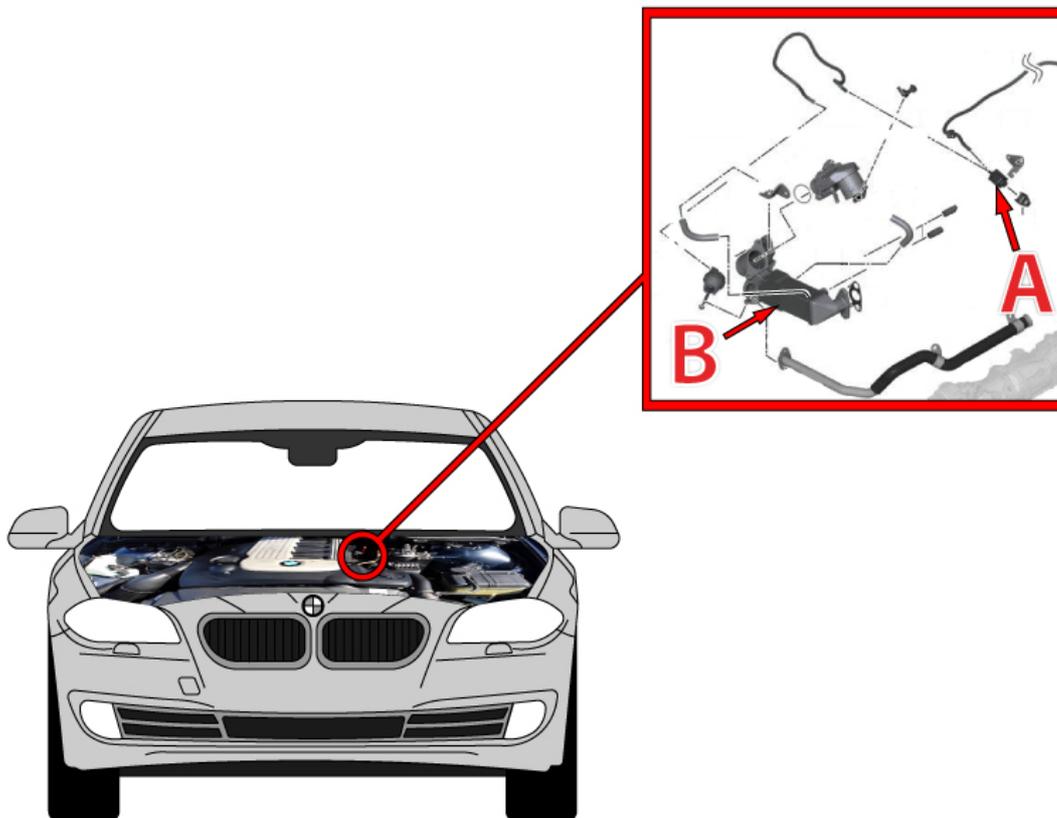
Represented vehicle:BMW 5 Series.

Image taken from:Catcar.info

**SEE IMAGE 1:**



SEE IMAGE 2:



The information provided in this bulletin is only a recommendation of the procedures to be followed and it cannot replace at any time neither the diagnosis nor the professional judgement of the repairer. Grup Eina Digital Ltd. will not accept any liability for any possible damages caused directly or indirectly from the use of the information in this bulletin.

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