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TECHNICAL REPORT

Sealant use in BMW 2.5 TD
(M51D25) cylinder head gasket
assembly



PURPOSE

Inform about **the sealant application** in the 550093X0 and 101181X0 cylinder head gaskets assembly which fit in BMW 2.5 TD engines with engine code M51D25.

DESCRIPTION

Cylinder head gasket has an **elastomer covering in the external sides** which perfectly adapts to the engine **head and block**, absorbing every existing imperfection due to the surface finish of the rectified areas and the material roughness.

Therefore, sealant application in the installation of the cylinder head gasket is not really common and it is completely advised against, unless workshop manual indicates it.

Sometimes it is **necessary to add some sealant** to the cylinder head gasket in particular areas, for example **block-head-timing gear cover joint**.

During the manufacturing period of this engine, there was a design change in the cylinder head gasket, from the 550093X0 cylinder head gasket kit to the 101181X0 **cylinder head gasket on January 1994**. It must be considered that 550093X0 kit includes an additional part made of elastomer which must be assembled in the engine block.

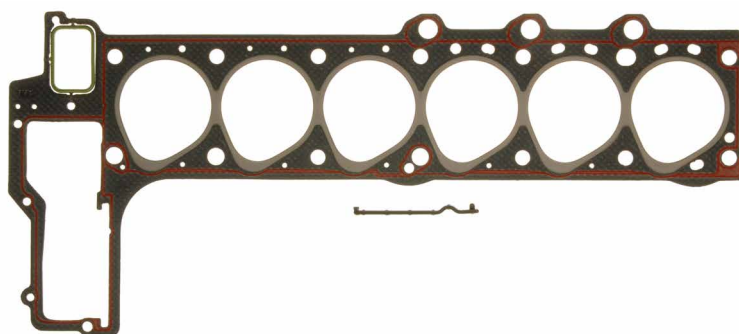
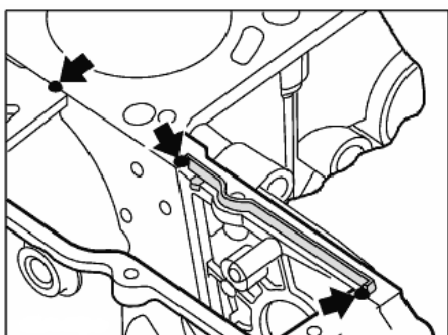
BMW M51D25 engine fits in the following vehicles:

Commercial designation	Manufacturing year		kW	CV	cc
	from	to			
BMW 3 (E36) 325 td	09/91	02/98	85	115	2497
BMW 3 (E36) 325 tds	05/93	02/98	105	143	2497
BMW 3 Touring (E36) 325 tds	03/95	04/99	105	143	2497
BMW 5 (E34) 525 td	03/93	08/95	85	115	2497
BMW 5 (E34) 525 tds	09/91	08/95	105	143	2497
BMW 5 Touring (E34) 525 td	03/93	07/96	85	115	2497
BMW 5 Touring (E34) 525 tds	12/91	07/96	105	143	2497
BMW 5 (E39) 525 td	01/97	06/03	85	115	2497
BMW 5 (E39) 525 tds	01/96	06/03	105	143	2497
BMW 5 Touring (E39) 525 tds	03/97	05/04	105	143	2497
BMW 7 (E38) 725 tds	04/96	11/01	105	143	2497

According to **workshop manual**, it is mandatory to add a **little amount of sealant** in different areas of the timing gears cover according to the manufacturing year, **before January 1994 or later**, as the following images show.

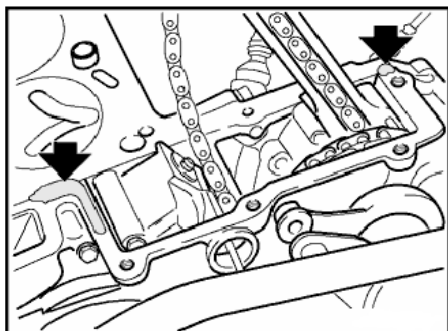
VEHICLES UNTIL JANUARY 1994

Before cylinder head gasket is placed on the engine block, a 2,0 – 3,0 mm diameter silicon cord of sealant or RTV (room temperature vulcanization) gasket maker, for example, our **AJUSIL sealant**, must be applied over the engine block and the elastomer part, following the indications of the next picture:



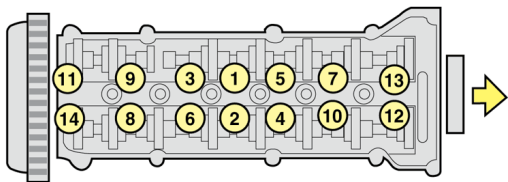
VEHICLES FROM JANUARY 1994

Before cylinder head gasket is placed on the engine block, a 2,0 – 3,0 mm diameter silicon cord of sealant or RTV (room temperature vulcanization) gasket maker, for example, our **AJUSIL sealant**, must be applied over the engine block, following the indications of the next picture:



ASSEMBLY

1. Remove old sealant remains over the engine block and engine head.
2. Clean and degrease the engine block and engine head surfaces.
3. Use sealant in the engine block as it was showed in the pictures above.
4. Place the cylinder head gasket immediately after using the sealant over the block.
5. Place the engine head and the cylinder head bolts immediately, then follow the next tightening steps:
 - 1) 80 Nm
 - 2) -180°
 - 3) 50 Nm
 - 4) 90°
 - 5) 90°
 - 6) Run the engine until total opening of the thermostat, let the engine cool down for 4 hours with open bonnet.
 - 7) 90°



6. Wait for 18 hours before running the engine or filling in the oil and coolant.