



Drive

Exhaust system

The exhaust system is made of stainless steel. Together with the intermediate pipes, the central and rear silencers form one component.

- Changes

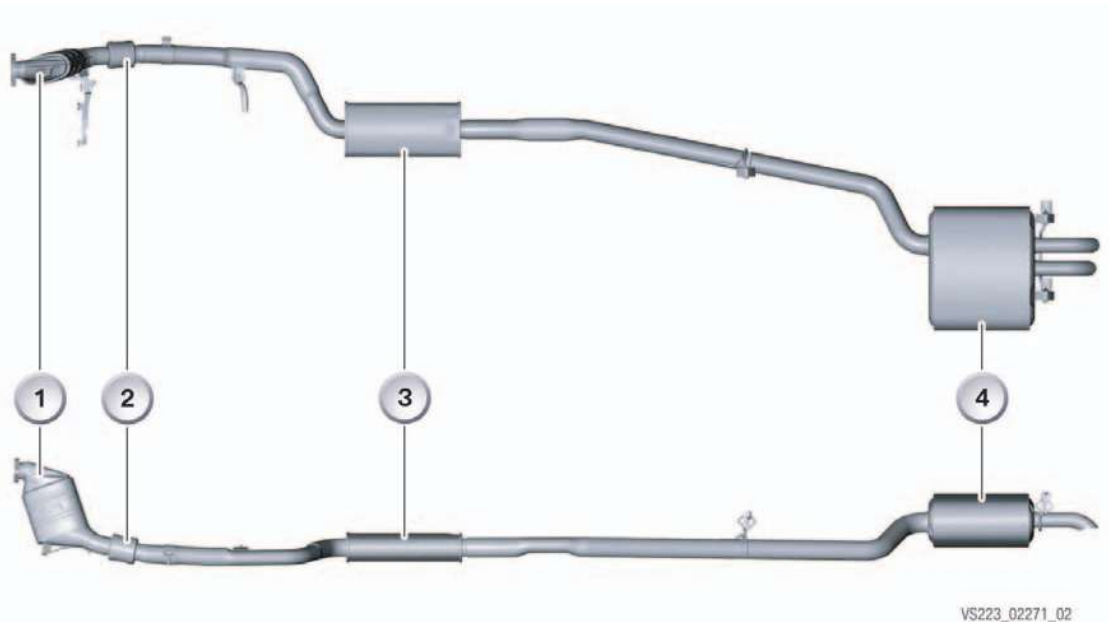
The exhaust manifold and the turbocharger were re-engineered.

In line with the scope of changes made to the engine (2nd generation common rail), only one catalytic converter is used for treating the exhaust gas.



Drive

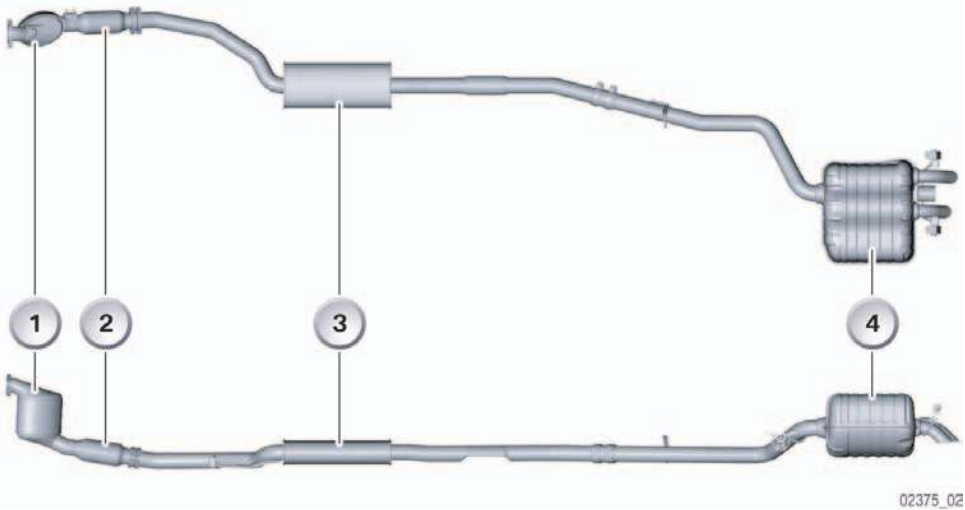
System overview



KT-10949

VS223_02271_02

Fig. 12: Exhaust system E60



KT-10969

02375_02

Fig. 13: Exhaust system E65

Index	Explanation	Index	Explanation
1	Catalytic converter	3	Central silencer
2	Vibration decoupling element	4	Rear silencer



Drive

- Exhaust manifold

The exhaust manifold is designed as an air gap-insulated sheet metal exhaust manifold. Compared to a cast manifold the advantages are:

- Weight reduction of approx. 1.7 kg
- Higher exhaust gas temperature at the catalytic converter
- Improved response characteristics of the turbocharger

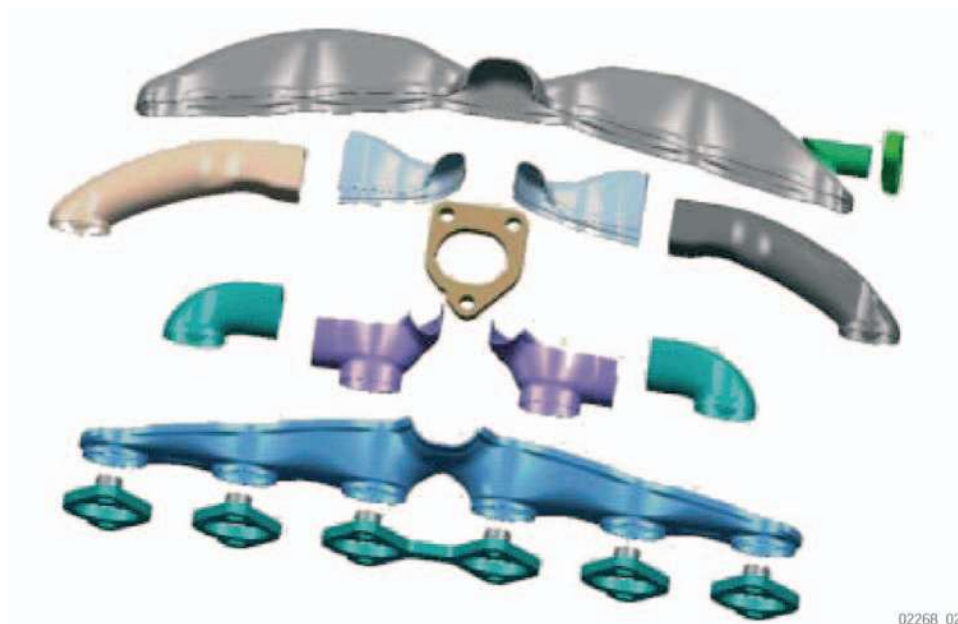


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Design

The individual parts of the exhaust manifold are made of sheet steel and are welded to form one component.

In addition to their low weight, sheet metal exhaust manifolds have a distinctly lower thermal capacity than cast manifolds. External heat loss is additionally minimized by the air gap insulation. Consequently, the sheet metal exhaust gas manifold heats up faster than a cast manifold, thus ensuring the catalytic converter is heated as fast as possible for effective conversion after a cold start.



KT-10952

02268_02

Fig. 14: Exhaust manifold (exploded drawing)



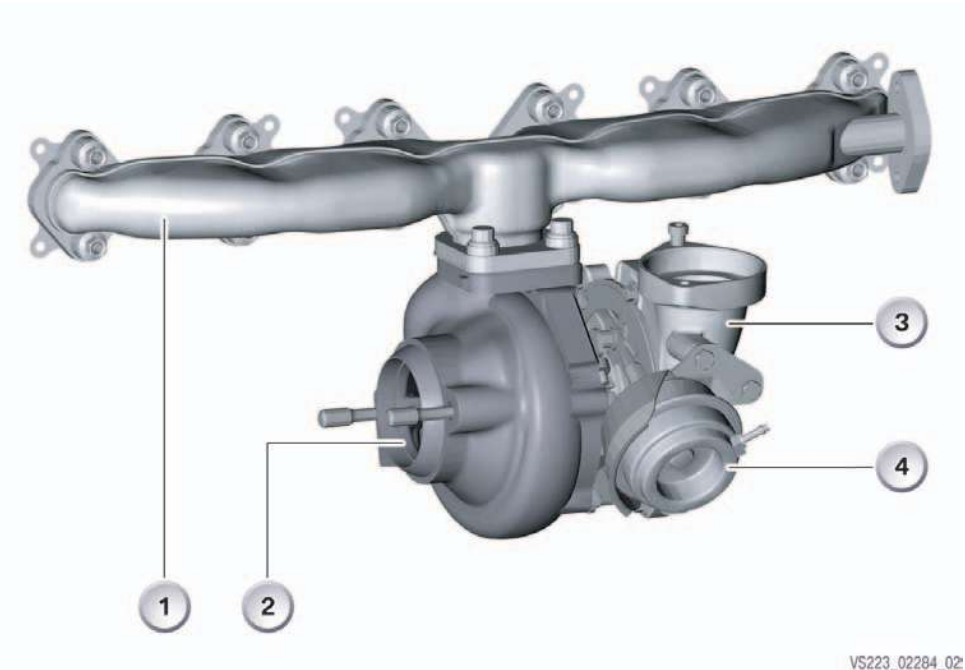
Drive

- Turbocharger

The efficiency of the turbocharger was improved by changing the blade geometry of the turbocharger compressor and turbine. The turbine housing was adapted to the modified blade geometry.

Design

The connection of the charge air line at the turbocharger (compressor outlet) was equipped with a flange coupling (as on the M47TU). The vacuum unit was positioned higher up.



KT-10825

VS223_02284_02

Fig. 15: Turbocharger

Index	Explanation
1	Air gap insulated exhaust manifold
2	Exhaust gas outlet at turbine housing
3	Compressor outlet
4	Vacuum unit



Drive

- Catalytic converter

The catalytic converter is designed as an oxidation catalytic converter with a volume of 2.26 litres.

- Central silencer

The central silencer is based on the absorption principle with a volume of 5.4 litres (E60) and 5.8 litres (E65).

- Rear silencer

The rear silencer is based on the reflection principle and has a volume of 23 litres (E60) and 32 litres (E65).