



Warning!

Risk of burning!

Only perform this repair work on an engine that has cooled down.



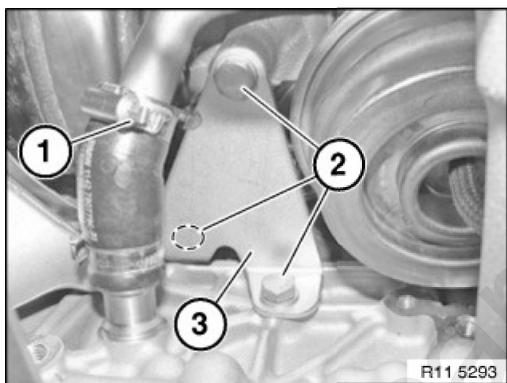
Note:

Exhaust manifold can only be removed together with low-pressure turbocharger.



Necessary preliminary tasks:

- Remove [diesel particulate filter](#).
- Remove [high pressure exhaust turbocharger](#).
- Remove right [pressure pipe](#).
- Remove [clean air pipe](#).
- Drain [coolant](#).



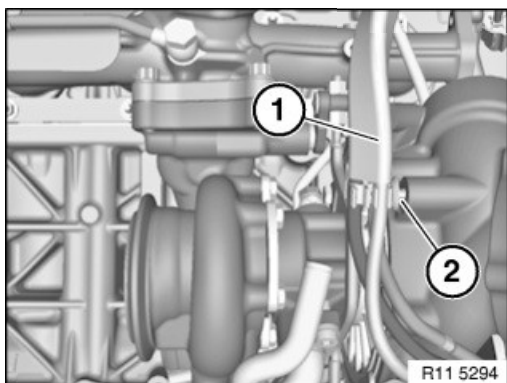
Release clamp (1) on oil return pipe.

Tightening torque [11 65 2AZ](#).

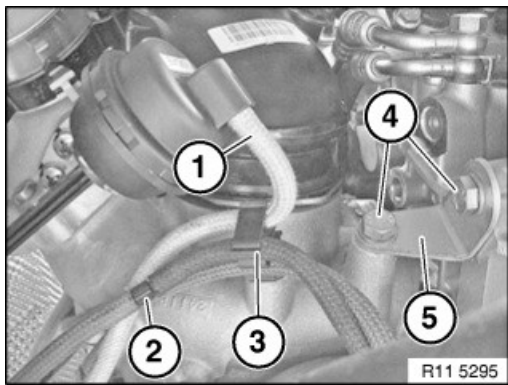
Unfasten screws (2).

Tightening torque [11 65 2AZ](#).

Remove bracket (3).



Release vacuum lines (1) of turbocharger at clamp (2).



Disconnect yellow vacuum line (1) from vacuum unit.

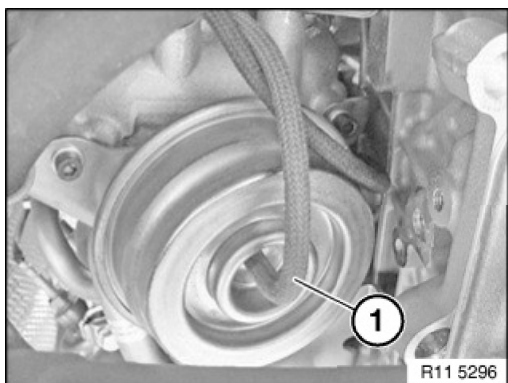
Disconnect red vacuum line at separation point (2) from black vacuum line.

Release vacuum lines from clamp (3).

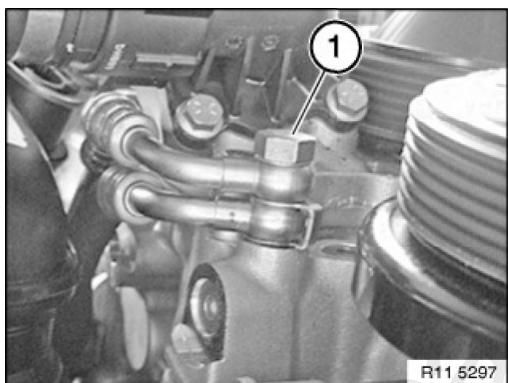
Release screws (4).

Tightening torque [11 65 2AZ](#).

Remove bracket (5).



Disconnect blue vacuum hose from vacuum unit (wastegate valve).



Release banjo bolt (1).

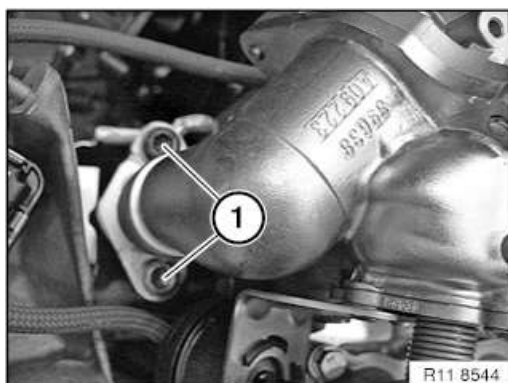
Tightening torque [11 42 2AZ](#).

Note:

Catch escaping engine oil with suitable auxiliary materials.

Replace sealing rings.

Disconnect engine oil pipes from engine block.

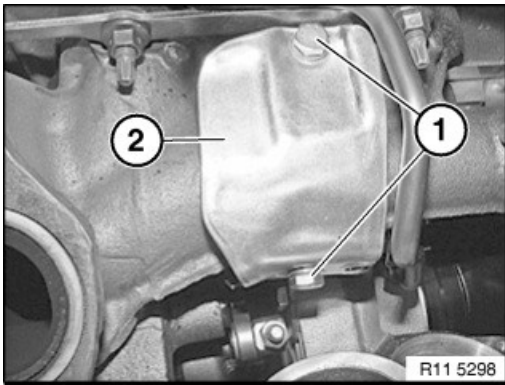


Release screws (1).

Installation note:

Grease screws with [assembly paste 4.2](#).

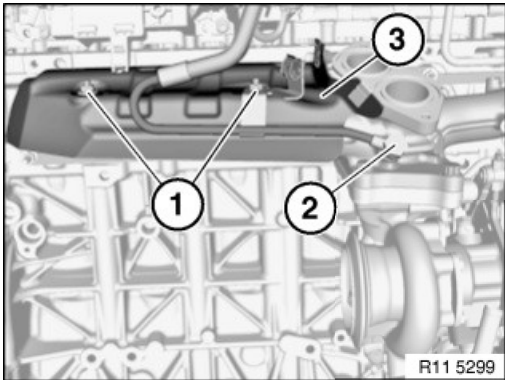
Tightening torque [18 31 8AZ](#).



Release screws (1).

Tightening torque [18 31 6AZ](#).

Remove heat shield (2).



Unscrew nuts (1).

Tightening torque [18 31 6AZ](#).

Unfasten banjo bolt (2).

Tightening torque [18 31 6AZ](#).

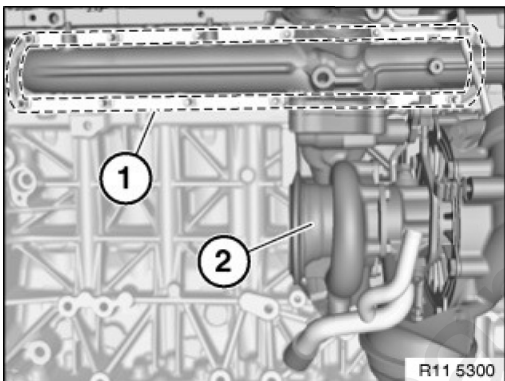
Replace sealing rings.

Important!

To ensure operational reliability, use stainless steel sealing washers.

Remove exhaust backpressure pipe from exhaust manifold.

Remove heat shield (3).



Release all nuts along dashed line (1).

Tightening torque [18 31 7AZ](#).

Installation note:

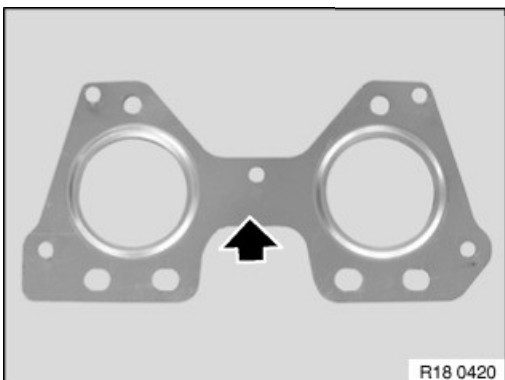
Replace self-locking nuts.

Clean sealing surfaces of exhaust manifold.

Replace gaskets.

Reinstall reinforcement plates.

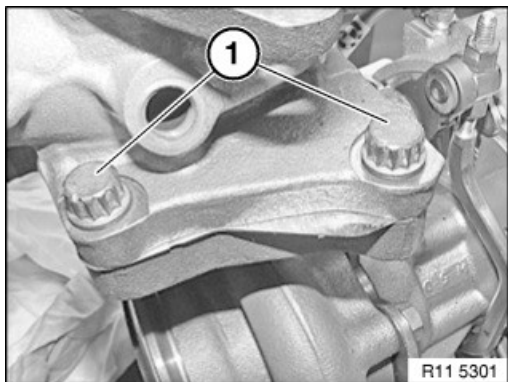
Release exhaust manifold together with exhaust turbocharger (2) from engine block. Feed out and remove exhaust manifold with exhaust turbocharger (2) toward the top.



Important!

Manifold gaskets are graphite-coated on one side!

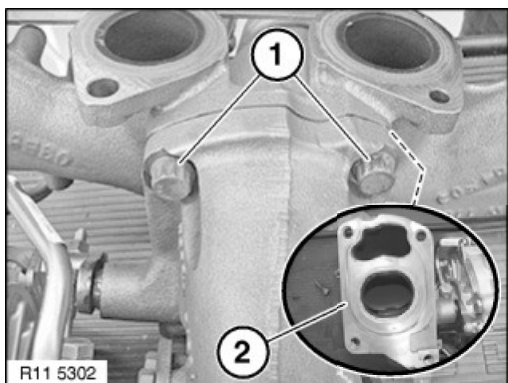
The graphite coating must be fitted on the manifold side.



Only for exhaust manifold replacement:

Release screw (1) from exhaust turbocharger.

Tightening torque [11 65 2AZ](#).



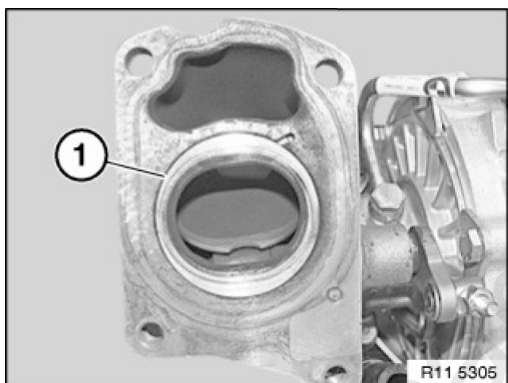
Release screws (1) beneath exhaust manifold.

Tightening torque [11 65 2AZ](#).

Release exhaust turbocharger from exhaust manifold.

Replace exhaust manifold.

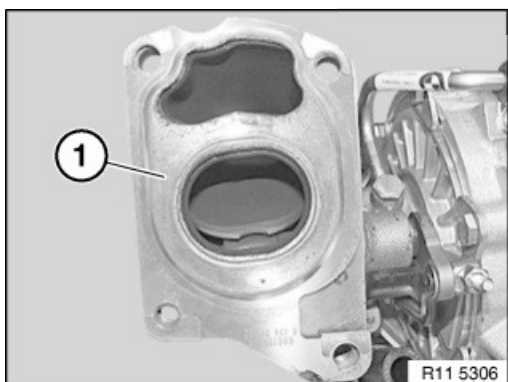
Replace gasket (2) between turbocharger and exhaust manifold.



Installation note:

Spacer ring (1) for control flap of low-pressure stage must be reinstalled.

Operating failure!



Clean sealing surfaces.

Replace gasket (1) between turbocharger and exhaust manifold.

Apply a thin coating of copper paste to bolt thread.

To avoid damaging screw threads and prevent turbocharger leakage, insert retaining screws in 1/2 turns simultaneously.



Assemble engine.