

**Warning!**

Risk of burning!

Only carry out this repair work when the exhaust system has cooled down.

Important!

Removal of the exhaust system must be carried out with the assistance of a second person.

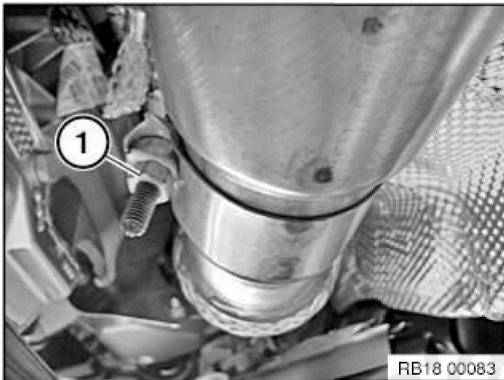


Support exhaust system with a suitable jack and secure it against falling down.

**Necessary preliminary tasks:**

- F31, F33, F34, F36 only:

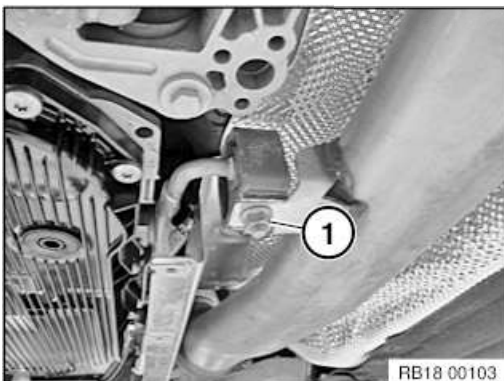
Remove right [trailing link](#).



Unfasten clamp.

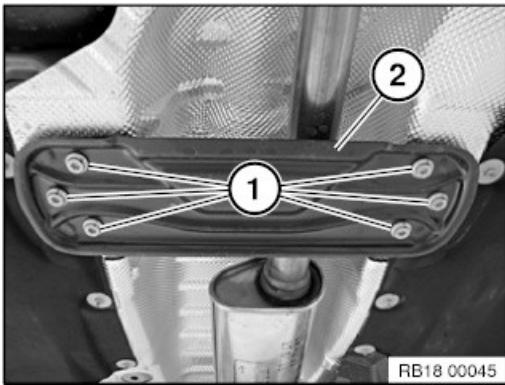
If necessary, renew clamp.

Tightening torque [18 31 2AZ](#).



Slacken nut (1).

Tightening torque [18 31 5AZ](#).

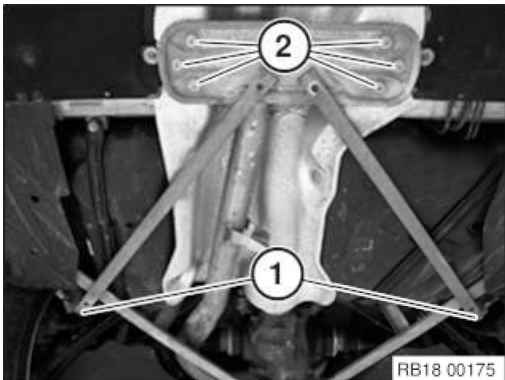


If fitted:

Release screws (1).

Tightening torque [18 20 5AZ](#).

Remove reinforcement plate (2).



If fitted:

Release screws (1).

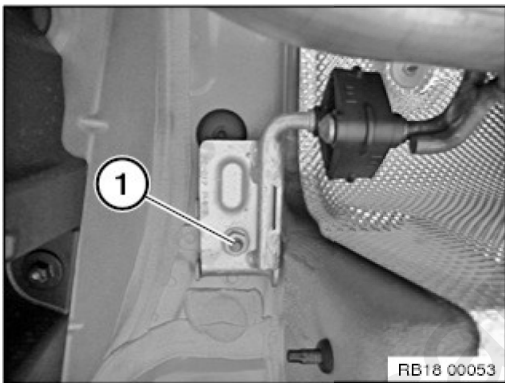
Renew screws (1).

Tightening torque [18 20 6AZ](#).

Unfasten screws (2).

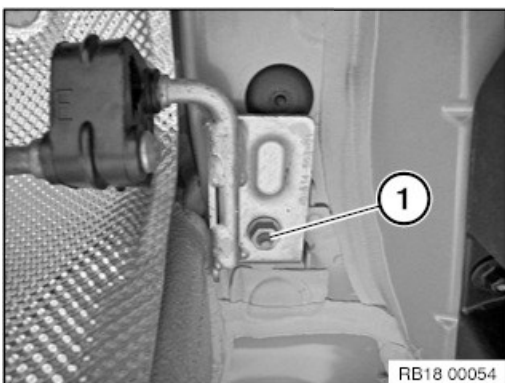
Tightening torque [18 20 5AZ](#).

Remove reinforcement plate with trailing links.



Unfasten nut.

Tightening torque [18 20 4AZ](#).



Slacken nut (1).

Tightening torque [18 20 4AZ](#).

Lower and remove exhaust system with assistance of a second person.



Installation note:

Check exhaust system for leak tightness.

**Warning!**

Risk of burning!

Only perform this repair work after engine has cooled down.

Danger of injury!

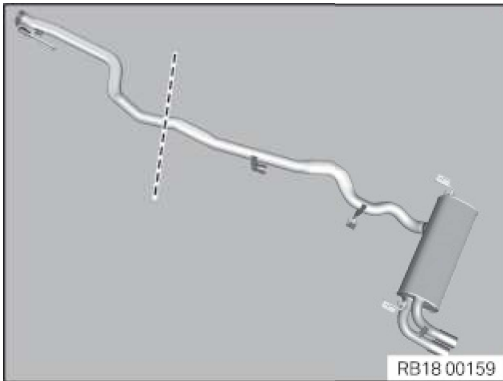
Removal of the exhaust system must be carried out with the assistance of a second person.

**Necessary preliminary tasks:**

- **F31, F33, F34, F36 only:**

Remove right [trailing link](#).

- Support rear silencer with a suitable jack and secure against falling down.

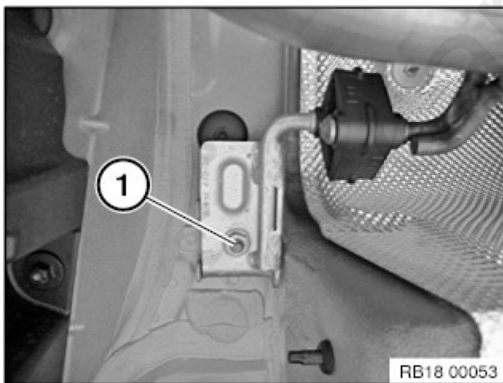
**Note:**

If the separation point line is not marked by a punch mark in the pipe, determine the separation point by means of the pipe length on the new rear silencer.

Carry over separation point to faulty rear silencer and mark.

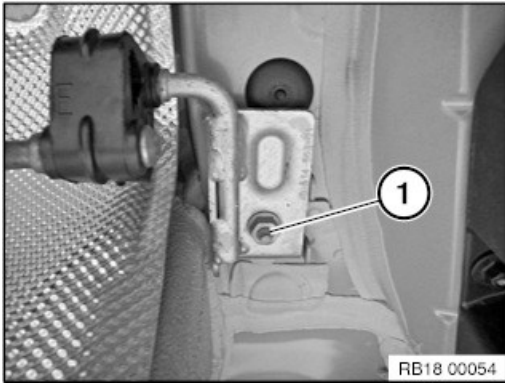
Secure rear silencer against falling off.

Cut through exhaust pipes at marked point with a suitable tool.



Unfasten nut.

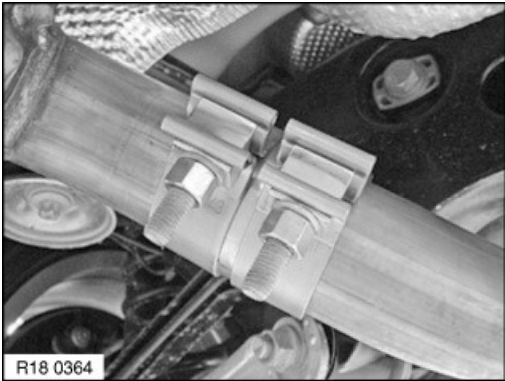
Tightening torque [18 20 4AZ](#).



Slacken nut (1).

Tightening torque [18 20 4AZ](#).

Lower and remove the rear silencer carefully with assistance of a second person.



Installation note:

Adjust rear silencer and connect with clamp.

Align clamping sleeves so that:

- Nuts point downwards.
- Cutting line is in middle of clamping sleeve.
- There is sufficient spacing to adjoining components.

Centre clamp and tighten down.

Tightening torque [18 31 3AZ](#).



Installation note:

Check rubber mount for damage, replace if necessary.

Check exhaust system for leak tightness.

**Special tools required:**

- 83 19 2 211 603
- 83 19 2 211 602

**Warning!**

Only clean an engine that has cooled down.

In order to achieve good cleaning results, the diesel particulate filter should be no more than warm to the touch.



Follow diagnosis instruction.

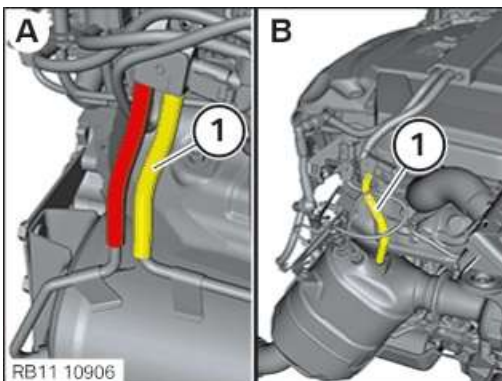
**Necessary preliminary tasks:**

- If necessary, remove [acoustic cover](#) (only F07, F10, F11)
- If necessary, remove [intake silencer housing](#) (only F01, F02, F15, F16)

**Note:**

Starter kit for diesel particulate filter cleaning agent 83 19 2 211 603 (includes pressure canister gun with lance and 1x DPF cleaning agent)

Fill the pressure canister gun (1) with DPF cleaning agent 83 19 2 211 602 (2).

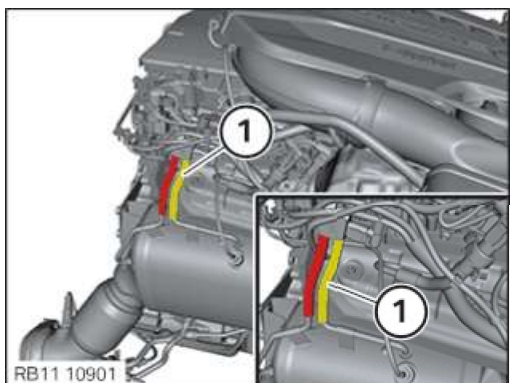
**Important!**

Note: Some engine versions have only one pressure hose (1) (version B).

In versions A and C, always use the pressure hose (1) in front of the diesel particulate filter.

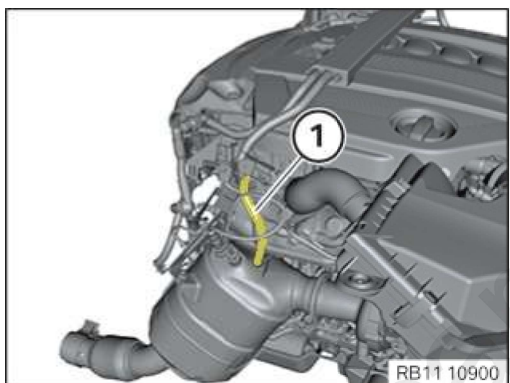


Connect the special sensor (1) directly to the diesel particulate filter.



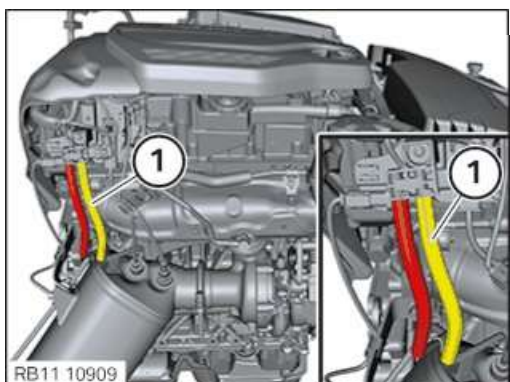
Important!

Note: Engine version A.



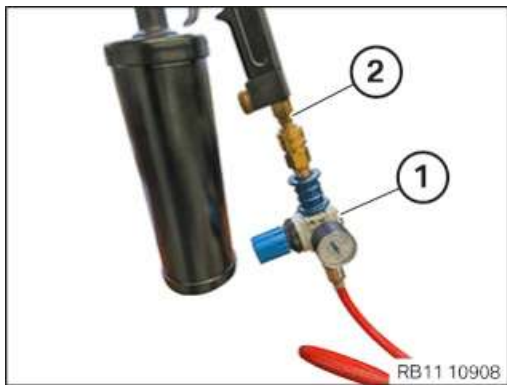
Important!

Note: Engine version B



Important!

Note: Engine version C



Important!

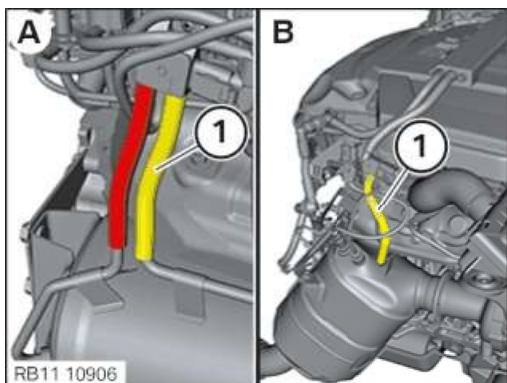
Note:

Only use supplied agitator cup gun.

Operate the agitator cup gun with no more than 2 bar.

Set pressure reducer (1) to 2 bar and connect to the agitator cup gun (2).

Spray DPF solvent cleaner in the direction of honeycomb structure with no more than 2 bar at intervals.



Re-fasten differential pressure hose (1).



Required follow-up work:

- If necessary, install [acoustic cover](#) (only F07, F10, F11)
- If necessary, install [intake silencer housing](#) (only F01, F02, F15, F16)
- Check oil level:
- Delete the fault memory and take the vehicle for a regeneration drive.

**Warning!**

Risk of burning!

Only perform this repair work after engine has cooled down.

Danger of injury!

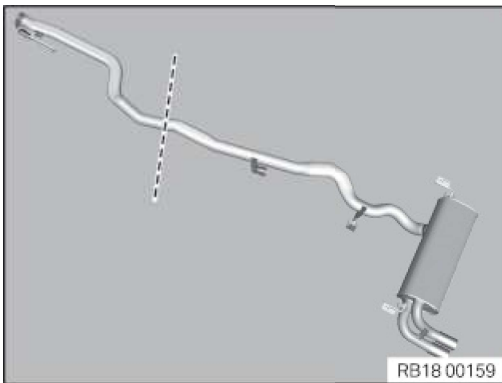
Removal of the exhaust system must be carried out with the assistance of a second person.

**Necessary preliminary tasks:**

- **F31, F33, F34, F36 only:**

Remove right [trailing link](#).

- Support rear silencer with a suitable jack and secure against falling down.

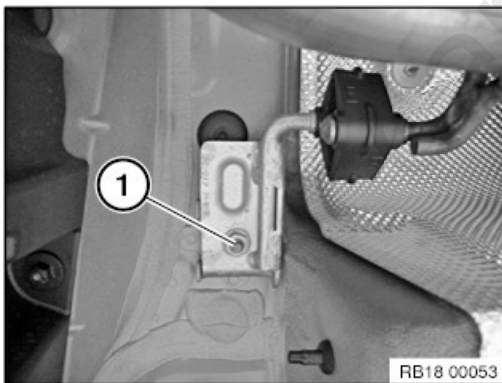
**Note:**

If the separation point line is not marked by a punch mark in the pipe, determine the separation point by means of the pipe length on the new rear silencer.

Carry over separation point to faulty rear silencer and mark.

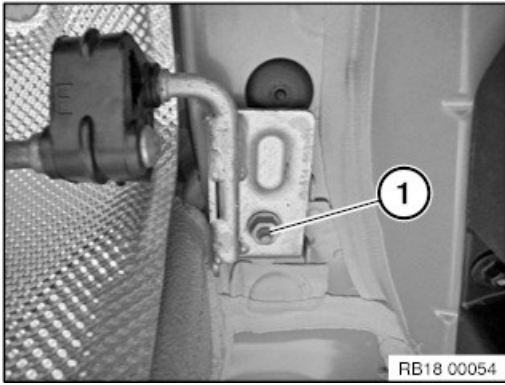
Secure rear silencer against falling off.

Cut through exhaust pipes at marked point with a suitable tool.



Unfasten nut.

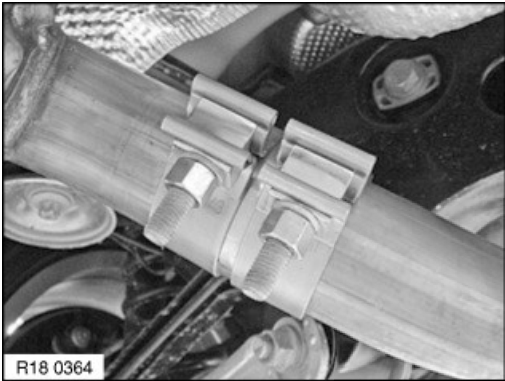
Tightening torque [18 20 4AZ](#).



Slacken nut (1).

Tightening torque [18 20 4AZ](#).

Lower and remove the rear silencer carefully with assistance of a second person.



Installation note:

Adjust rear silencer and connect with clamp.

Align clamping sleeves so that:

- Nuts point downwards.
- Cutting line is in middle of clamping sleeve.
- There is sufficient spacing to adjoining components.

Centre clamp and tighten down.

Tightening torque [18 31 3AZ](#).



Installation note:

Check rubber mount for damage, replace if necessary.

Check exhaust system for leak tightness.

**Special tools required:**

- 83 19 2 211 603
- 83 19 2 211 602

**Warning!**

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In order to achieve good cleaning results, the diesel particulate filter should be no more than warm to the touch.



Follow diagnosis instruction.

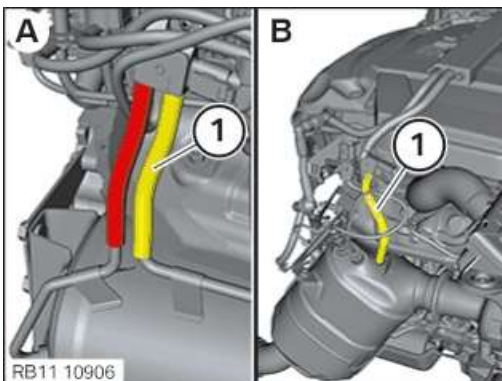
**Necessary preliminary tasks:**

- If necessary, remove [acoustic cover](#) (only F07, F10, F11)
- If necessary, remove [intake silencer housing](#) (only F01, F02, F15, F16)

**Note:**

Starter kit for diesel particulate filter cleaning agent 83 19 2 211 603 (includes pressure canister gun with lance and 1x DPF cleaning agent)

Fill the pressure canister gun (1) with DPF cleaning agent 83 19 2 211 602 (2).

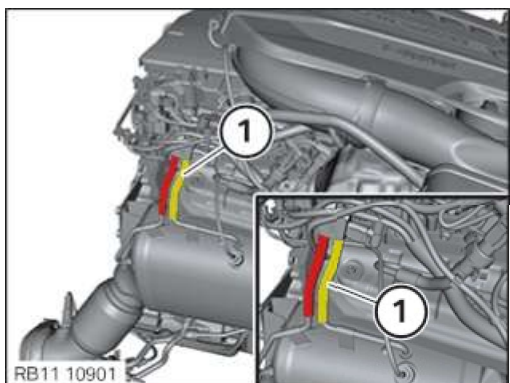
**Important!**

Note: Some engine versions have only one pressure hose (1) (version B).

In versions A and C, always use the pressure hose (1) in front of the diesel particulate filter.

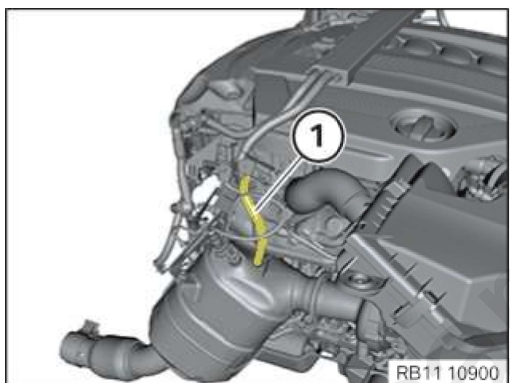


Connect the special sensor (1) directly to the diesel particulate filter.



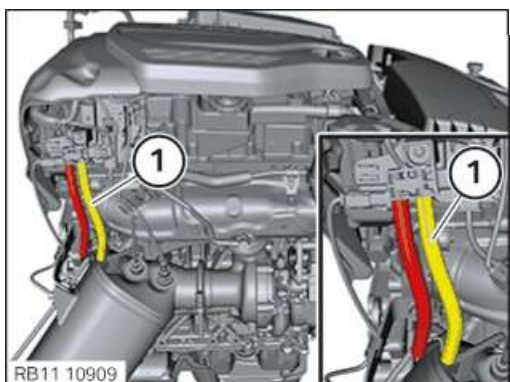
Important!

Note: Engine version A.



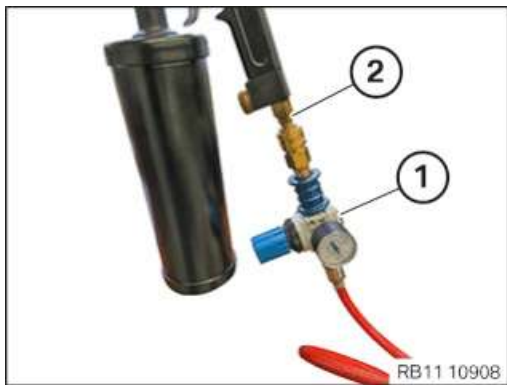
Important!

Note: Engine version B



Important!

Note: Engine version C



Important!

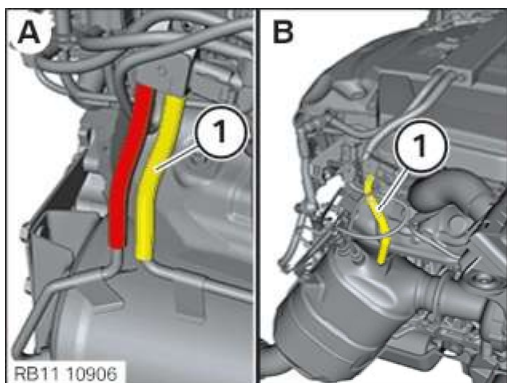
Note:

Only use supplied agitator cup gun.

Operate the agitator cup gun with no more than 2 bar.

Set pressure reducer (1) to 2 bar and connect to the agitator cup gun (2).

Spray DPF solvent cleaner in the direction of honeycomb structure with no more than 2 bar at intervals.



Re-fasten differential pressure hose (1).



Required follow-up work:

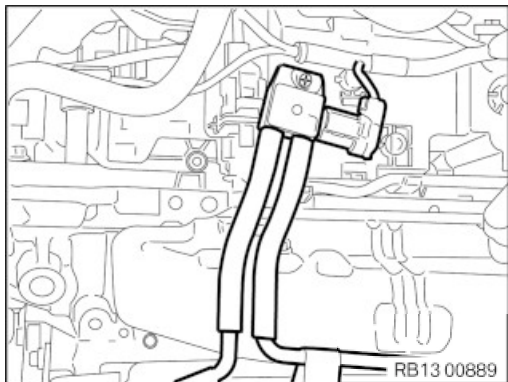
- If necessary, install [acoustic cover](#) (only F07, F10, F11)
- If necessary, install [intake silencer housing](#) (only F01, F02, F15, F16)
- Check oil level:
- Delete the fault memory and take the vehicle for a regeneration drive.



Warning!

Risk of burning!

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



Important!

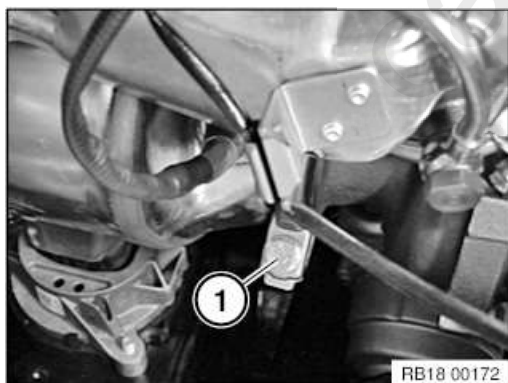
When removing the diesel particulate filter or differential pressure sensor, the pressure hoses between the diesel fuel particulate filter and the differential pressure sensor must be replaced.

Note: Some engine versions have only one pressure hose.



Necessary preliminary tasks:

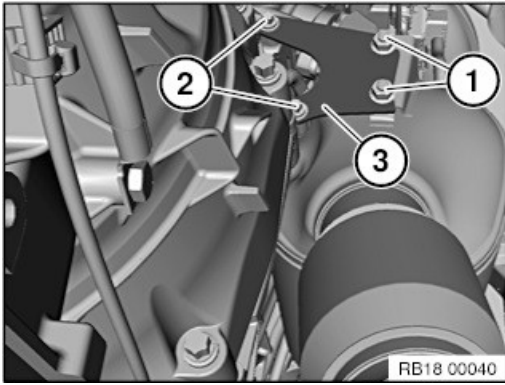
- Remove front [underbody protection](#).
- Remove rear [underbody protection](#).
- Remove [exhaust system](#).
- Remove right [engine mount](#).
- Remove the [exhaust-gas temperature sensors](#).
- Remove [oxygen sensor](#).
- Remove [exhaust gas pressure sensor / differential pressure sensor](#).



Release screw (1) of clamp between diesel particle filter and turbocharger. *Installation note:*

Clamp and gasket must be replaced after disassembly.

Tightening torque [18 31 1AZ](#).



Unscrew nuts (1).

Tightening torque [18 20 1AZ](#).

Unscrew nuts (2).

Tightening torque [18 20 2AZ](#).

Remove bracket (3).

Remove diesel particle filter in downward direction.



Installation note:

Assemble engine.

Check exhaust system for leaks.

After replacing the diesel particle filter, reset adaptation via the BMW diagnosis system.

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Warning!

Risk of burning!

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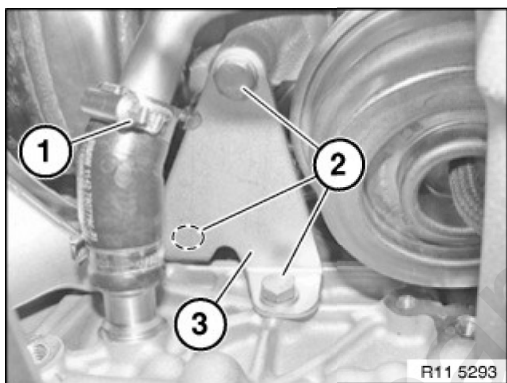
Note:

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](#).



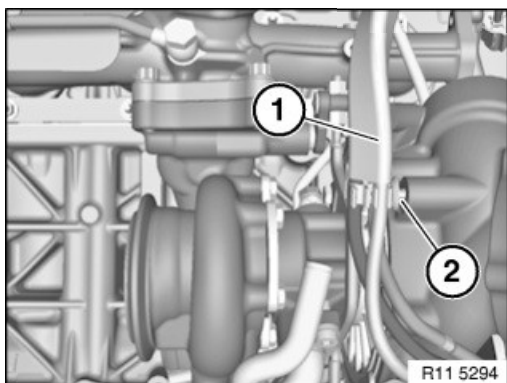
Release clamp (1) on oil return pipe.

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

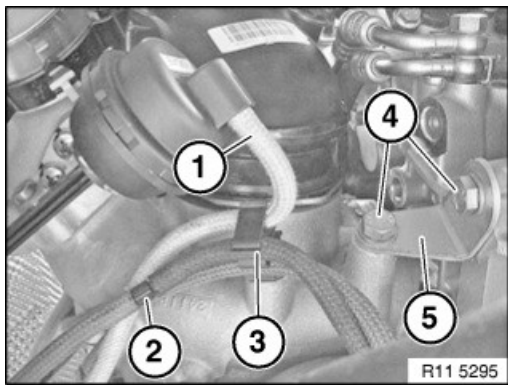
Unfasten screws (2).

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.

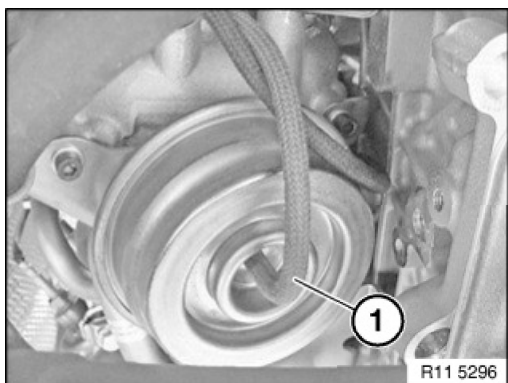
Disconnect red vacuum line at separation point (2) from black vacuum line.

Release vacuum lines from clamp (3).

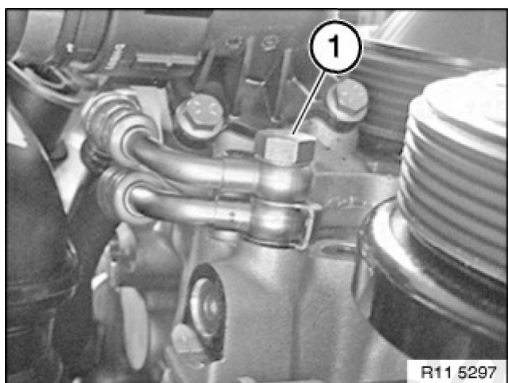
Release screws (4).

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

Remove bracket (5).



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



Release banjo bolt (1).

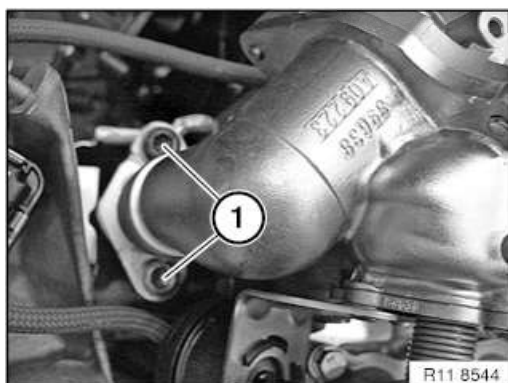
Tightening torque [11 42 2AZ](#).

Note:

Catch escaping engine oil with suitable auxiliary materials.

Replace sealing rings.

Disconnect engine oil pipes from engine block.

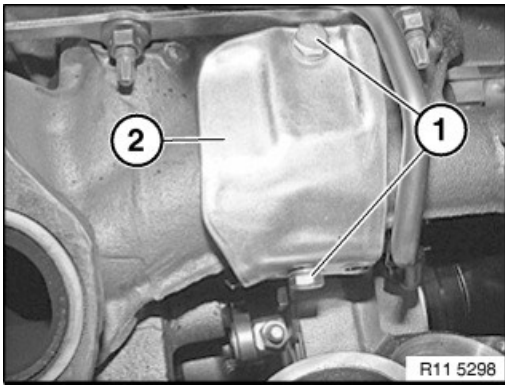


Release screws (1).

Installation note:

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

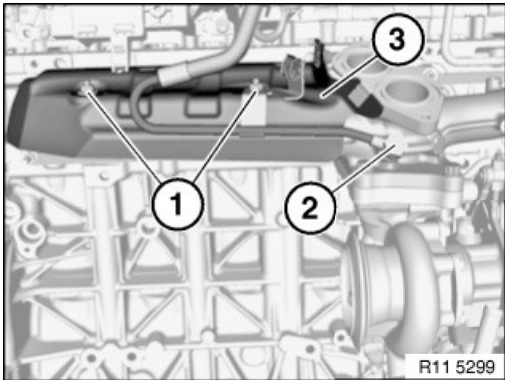
Tightening torque [18 31 8AZ](#).



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](#).

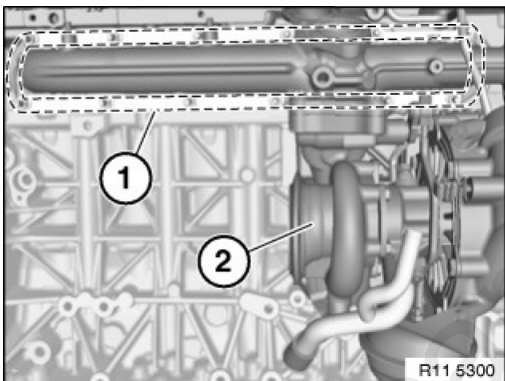
Replace sealing rings.

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:

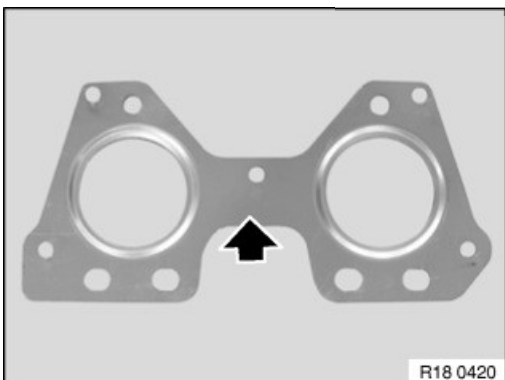
Replace self-locking nuts.

Clean sealing surfaces of exhaust manifold.

Replace gaskets.

Reinstall reinforcement plates.

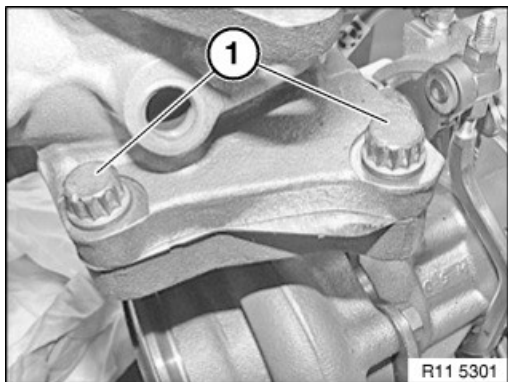
Release exhaust manifold together with exhaust turbocharger (2) from engine block. Feed out and remove exhaust manifold with exhaust turbocharger (2) toward the top.



Important!

Manifold gaskets are graphite-coated on one side!

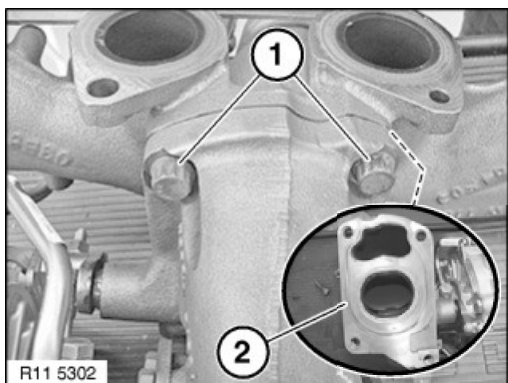
The graphite coating must be fitted on the manifold side.



Only for exhaust manifold replacement:

Release screw (1) from exhaust turbocharger.

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



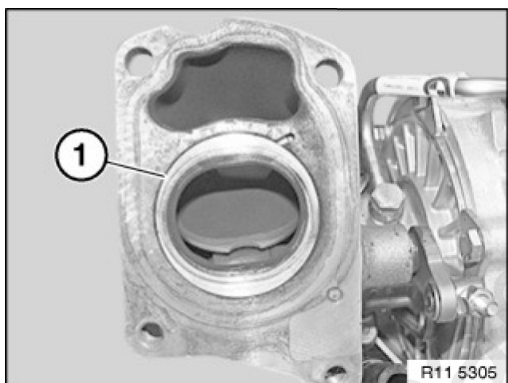
Release screws (1) beneath exhaust manifold.

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

Release exhaust turbocharger from exhaust manifold.

Replace exhaust manifold.

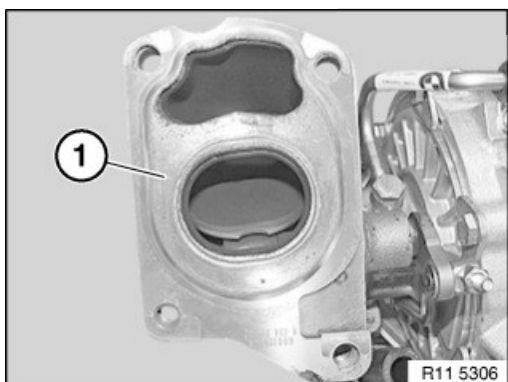
Replace gasket (2) between turbocharger and exhaust manifold.



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.