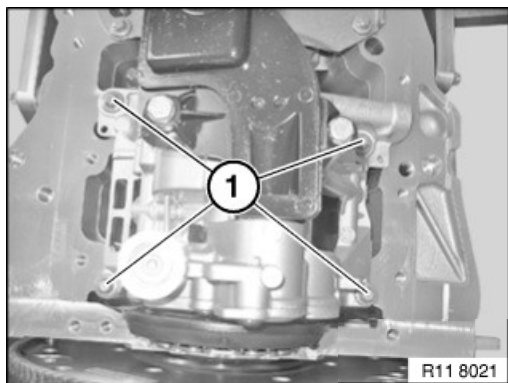




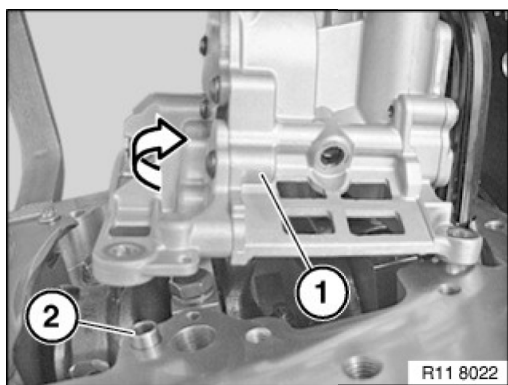
Necessary preliminary work:

- Removing [oil sump](#).



Release screws (1).

Tightening torque: [11 41 1 AZ](#).

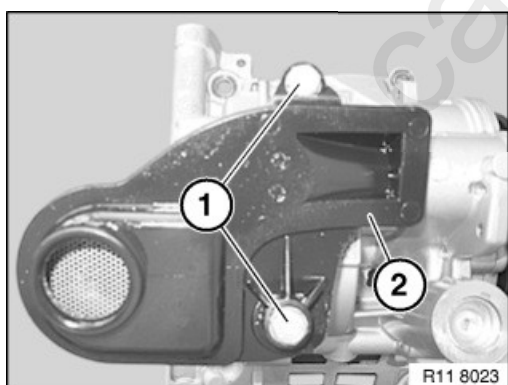


Lift oil/vacuum pump (1) in direction of arrow.

Remove timing chain from sprocket wheel.

Installation note:

Check fitting sleeves (2) for damage.



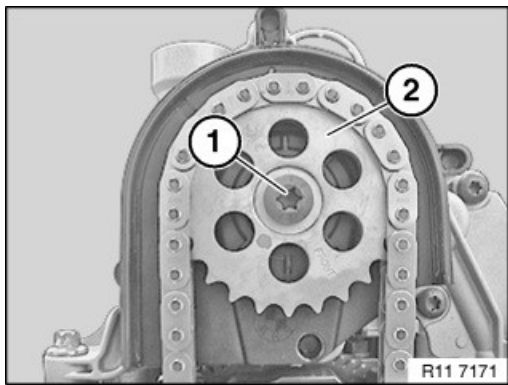
Replacing oil/vacuum pump:

Release screws (1).

Remove oil strainer (2) by turning.

Installation note:

Replace O-ring.



Replacing oil/vacuum pump:

Important!

Left-hand threads.

Bolt (1) does **not have to be opened** when the oil/vacuum pump is exchanged.

Tightening torque: [11 41 2 AZ](#).



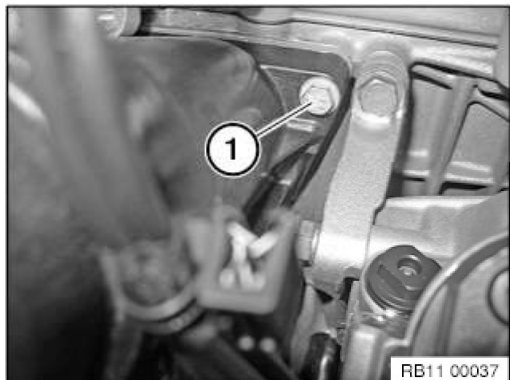
Assemble engine.

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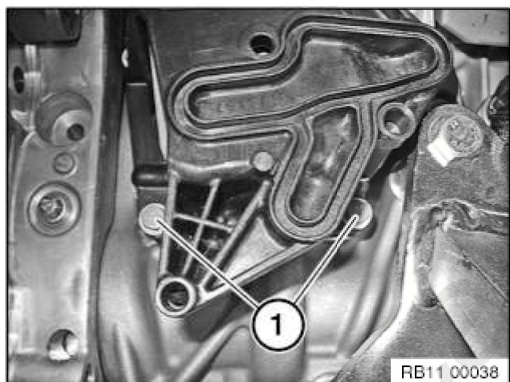
Necessary preliminary work:

- Drain [coolant](#).
- Remove [intake plenum](#).
- Remove [coolant pipe](#).
- Remove [transmission oil cooler](#) (if fitted).
- Change [engine oil](#).



Release screw (1).

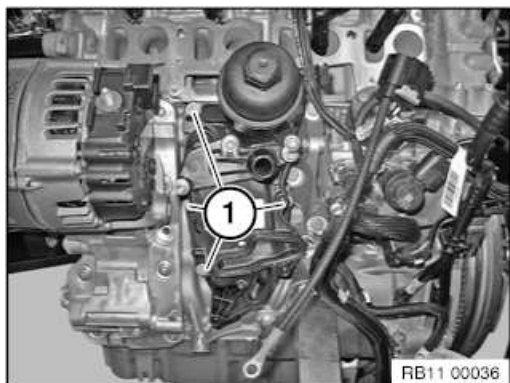
Tightening torque: [11 42 5AZ](#).



Release screws (1).

Tightening torque: [11 42 5AZ](#).

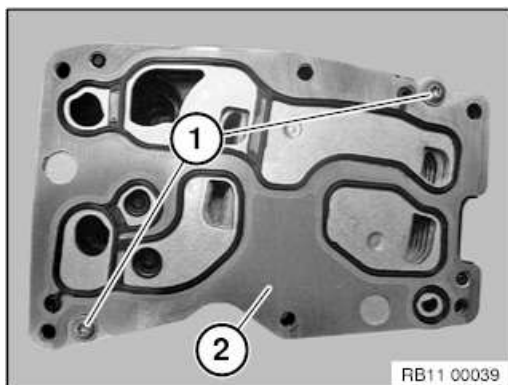
Lift out oil filter housing.



Release screws (1).

Tightening torque: [11 42 5AZ](#).

Remove oil filter module.

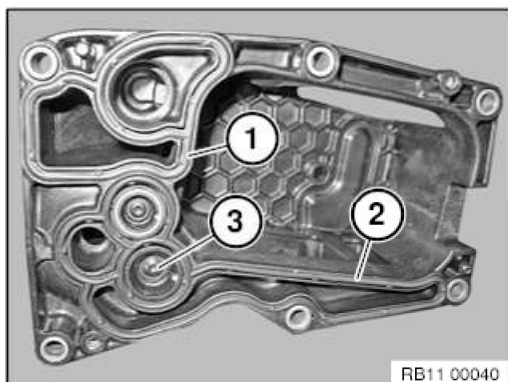


Release screws (1).

Tightening torque: [11 42 5AZ](#).

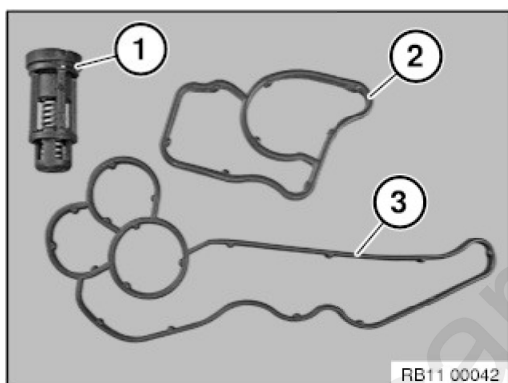
Installation note:

Replace sealing element (2).



Remove seals (1 and 2).

Remove non-return valve (3).



Installation note:

Replace non-return valve (1).

Replace profile seal (2).

Replace profile seal (3).



Assemble engine.

11 42 230 Removing and installing/replacing oil feed line for high-pressure exhaust turbocharger (N57T1)



Warning!

Risk of burning!

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



Recycling:

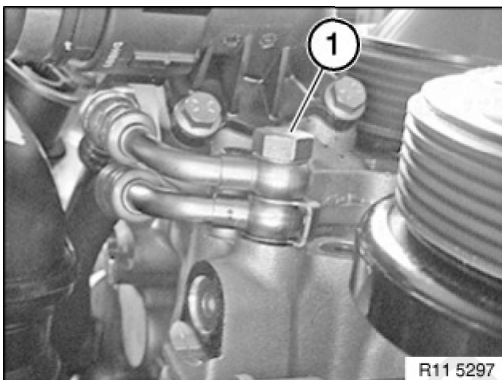
Catch escaping engine oil with suitable auxiliary materials.

Observe country-specific waste disposal regulations.



Necessary preliminary tasks:

- Remove [diesel particulate filter](#).
- Remove [high-pressure exhaust turbocharger](#).
- Remove right [pressure pipe](#).
- Remove [electronics box](#).



Release banjo bolt (1).

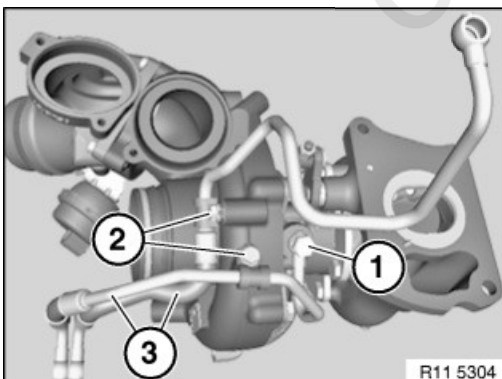
Tightening torque [11 42 2AZ](#).

Note:

Catch escaping engine oil with suitable auxiliary materials.

Replace sealing rings.

Disconnect engine oil pipes from engine block.



Release screws (2) at oil feed line (3) of high-pressure exhaust turbocharger.

Tightening torque [11 42 9AZ](#).

Installation note:

Make sure engine oil pipe is in correct installation position.

Graphic shows removed low-pressure exhaust turbocharger.



Assemble engine.

11 42 235 Removing and installing/replacing oil feed line of low-pressure exhaust turbocharger (N57T1)



Warning!

Risk of burning!

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



Recycling:

Catch escaping engine oil with suitable auxiliary materials.

Observe country-specific waste disposal regulations.



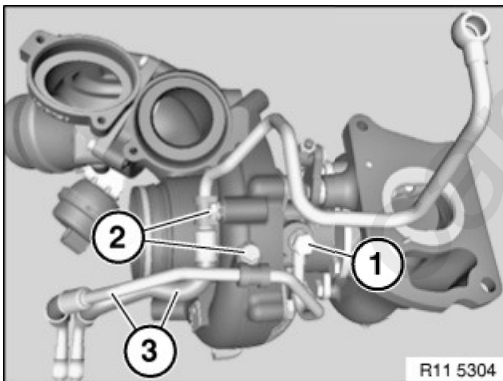
Necessary preliminary tasks:

- Remove [diesel particulate filter](#).
- Remove [high pressure exhaust turbocharger](#).
- Remove right [pressure pipe](#).
- Remove [electronics box](#).



Note:

[Low pressure charger](#) can only be removed together with exhaust manifold.



Release banjo bolt (1).

Tightening torque [11 42 6AZ](#).

Replace sealing rings.

Unfasten screws (2).

Tightening torque [11 42 9AZ](#).

Detach engine oil pipe (3) from exhaust turbocharger and remount on new exhaust turbocharger.

Installation note:

Make sure engine oil pipe is in correct installation position.



Assemble engine.

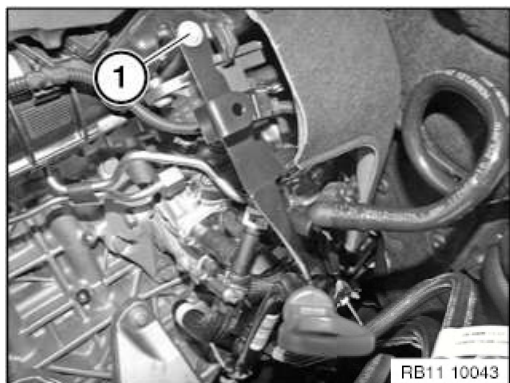
11 43 000
D30 U/O/T 1)

Removing and installing/renewing guide tube for oil dipstick (N57

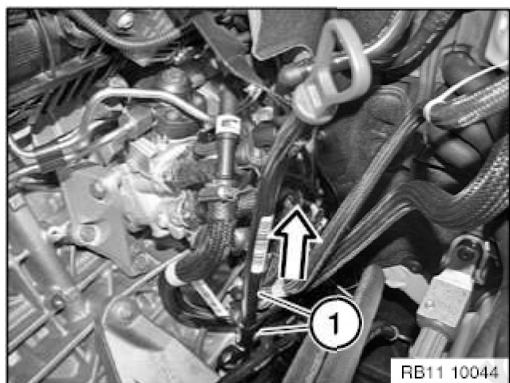


Necessary preliminary tasks:

- Remove [acoustic cover](#)
- Remove [intake silencer housing](#).



Release screw (1) on intake plenum.



Release cables and hoses (1) on guide tube.

Remove guide tube for oil dipstick in direction of arrow.

Installation note:

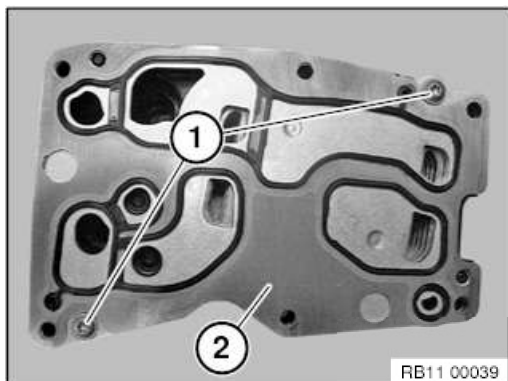
Replace O-ring.

11 44 001 Removing and installing/renewing oil-to-water heat exchanger (N57 D30 U/O/T 1)



Necessary preliminary tasks:

- Remove [full-flow oil filter](#).



Release screws (1).

Remove panel together with heat exchanger (2).

Tightening torque: [11 42 4AZ](#).



Assemble engine.

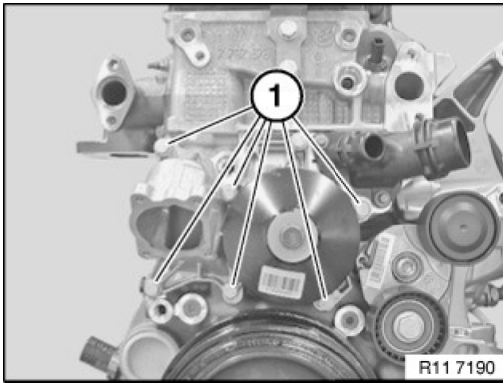
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*Installation note:*

1. All screws, nuts, bolts and hose clamps removed during the repair must be replaced.
2. Retaining elements on chassis and suspension and steering parts must be replaced.

**Necessary preliminary tasks:**

- Remove [drive belt](#) for alternator
- Remove exhaust-gas recirculation cooler
- Remove [coolant thermostat](#)

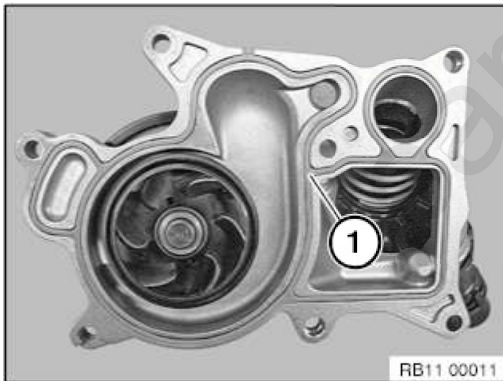


Release bolts (1) and remove coolant pump.

Tightening torque [11 51 1AZ](#).

Note:

Picture shows N47.

*Installation note:*

Seal coolant pump (1) with [liquid sealing compound 2.2](#).



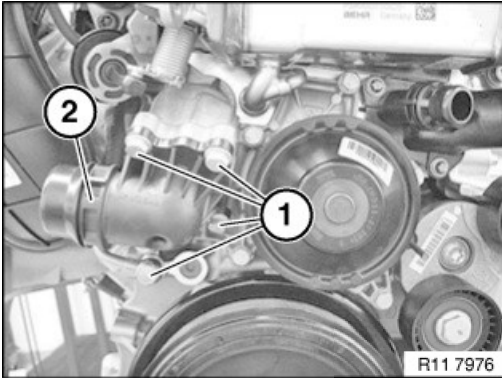
Assemble engine.

Vent cooling system and check for leak tightness.



Necessary preliminary tasks:

- Drain [coolant](#).
- Remove [fan cowl](#).



Graphic N47.

Release coolant hose from coolant thermostat.

Release screws (1) on thermostat housing (on N57T 3 screws).

Tightening torque: [11 00 2 AZ](#)

Remove thermostat housing.

Installation note:

Replace gasket.



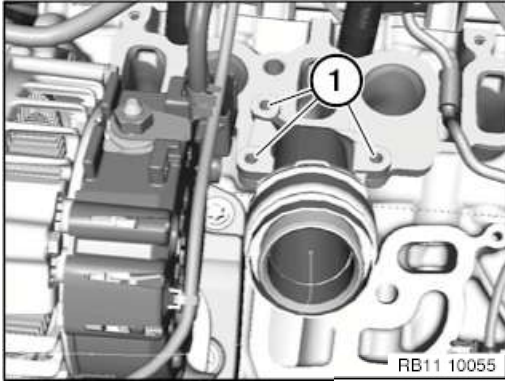
Assemble engine.

[Fill](#) and bleed cooling system.



Necessary preliminary work:

- Remove [intake plenum](#).



Release screws (1).

Tightening torque [11 12 5AZ](#).

Remove connecting branches.

Replace gasket.



Assemble engine.

Top up [coolant](#).

[Check cooling system for leak tightness.](#)