

**Warning!****Risk of scalding!**

Only perform this work after engine has cooled down.

**Attention!**

If a coolant pump that has already been operated is reused, it must be filled with coolant after removal.

Water mixture ratio: Coolant = 1 : 1

Protect plug connections against coolant and dirt contamination.

**Recycling:**

Catch and dispose of drained coolant in a suitable container.

Observe country-specific waste disposal regulations.

**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.

**Attention!****Risk of damage:****Non-visible damage to the coolant pump.**

Forcibly removing, installing or dropping the coolant pump down will damage it.

Remove and install the coolant pump without damaging it and without applying external force.

Avoid impacts/knocks to the coolant pump (e.g.. by tools, falling down, hard contact with base).

**Necessarily** renew the coolant pump after it falls or receives hard blows.

**Installation note:**

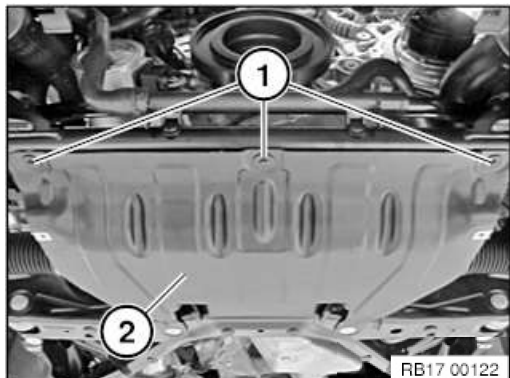
1. Top up coolant.
2. Bring the engine to operating temperature and then check the coolant level and top up if necessary.



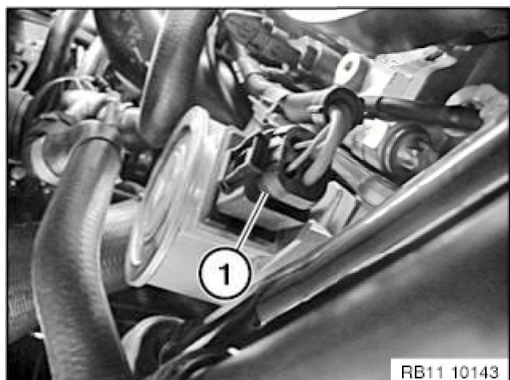


*Necessary preliminary work:*

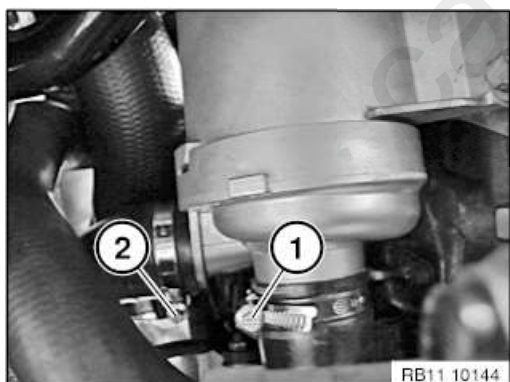
- Follow diagnosis instructions.
- Remove underbody protection
- Remove fan cowl.
- Drain coolant.



Loosen screws (1).  
Remove cover (2).



Disconnect plug connection (1) from coolant pump.

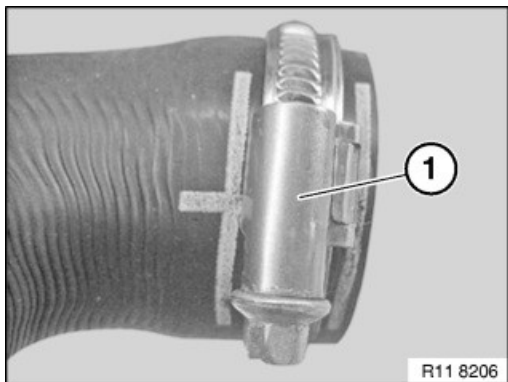


Release hose clamp (1 and 2).

*Installation note:*  
Note installation hose clamps.

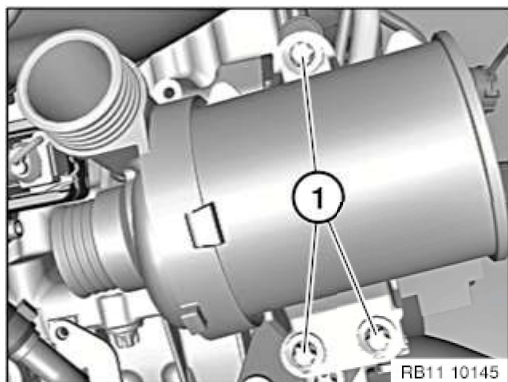
Tightening torque 11 53 5AZ.





**Follow assembly instructions:***Installation note:*

Hose clamps (1) must be installed in the centre of the marked area (see graphic).



Release screws (1).

Tightening torque 11 51 2AZ.

*Installation note:*

**Replace screws.**



*Installation note:*

If the electric coolant pump is reused, it must be rotated one turn due to the breakaway torque at the impellers.

Assemble engine.

Bleeding instructions must be observed without fail.



**Special tools required:**

- 17 2 050

**Warning!****Risk of scalding!**

Only perform this work after engine has cooled down.

**Danger of injury!**

Use only special tool 17 2 050 to lock and release spring strap.

**Recycling**

Observe country-specific waste disposal regulations.

Catch and dispose of drained coolant in a suitable container.

**Important!**

Read and comply with General Notes.

Protect plug connections against coolant and contamination.

Cover plug connections with suitable materials.

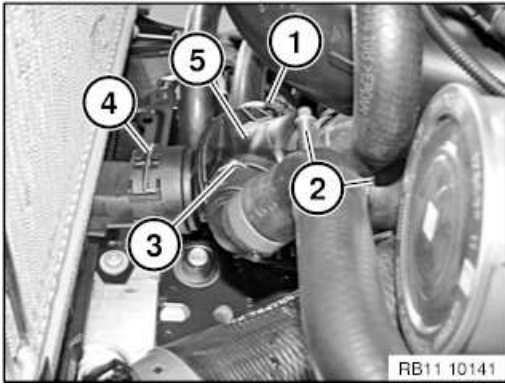
**Necessary preliminary tasks:**

- Drain coolant.
- Remove fan cowl.
- Remove front underbody protection.
- Place collecting vessel for coolant under engine compartment.



Unscrew bolt (1) and set expansion tank aside.





Unfasten plug connection (1).

Loosen hose clamps (2), detach coolant hoses from thermostat.

Unlock quick-action lock (3) and detach coolant hose from thermostat.

Unlock quick-action lock (4) and detach thermostat from radiator.

Remove thermostat (5) toward the top.



Assemble engine.

Fill the cooling system.

Observe capacities.

*Installation note:*

Check coolant hoses for cracks and damage.

Renew coolant hoses as required.

**Recommendation:**

On vehicles older than five years, renew coolant hoses.

Check function of cooling system.

