17 11 ... **Bleed and fill the cooling system for the charge air cooler with the vacuum filling unit**

Special tools required:

- 00 2 030
- 17 0 100

Important!

Lifetime coolant filling:

Never reuse used coolant!

When replacing and removing components which rely on the corrosion protection effect of the coolant, it is essential to change the coolant. The cooling system must therefore be drained and refilled.

In the case of other removal work involving the draining of part quantities of coolant, replace these quantities which have been drained with new coolant.

Important!

You must protect the alternator against contamination by coolant when carrying out repair work on the cooling circuit.

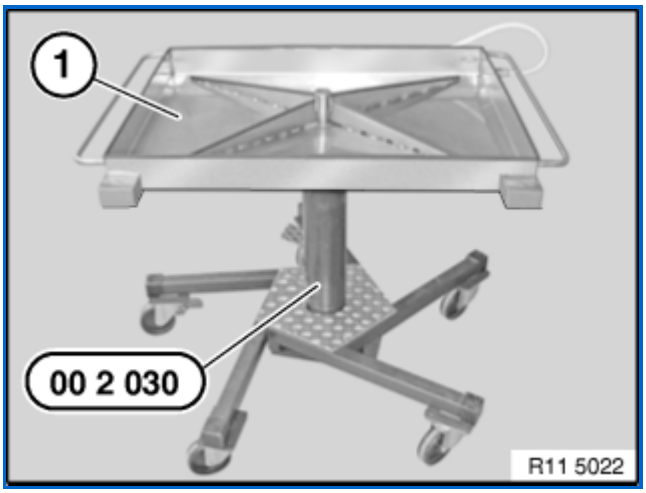
Cover alternator with suitable materials.

Failure to comply with this procedure may result in an alternator malfunction.

Note on ordering:

- Workshop equipment

- Workshop equipment catalogue
- No.- 81 93 2 152 473



Important!

Risk of slipping due to coolant on the floor.

Danger of injury!

Catch and dispose of emerging coolant in drip tray (1) and if necessary special tool 00 2 030 (universal hydraulic lifting equipment).

Recycling:

Observe country-specific waste disposal regulations.

Graphic shows the N63, procedure for other engines identical.

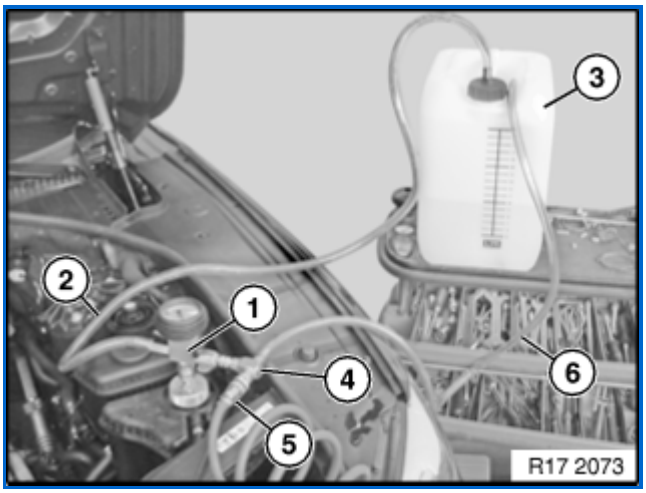
Important!

Check all the coolant hoses before filling the cooling system with the vacuum filling unit.

If necessary, replace damaged and porous coolant hoses.

Vacuum filling unit consists of:

- 1) Filling unit with vacuum meter and shutoff valves
- 2) Filler hose
- 3) Coolant container
- 4) Venturi nozzle
- 5) Compressed air connection (max. 6 bar)



- 6) Outgoing-air hose (lead outgoing-air hose into a collecting container)

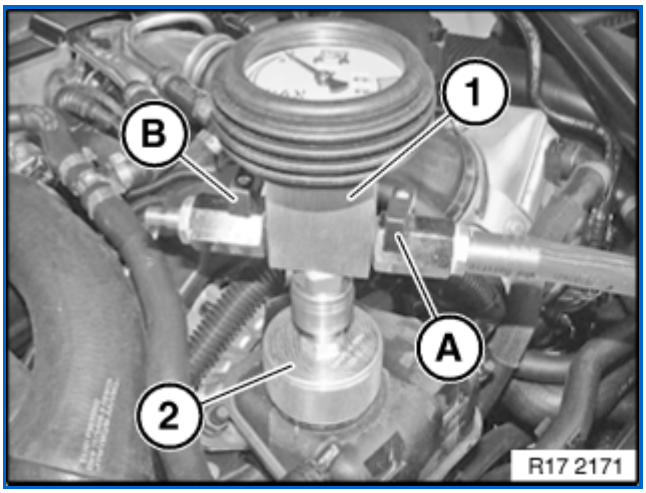
Preconditions

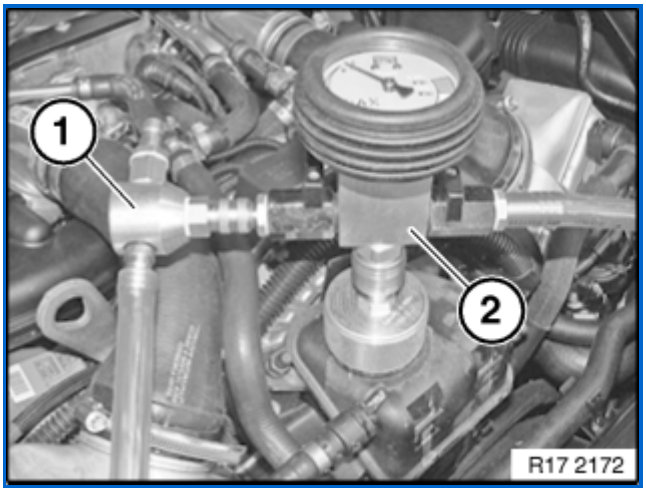
- The expansion tank of the cooling system for the charge air cooler must be empty.
- There must be sufficiently premixed coolant in the filling unit container, 1 - 2 litres more than the vehicle filling capacity.
  - Use only recommended coolant.
  - Observe mixture ratio.
  - Observe capacities.
- Position the filling unit container at the same height as the coolant expansion tank.
- Compressed-air connection with 6 bar pressure present.
- Set heating to maximum temperature.

Application

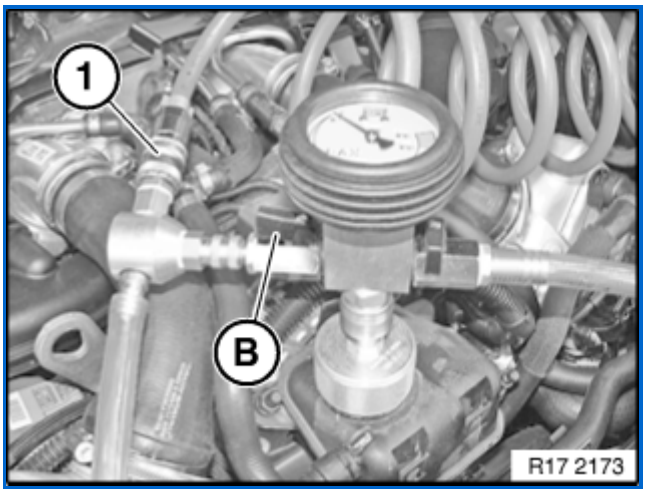
Connect filling unit (1) with a suitable adapter (2) from special tool set 17 0 100 to the charge air cooler expansion tank.

Shutoff valves (A) and (B) must be closed.





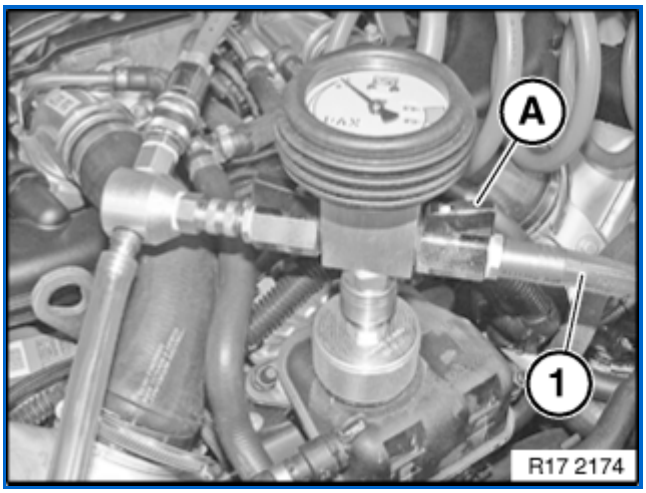
Connect venturi nozzle (1) to filling unit (2).



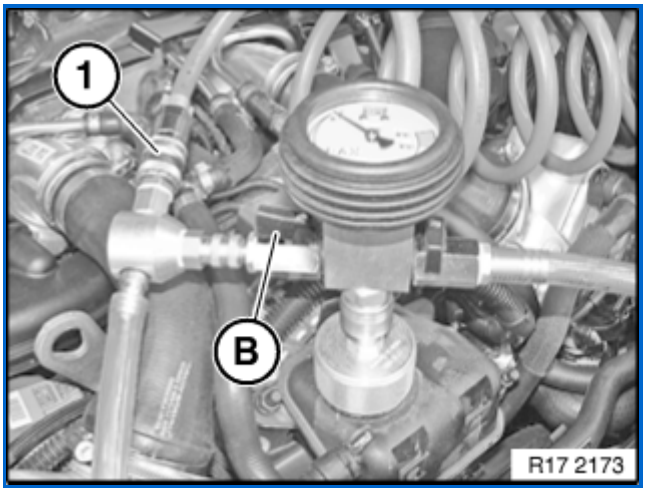
Connect compressed air (1) and open shutoff valve (B).

The venturi nozzle produces a flow noise.

Then open shutoff valve (A) until the filling hose (1) is free of bubbles. Close shutoff



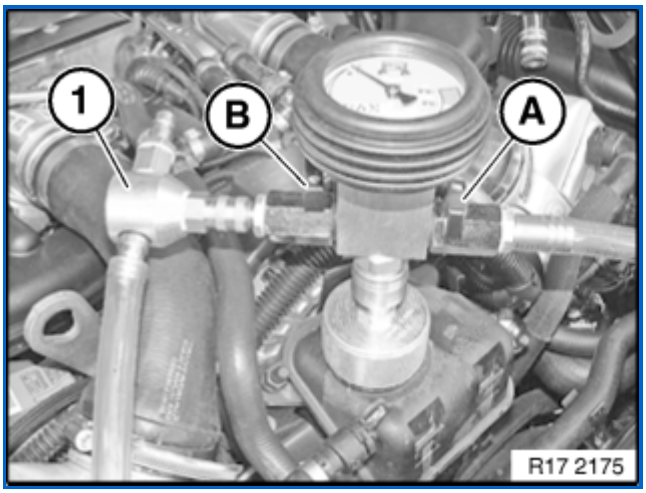
valve (A) again. The filling hose (1) is vented in this way.



Shutoff valve (B) remains open. Generate vacuum in cooling cycle for approx. 1 minute. The end vacuum is reached at a vacuum of -0.7 to -0.95 bar. Green scale on the vacuum meter.

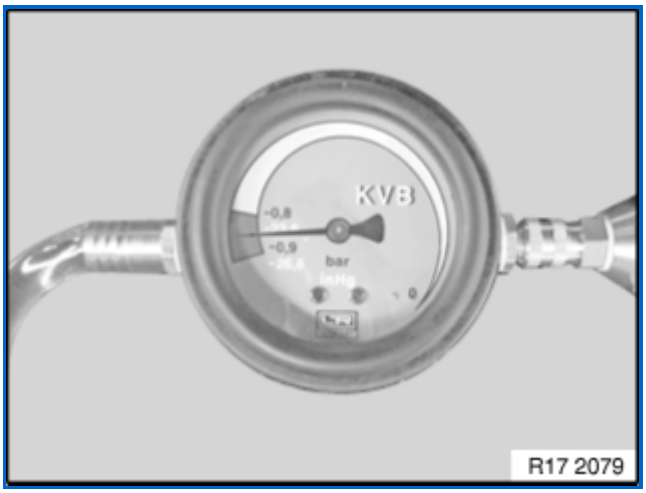
Note:
The coolant hoses contract during vacuum build-up.

Then close shutoff valve (B) again.



Both shutoff valves (A) and (B) must be closed. Then seal Venturi nozzle (1).

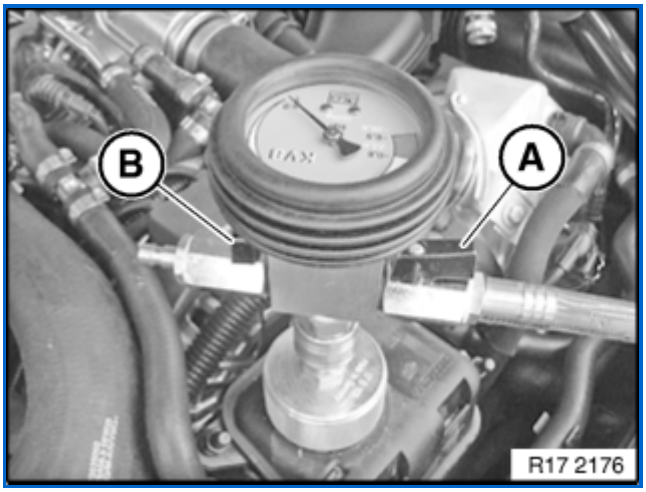
The cooling system must hold the vacuum for 30 seconds. If the needle in the vacuum



meter falls, this indicates a leak in the cooling system.

If the vacuum remains constant, proceed with filling.

In the event of a leak, check the cooling system for the charge air cooler for leaks.



Important!

There must be sufficiently premixed coolant in the filling unit container, 1 - 2 litres more than the vehicle filling capacity.

Position the filling unit container at the same height as the coolant expansion tank.

Shut-off valve (B) remains closed during the filling process.

To fill the cooling system, open shutoff valve (A) to filling unit container.

Coolant is now added.

The filling procedure is finished when the needle in the vacuum meter is at 0 bar or no longer falls.

If necessary, reduce remaining vacuum. Open shutoff valve (B) to do so.

Remove filling unit with adapter from expansion tank.

After the cooling system has been filled with the vacuum filling unit, another bleeding procedure must be performed for the following vehicles:

- F01, F02, F03, F04, F07, F06, F10, F11, F12, F13 N63 B40/B44 O 0/1
- F01, F02, F03, F04 N74

- F06, F10, F12, F13 S63 B44 T 0

Close charge air cooler expansion tank.

Adjust coolant level to maximum.

Check cooling system for charge air cooler for leaks.