17 00 039  Venting and filling cooling system with vacuum filling unit

Special tools required:

- 00 2 030
- 17 0 113

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 partial quantities of coolant, replace these quantities which have been drained with new coolant.

Important!

You must protect the alternator against contamination by coolant before carrying out any work on the coolant 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 lifter).

Recycling:
Observe country-specific waste-disposal regulations.

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 shut-off
- 2) Filler hose
- 3) Coolant container
4) Venturi nozzle
5) Compressed-air connection (max. 6 bar)
6) Outgoing-air hose (lead outgoing-air hose in collecting container)

Prerequisites

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

Application

Connect filling unit (1) with adapter (2) 17 0 113 to coolant expansion tank.
Shut-off valves (A) and (B) must be closed.

Connect venturi nozzle (1) to filling unit (2).
Connect compressed air (1) and open shut-off valve (B). The venturi nozzle produces a flow noise.

Then open shut-off valve (A) until filler hose (1) is filled without bubbles. Close shut-off valve (A) again. This vents the filler hose (1).

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

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

Then close shut-off valve (B) again.

Both shut-off valves (A) and (B) must be closed. Then seal venturi nozzle (1).

The cooling system must maintain 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 event of leaks, check cooling system 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 shut-off valve (A) to filling unit container.

Coolant is now added.

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

If necessary, release remaining vacuum. To do so, open shut-off valve (B).

Remove filling unit with adapter from expansion tank.

Adjust coolant level to max.

Close coolant expansion tank.

Installation:

Close cap (1) until the arrow marks line up.
Check function of cooling system. Check cooling system for leaks.