17 00 010 Checking cooling system for leaks (with cooling system tester) 4 FRUs

+ 17 00 502



Take care when working on the cooling system: risk of burns if the system is hot.

Do not work on the cooling system until it has had ample time to cool down.

Preparatory work

Removing right bottom side panel Removing right radiator cowl Remove the right side panel

Core activity

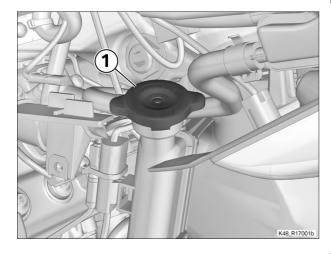
(-) Checking cooling system for leaks

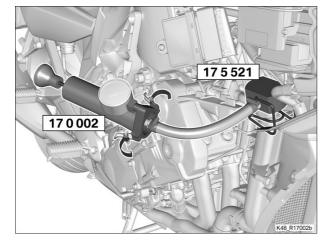
Precondition

• Engine cold.

Removing radiator cap

• Remove cap (1).





 Secure pump (No. 17 0 002) with adapter (No. 17 5 521) to the filler neck.

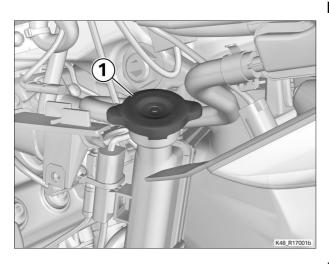
Test

• Pressure-test the cooling system; the pressure must remain unchanged for at least 5 minutes.

Technical	data		
Cooling system test pressure	Test pressure must remain unchanged: min 5 min	2 bar	

Result: Pressure loss

Measure:

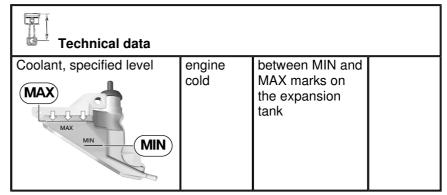


Check for leaks and rectify.

- Installing radiator cap
- Install cap (1).

- Allow the engine to warm up until the fan cuts in.
- Allow the engine to cool down.

• Check the coolant level; top up if necessary.



Finishing work

Install the right side panel Install the right radiator cowl Installing right bottom side panel Final check of work performed

17 00 020 Checking coolant concentration

+ 17 00 503



Take care when working on the cooling system: risk of burns if the system is hot.

Do not work on the cooling system until it has had ample time to cool down.

Core activity

(-) Checking coolant

Test

• Check the ability of the coolant in the expansion tank to resist freezing temperatures by checking the antifreeze concentration in the expansion tank.

Technical da	ta		
Coolant, frost protection		min –30 ℃	

Result: Ability to resist freezing temperatures is not ensured.

Measure:

• If necessary, increase the proportion of antifreeze until ability to resist freezing temperatures is ensured.

Technical da	ita		
Coolant, total capacity	Expansion tank	0.5	
	Coolant system, total	3.5	
	Fluids and lub	pricants	<u> </u>
	Antifreeze		

Finishing work

Final check of work performed

17 00 035 Draining coolant, refilling/bleeding system 8 FRUs

+ 17 00 504



Take care when working on the cooling system: risk of burns if the system is hot.

Do not work on the cooling system until it has had ample time to cool down.

Preparatory work

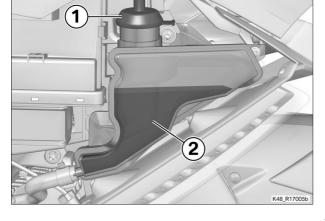
Removing left bottom side panel Removing left radiator cowl Removing left side panel Removing right bottom side panel Removing right radiator cowl Remove the right side panel

Core activity

(-) Completely draining cooling system

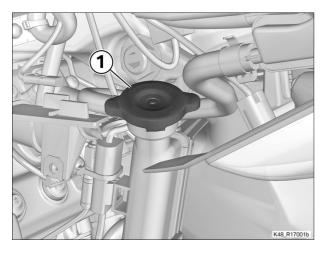
Drawing off coolant from expansion tank

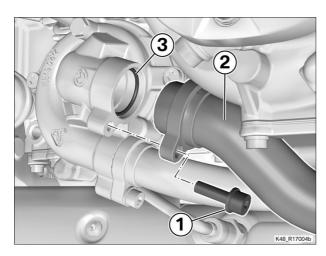
• Remove cap (1) and draw off coolant (2) with a suitable tool, such as a large syringe, for example.



Removing radiator cap

• Remove cap (1).





) Warning

Take care when working on the cooling system: risk of burns if the system is hot.

Do not work on the cooling system until it has had ample time to cool down.

- Place a suitable container in position.
- Remove screw (1).
- Disconnect return line (2) for the coolant from the coolant pump, noting O-ring (3).
- Drain the coolant into the container.

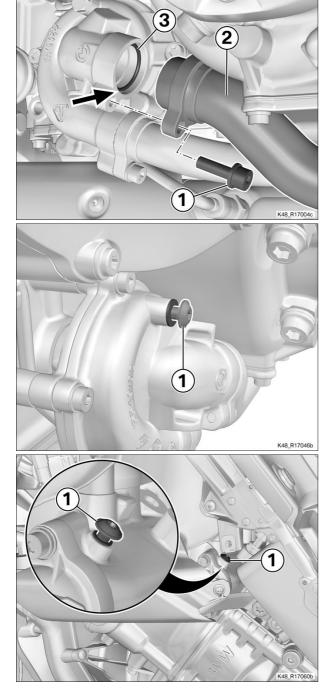
(-) Filling and venting complete cooling system

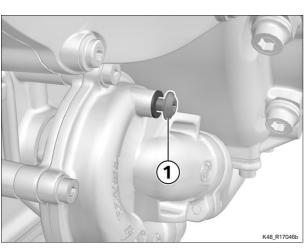
- · Clean the tapped hole.
- Check O-ring (3) for damage; replace if not in perfect condition.
- Make sure that O-ring (3) is seated in the groove (arrow).
- Push return line (2) for the coolant into the coolant pump.
- Install new screw (1).

Tightening torques		
Coolant line to pump		
M6 x 20, Replace screw	10 Nm	
Micro-encapsulated		

• Slacken screw (1).

• Slacken screw (1).





If the system is not refilled with fresh coolant, check the coolant to ensure that the proportion of antifreeze is sufficient to ensure resistance to freezing temperatures.

Technical dat	ta		
Coolant, frost protection		min –30 ℃	

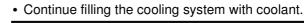
• Fill the cooling system with coolant.

Technical da	ata		
Coolant, total capacity	Expansion tank	0.5	
	Coolant system, total	3.5	
	Fluids and lub	oricants	
	Antifreeze		

>> Air escapes initially, then coolant.

• Tighten screw (1).

Tightening torques		
Vent screw in coolant pump		
M6 x 10	8 Nm	



Technical da	ta		
Coolant, total capacity	Expansion tank	0.5	
	Coolant system, total	3.5	
	Fluids and lub	pricants	
	Antifreeze		

>> Air escapes initially, then coolant.

• Tighten screw (1).

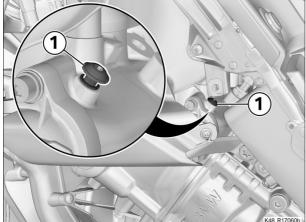
Tightening torques		
Breather screw to cylinder head		
M6 x 10	8 Nm	

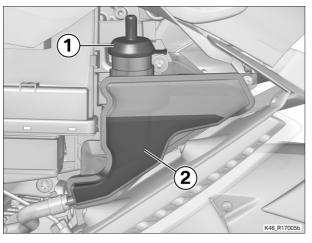
• Completely fill the cooling system with coolant.

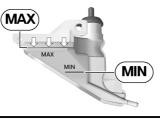
Filling expansion tank

• Pour in coolant (2).

Technical data			
Coolant, specified level	engine cold	between MIN and MAX marks on	







the expansion tank	

• Install cap (1).

◀

(-) Checking cooling system for leaks

Precondition

• Engine cold.



 Secure pump (No. 17 0 002) with adapter (No. 17 5 521) to the filler neck.

Test

• Pressure-test the cooling system; the pressure must remain unchanged for at least 5 minutes.

Technical	data		
Cooling system test pressure	Test pressure must remain unchanged: min 5 min	2 bar	

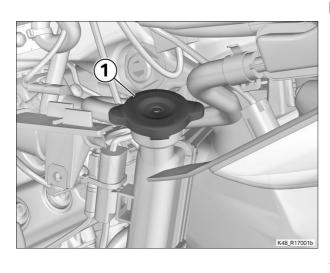
Result: Pressure loss

Measure:

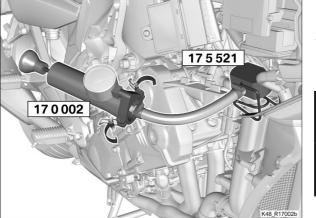
• Check for leaks and rectify.

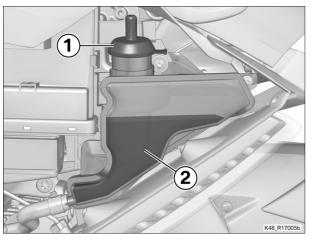
Installing radiator cap

• Install cap (1).



Filling expansion tank





Pour in coolant (2).

Technical data			
Coolant, specified level	engine cold	between MIN and MAX marks on the expansion tank	
MIN			

Install cap (1).

•

• Allow the engine to warm up until the fan cuts in.

• Allow the engine to cool down.

• Check the coolant level; top up if necessary.

Technical data			
Coolant, specified level	engine cold	between MIN and MAX marks on the expansion tank	

Finishing work

Install the right side panel Install the right radiator cowl Installing right bottom side panel Install the left side panel Installing left radiator cowl Installing left bottom side panel Final check of work performed