

---

PuMA measure

## Cooling System Refilling and Top Up

UR-V-2 65452047-01 - 6/16/20

### Complaint:

Customer may experience intermittent warnings regarding the temperature of the engine or transmission, for example:

CC message 'Engine too hot'

CC message 'Gearbox too hot' (RR4/5/6)

CC message 'Gearbox temperature, drive with care' (RR4/5/6)

---

### Cause

Deposits in the coolant system reduce the through flow of coolant, thus also reducing the cooling power. These deposits (internal corrosion) occur due to incorrect coolant composition.

The mixture ratio of 50% water and 50% antifreeze was not observed. Pure water may also of been added to the cooling system.

A coolant type not approved by Rolls-Royce may also have been used.

In addition, the transmission cooler thermostat may become stiff/blocked due to these deposits. (RR4/5/6 only).

---

### Measure

This measure is to provide further background information regarding an incorrectly filled or topped up cooling system, normal diagnosis steps should still be followed.

During routine service and repair it is imperative that only the correct mix of coolant/water is added to the cooling system.

This applies to both the low temperature (charge air) cooling circuit and the high temperature (engine) cooling circuit.

Important Information:

Only carry out repair work on the cooling system when the engine is cooled down.

Only use coolant prescribed by Rolls-Royce.

PuMA measure 64757083 provides further information regarding the available coolant types.

Observe the mixture ratio without fail !!!

If the cooling system has been incorrectly filled or topped up and deposits have formed, then it will be necessary to flush the complete cooling system adhering to the following procedure.

Always follow the relevant repair instructions !!!

Procedure:

1) Drain and refill cooling system.

2) Heat up the vehicle (driving on roads required) until an engine oil temperature of 100°C is reached and then drive for a further 15 minutes.

Tip: The engine oil temperature can be read out using the instrument cluster test functions or using an offline ISID.

3) Let the vehicle cool down.

4) Drain and refill cooling system again.

5) Heat up the vehicle again (driving on roads required) until an engine oil temperature of 100°C is reached and then drive for a further 15 minutes.

Note: Repeated rinsing of the cooling system improves the cleaning of the cooling system.

6) Let the vehicle cool down.

7) Replace the main coolant radiator on all models.

Observe the repair instructions, 17 11 000 - Remove and install/replace radiator

In addition on RR4/5/6 models replace the gearbox oil cooler.

17 22 010 Removing and installing/replacing transmission oil cooler for automatic transmission (N74R)

7.1) Fill cooling system again with new coolant.

7.2) Check cooling system for water tightness:

Observe Repair Instructions:

RR4/5/6

17 00 ... - Instructions for working on cooling systems

17 00 009 - Draining and adding coolant (N74R)

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

RR11/12/31

17 00 008 - Draining and topping up coolant for high temperature circuit

17 00 039 - Bleed cooling system and check it for water tightness with vacuum filler device

Note:

If the customer tops up coolant themselves as necessary:

Inform the customer about using the coolant prescribed by Rolls-Royce and observing the mixture ratio.

Incorrectly filled cooling systems and any associated repairs are not claimable through the warranty system.

---

## Validity information

---

<b>Model series:</b>	[RR5, RR4, RR11, RR6, RR12, RR31]
<b>Engine range:</b>	[N74L, N74R, N74N]
<b>Body style:</b>	[ALL]
<b>Fault codes:</b>	[4209A1, 4209A3, 4209A2]
<b>Production period:</b>	-

---

## Repair overviews

---

17/22/002/27266/11289, Transmission oil cooler, thermostat, Cannot be encoded with VFC, , Obstruction, , Checking, repairing, replacing

83/10/15404, Coolant, , , System fault coolant filling, , Checking, repairing, replacing

17/11/001/27260/31170/11273, Radiator, Cannot be encoded with VFC, , Obstruction, , Checking, repairing, replacing