PuMA measure

Check Control Message "Top up Coolant" despite correct coolant level

UR-V-2 65522171-01 - 4/20/21

Complaint:

Check Control message (ID 166): Top up coolant

The Check control message (ID166) appears despite correct coolant level.
Coolant is visible in the expansion tank.

The complaint occurs sporadically.

The problem described here only concerns the High Temperature coolant circuit.

Rolls-Royce vehicles affected:

RR11, RR12, RR21, RR22, RR31 with engines N74L (= N74B68U2) and N74N (= N74B68M2)
Production period: May, 1st 2018 until September, 18th 2020

Cause

There are various possible causes for this displayed Check Control message.

Most probable cause:

Expansion Tank, Rolls-Royce part number 17 13 8 689 765.

The expansion tank contains an opaque protective sleeve filled with silicate gel.
During a limited production period, expansion tanks were installed in series production in which this protective sleeve was inserted in the wrong position.
The protective sleeve in the wrong position can partially, or completely block the passage to the coolant level sensor chamber in the expansion tank.
As a result, the chamber of the coolant level sensor can be sucked empty when the engine is running and the coolant level sensor will report a coolant level that is too low.

NOTE*
The cause described here only affects coolant expansion tanks with part number 17 13 8 689 765

Measure

In the event of a customer complaint, proceed as follows.

Warning:
Hot fluids.
Risk of scalding!
Perform work on a cold engine.

1) Check the coolant level of the high-temperature coolant circuit.
See attachment, page 1:
The red line indicates the coolant level in the expansion tank, below which the Check Control message (ID 166) is output. This shows that the check control message (ID 166) is only output when the value falls significantly below the MIN mark. This circumstance is important for the further procedure.

Visual check whether coolant is detected in the expansion tank (if necessary also below the minimum mark).

1.1) Coolant is visible in the expansion tank:
Continue with point 2.

1.2) No coolant is visible in the expansion tank:
Top up coolant.
If necessary, check the high-temperature coolant circuit for leaks (depending on the amount of coolant that was missing and also depending on whether the complaint occurred repeatedly). The further procedure depends on the test result.
Steps 2 and 3 below are not relevant.

2) Check the plug connection to the coolant level sensor.

2.1) The plug connection is OK:
Continue with point 3.

2.2) The plug connection is not OK (for example, the contacts are corroded):
Repair the connector on the wiring harness end.
Replace expansion tank sensor if necessary.
The following step 3 is not relevant.

3) Check the production date of the expansion tank.
See attachment, page 2:
The red arrow points to the place where the production date is written.
On the right figure you can see the production date: Day-Month-Year
9-9-2020 means 09 September 2020.

3.1) The production date of the expansion tank is before 09 September 2020:
Replace expansion tank.
Note:
The Central Parts Warehouse (ZTA) Dingolfing has been purged.
Observe repair Instructions 17 11 100 .

3.2) The production date of the expansion tank is after 08 September 2020:
Perform diagnosis with ISTA.

Invoicing:
Processing and reimbursement must be conducted according to current warranty conditions.

When invoicing under warranty, always use the defect code of the damage-causing component.

Recommended defect code, if the expansion tank caused the complaint:
17 11 02 37 00

The flat rate unit numbers and flat rates are saved in the AIR system.

Validity information

Model series:	[RR22, RR11, RR12, RR31, RR21]
Engine range:	[N74L, N74N]
Body style:	[ALL]
Fault codes:	[]
Production period:	from 5/1/18 to 9/18/20

Repair overviews

83/10/15404, Coolant, Cannot be encoded with VFC, , Cannot be encoded with VFC, , Checking, repairing, replacing

Attachments

Number of attachments: 1