

TECHNICAL BULLETIN

LTB00352NAS5

28 APR 2014



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NOTE: The information in Technical Bulletins is intended for use by trained, professional Technicians with the knowledge, tools, and equipment required to do the job properly and safely. It informs these Technicians of conditions that may occur on some vehicles, or provides information that could assist in proper vehicle service. The procedures should not be performed by 'do-it-yourselfers'. If you are not a Retailer, do not assume that a condition described affects your vehicle. Contact an authorized Land Rover service facility to determine whether this bulletin applies to a specific vehicle.

This reissue replaces all previous versions. Please destroy all previous versions. Only refer to the electronic version of this Technical Bulletin in TOPIx.

Changes are highlighted in gray

SECTION: 303-03

Coolant Pump Diagnostics

AFFECTED VEHICLE RANGE:

LR4 (LA)

Model Year: 2010 Onwards
VIN: AA510178 Onwards

Range Rover Sport (LW)

Model Year: 2014 Onwards
VIN: EA300000 Onwards

Range Rover (LG)

Model Year: 2013 Onwards
VIN: DA001204 Onwards

Range Rover Sport (LS)

Model Year: 2010-2013
VIN: AA212147-DA814822

Range Rover (LM)

Model Year: 2010-2012
VIN: AA304426-CA393639

MARKETS:

NAS

CONDITION SUMMARY:

Situation: The fluid level in the engine coolant system expansion tank may fall below the minimum level over a period of time or a 'Low coolant level' message is displayed in the message center. Upon inspection, a leak may be found to be from the front of the engine-driven coolant pump, together with excessive wear of the coolant pump bearing.



NOTE: The coolant pump can display some dry coolant residue on the pump body and surrounding area during normal operation. A small amount of coolant may temporarily weep through the pump seals or from the evaporation chamber. This does not affect the operation of the pump or the cooling system and does not damage the coolant pump. A small amount of dry coolant residue on the pump body, pulleys, belts, or around the front of the engine is not alone sufficient justification for changing a coolant pump.

Cause: This may be caused by coolant ingress into the coolant pump bearing housing, leading to one or more of the following:

- corrosion of the bearing;
- incorrect support for the impeller shaft;
- accelerated wear of the mechanical flat face of the seal; and
- coolant loss sufficient to display the warning message.

Action: Should a customer express this concern, follow the Service Instruction outlined below.

PARTS:

No Parts Required

TOOLS:

Refer to Workshop Manual for any required special tools.

WARRANTY:



NOTE: Repair procedures are under constant review, and therefore times are subject to change; those quoted here must be taken as guidance only. Always refer to TOPIx to obtain the latest repair time.



NOTE: DDW requires the use of causal part numbers. Labor only claims must show the causal part number with a quantity of zero.

| DESCRIPTION | SRO | TIME (HOURS) | CONDITION CODE | CAUSAL PART |
|---|--------------------|--------------|----------------|-------------|
| Coolant pump bearing diagnostics - LR4 (L319) | 26.50.89.27 | 0.3 | 42 | LR010801 |
| Coolant pump bearing diagnostics - Range Rover Sport (L494) | 26.50.89.27 | 0.3 | 42 | LR010801 |
| Coolant pump bearing diagnostics - Range Rover Sport (L320) | 26.50.89.27 | 0.4 | 42 | LR010801 |
| Coolant pump bearing diagnostics - Range Rover (L322, L405) | 26.50.89.27 | 0.3 | 42 | LR010801 |
| Coolant pressure test - All | 26.10.07 | 0.2 | 42 | LR010801 |



NOTE: Normal Warranty policies and procedures apply.

SERVICE INSTRUCTION:



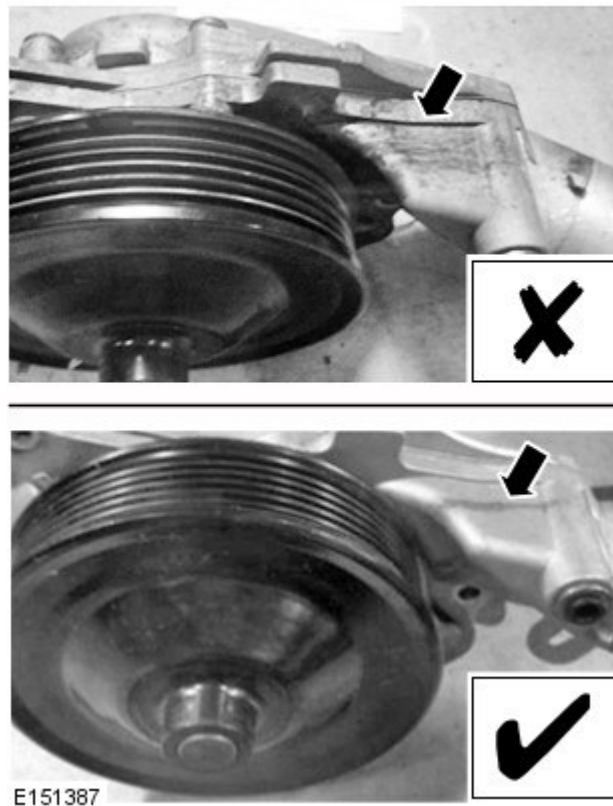
NOTE: The coolant pump may display dry coolant residue on the pump body and surrounding area during normal operation. A small amount of coolant may temporarily weep through the pump seals or from the evaporation chamber. This does not affect the operation of the pump or the cooling system and does not damage the coolant pump. A small amount of dry coolant residue on the pump body, pulleys, belts, or around the front of the engine is not alone sufficient justification for changing a coolant pump.



1. NOTE: Acceptable Coolant Pump Witness Marks

Check the coolant pump for witness marks before continuing:

- Note the severity of any witness marks on the repair order.



2. Check the expansion tank level and message center for a low coolant warning; record on the repair order.

- If there is low coolant in the expansion tank and/or a low coolant message from the message center, continue to next step.
 - Any leak located must be carried out as a separate claim.

3. Top up the coolant to the correct level.

4.  **NOTE: A 1.0-1.5 PSI pressure drop is normal and does not indicate a system leak. An air leak may also be present in the pressure test equipment.**

Carry out a cooling system pressure test to 1 bar (15 PSI) for 5 minutes:

- Record the pressure drop (if any) on the repair order.
- If there is a cooling system pressure drop of more than 1.5 PSI, investigate the system for fresh wet leaks and record on the repair order. A UV light may be helpful as there is a UV dye in the coolant.
 - Fresh wet coolant dripping from the pump indicates a leak. Repair as required; to be carried out as a separate claim.
 - Coolant residue is normal and does not indicate a leak; continue to the next step.

5. If no leak is found starting the engine from cold, listen for unusual noise (moaning, groaning, rumbling, grinding):

- Record results on the repair order.

6. Stop the engine; slacken the auxiliary drive belt tensioner and slip the auxiliary drive belt to one side.

7. Hold the coolant pump pulley firmly and rock it up and down by hand:

- Feel for excessive play;
- Rotate the pulley $\frac{1}{4}$ turn and repeat the rocking motion a few times;
- Record the results on the repair order.

8. Spin the pulley and feel for roughness:

- Record the results on the repair order.

9. If there is excessive play or roughness in the pulley bearing, refer to TOPIx Workshop Manual section 303-03 and replace the coolant pump; to be carried out as a separate claim.