

TECHNICAL BULLETIN  
LTB00352NAS6  
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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.**

Changes are highlighted in gray

**SECTION: 303-03**

Coolant Pump Diagnostics

**AFFECTED VEHICLE RANGE:**

**LR4 (LA)**

**Model Year:** 2010-2015

**VIN:** AA510178-FA745526

**Range Rover Sport (LW)**

**Model Year:** 2014-2015

**VIN:** EA300000-FA509159

**Range Rover (LG)**

**Model Year:** 2013-2015

**VIN:** DA001204-FA201814

**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)	<b>26.50.89.27</b>	0.3	42	LR055239
Coolant pump bearing diagnostics - Range Rover Sport (L494)	<b>26.50.89.27</b>	0.3	42	LR055239
Coolant pump bearing diagnostics - Range Rover Sport (L320)	<b>26.50.89.27</b>	0.4	42	LR055239
Coolant pump bearing diagnostics - Range Rover (L322, L405)	<b>26.50.89.27</b>	0.3	42	LR055239
Coolant pressure test - All	<b>26.10.07</b>	0.2	42	LR055239

 **NOTE: Normal Warranty procedures apply.**

### **SERVICE INSTRUCTION:**

Updates to the Service Instruction have **not** been highlighted.

 **NOTE: check the parts catalog to make sure the repair is made at the correct level. Coolant pump, cooling system gaskets, and seals are available through the parts catalog. These parts should be used whenever possible rather than fitting complete assemblies.**

 **NOTE: in all cases, reference this Technical Bulletin in the technician comments on the Warranty claim and on the Parts return tag (if applicable). Parts may be subject to investigation.**

1. Check the coolant expansion tank level and message centre for a low coolant warning and record on the repair order. With the engine cold, top up the coolant as required to the maximum level in the coolant expansion tank, record the quantity of coolant required to top up the expansion tank to maximum level on the repair order.
2. The current step will specify what to do next depending on where the VIN of the current vehicle falls within the following bearing seal introduction VINs list below.
  - If the vehicle was manufactured before the bearing seal introduction VIN in the table below, a new pump should only be installed if the pump shows clear signs of leakage, and Steps 4-6 have been carried out. Install the coolant pump (see TOPIx Workshop Manual section 303-03). Do not continue with the rest of this Service Instruction.

- If the vehicle was manufactured after the bearing seal introduction VIN in the table below, then go to the next step of this Service Instruction.

## 3.0L SC V6

MODEL CODE	MODEL NAME (engine)	BEARING SEAL INTRODUCTION VIN
LA - L319	LR4 (V6)	EA680828
LG - L405	Range Rover (V6)	EA110440
LW - L494	Range Rover Sport (V6)	EA000011

## 5.0L NA / SC V8

MODEL CODE	MODEL NAME (engine)	BEARING SEAL INTRODUCTION VIN
LA - L319	LR4 (V8)	CA618233
LW - L494	Range Rover Sport (V8)	EA000002
LG - L405	Range Rover (V8)	DA000010
LS - L320	Range Rover Sport (V8)	CA742657
LM - L322	Range Rover (V8)	CA376755

3. On the current coolant pump there may be some signs of leakage, such as dry coolant residue, but this is not a reason to replace the coolant pump. It is necessary to check the coolant pump for an abnormal noise from the bearings, free play in the pulley, or a grinding/rumbling feel when rotating the pulley by hand see Steps 7-9.
4. If there is low coolant in the expansion tank and or a low coolant message from the message centre, continue with the next step of this Service Instruction to identify the source of the leak. If a leak is located this must be claimed as a separate Warranty Claim.



5. **NOTE: A 1-1.5 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 on the repair order.

6. If there is a cooling system pressure drop of more than 1.5 PSI, then investigate the system for fresh (wet) leaks and record on the repair order. A UV light may be helpful as there is UV dye in the coolant. If there is fresh coolant dripping from the pump - this indicates a leak.

**Coolant Pump Bearing Check Procedure:**

7. Slacken the primary drive belt tensioner and move the primary drive belt to one side.
8. Hold the coolant pump pulley firmly and rock it up and down by hand.
  - Feel for excessive play.
  - Rotate the pulley a ¼ turn and repeat the check. Do this check twice more.
  - Record the results on the repair order.
9. Spin the pulley and feel for roughness and record the results on the repair order. Check for free play on the coolant pump pulley shaft and record the results on the repair order.

- 10.** The coolant pump should only be replaced where there are signs of free-play, excessive noise, or grinding/rumbling in the bearing (see TOPIx Workshop Manual section 303-03). Make sure that any repair is completed at the lowest possible component level - for example replacing gaskets and seals where appropriate rather than higher level assemblies.