

TECHNICAL BULLETIN

LTB00352NAS4
12-DEC-12



ISSUE '4' CHANGES ARE NOT HIGHLIGHTED

SECTION: 303

Engine Coolant Leak at Coolant Pump

AFFECTED VEHICLE RANGE:

LR4 (LA)

VIN: AA510742-Onwards

Model Year: 2010-Onwards

Range Rover Sport (LS)

VIN: AA212147-BA299999

BA700000-Onwards

Model Year: 2010-Onwards

Range Rover (LM)

VIN: AA304426-CA399999

Model Year: 2010-2012

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

Action: In the event of a customer concern of the above, refer to the Repair Procedure outlined below.

PARTS:

No parts necessary

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 DDW to obtain the latest repair time.

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

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.

<i>DESCRIPTION</i>	<i>SRO</i>	<i>TIME (HOURS)</i>	<i>CONDITION CODE</i>	<i>CAUSAL PART</i>
Coolant pump bearing diagnostics - LR4	26.50.89.27	0.30	42	LR010801
Coolant pump bearing diagnostics - Range Rover Sport	26.50.89.27	0.40	42	LR010801
Coolant pump bearing diagnostics - Range Rover	26.50.89.27	0.30	42	LR010801
Coolant pressure test - All	26.10.07	0.20	42	LR010801

Normal Warranty policies and procedures apply

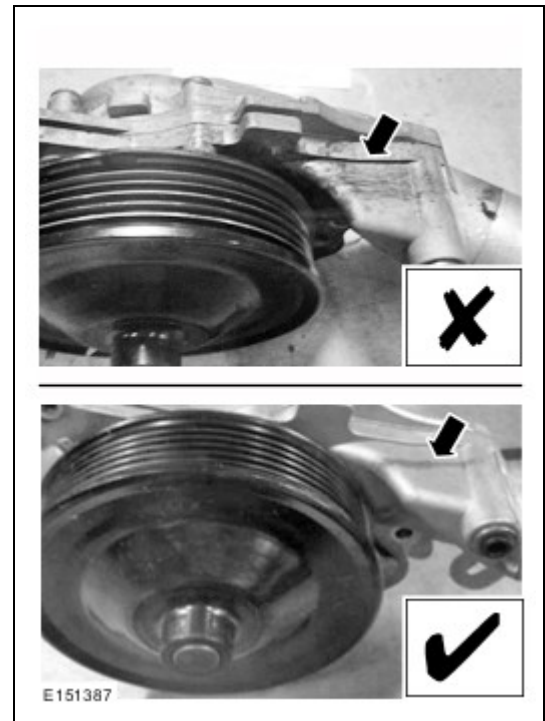
REPAIR PROCEDURE

△ **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.

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.
- If a leak is located this must be claimed 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 (15PSI) pressure test the system 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, then investigate the system for fresh wet leaks and record on a repair order. A UV light may be helpful as there is a UV dye in the coolant.
 - If there is fresh wet coolant dripping from the pump – this indicates a leak. Coolant residue is normal and does not indicate a leak.
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 FEAD belt tensioner and slip the FEAD 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 ¼ turn and repeat the rocking motion a few times.
 - Record results on the repair order.
 8. Spin the pulley and feel for roughness.
 - Record results on the repair order.
 9. If there is excessive play in the pulley bearing, refer to Workshop Manual section 303-03 and replace the coolant pump; to be carried out as a separate claim.