

TECHNICAL INFORMATION



No: 12/02/02/NAS
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New Style 'Crucifix' Seals

AFFECTED VEHICLE RANGE:

Land Rover V-8	
Range Rover Classic (LH)	All
Range Rover (LP)	All
Discovery (LJ)	All
Defender (LD)	All
Discovery Series II (LT)	All

SITUATION:

OIL LEAKAGE FROM REAR MAIN BEARING AREA

The customer may complain of oil leakage at the rear of the engine. Several seal areas can contribute to oil seepage in this location.

- Leak from the rear main bearing cap side seals.
- Leak from the rear main bearing cap sealant area.
- Leak from the crankshaft rear oil seal.

In addition the rear camshaft oil galley and bore plugs can contribute to oil seepage. Refer to TIB 12/01/02/NAS for additional information.

RESOLUTION:

NEW STYLE BEARING SIDE CAP (CRUCIFIX) SEALS INTRODUCED

Where a complaint of an oil leak from the above listed area is confirmed, replace the rear main bearing cap side seals with the new rear main bearing cap side seals now used in production.

As part of the replacement of the side seals the crankshaft rear oil seal should also be replaced and the rear cam galley and bore plugs inspected for seepage.

PARTS INFORMATION:



NOTE: The new side seals have a different appearance than the old but are interchangeable.

LUN000010.....	Side seals - main bearing cap rear	Qty 2
ERR2640	Oil seal - crankshaft rear	Qty 1
STC50550.....	Sealant	As Required
.....	Sump Gasket	Qty 1
	Refer to Microcat EPC for correct application part number	
LRN29208.....	Right-Stuff Sealant	As required

WARRANTY CLAIMS:

12.21.37	Refer to Repair Times Searcher (RTS) for times on individual models. Crankshaft seal / side seals renew and apply sealant
12.21.37	Defender Time 9.70 Hrs Crankshaft seal / side seals renew and apply sealant

FAULT CODE: N


*Normal warranty policy and procedures apply.
 Material allowance is included in labor operation.*

TIB 12/02/02/NAS	CIRCULATE: TO	Service Mgr X	Warranty X	Workshop X	Body Shop X	Parts X
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REPAIR PROCEDURE

INSTALL NEW SIDE SEALS

1. Refer to the Workshop Manual section 12.53.13 and remove the torque converter drive plate or flywheel.
2. Refer to Workshop Manual section 12.60.38 and remove the sump.
3. Refer to Workshop Manual, section 86.60.01 and remove the starter motor.
4. Remove Allen side bolts from the rear main bearing cap.
5. Remove the rear main bearing cap bolts, main bearing cap and crankshaft oil seal.
6. Remove the side seals from the main bearing cap.
7. Carefully remove any residue sealant from the main bearing cap to cylinder block mating surfaces.
8. Ensure seal locations and mating surfaces in the main bearing cap and cylinder block are clean.

 **CAUTION: The main bearing cap bolt holes in the cylinder block must be clean and dry.**

9. Clean cap bolt holes and verify they are dry.
10. Fit new side seals (LUN000010) to the main bearing cap. (Arrowed in Figure 1)

 **CAUTION: Ensure sealant does not enter the cylinder block bolt holes.**

11. Apply a 3mm (1/8 in) wide bead of STC50550 sealant to the main bearing cap rear mating surfaces on the cylinder block. (Arrowed in Figure 2)
12. Carefully locate main bearing cap into position.
13. Start but do **not** tighten side bolts.
14. Apply initial torque of **13.5 Nm (10 lbf.ft.)** to the main bearing cap bolts and side bolts.
15. Apply final torque of **92 Nm (68 lbf.ft.)** to the main bearing cap bolts.
16. Apply final torque of **45 Nm (33 lbf.ft.)** to the main bearing cap side bolts.
17. Refer to Workshop Manual section 12.21.20 and install new crankshaft rear oil seal to crankshaft.
18. Inspect camshaft oil gallery plugs and the camshaft bore cup plug for leakage.
19. If leakage is determined, refer to Technical Information Bulletin 12/01/02/NAS and seal.
20. Install starter motor and sump.
21. Install torque converter drive plate and assemble transmission components.

Figure 1

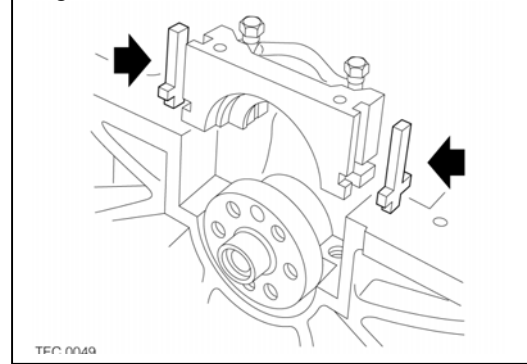


Figure 2

