

TECHNICAL BULLETIN

LT307-001

04 JUL 2005



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SECTION: 307-02 (44 - Automatic Transmission)

Discovery II - Method Change - Transmission Oil Cooler Pipes Renew

AFFECTED VEHICLE RANGE:

**Discovery Series II (LT) -
Automatic Transmissions
only**

VIN:

XA200000-4A870624

VIN:

XA900000-XA907214

Engine:

Td5

MARKETS:

All

CONDITION SUMMARY:

Situation: Change to Methods for removal and installation of the transmission oil cooler pipes.

Cause:

Methods engineers at Land Rover have recently studied the service process for renewal of the transmission oil cooler pipes for Discovery II Td5 models, and significant process changes have been made. The changes, detailed below, refine and improve the process which allow the operation to be carried out more efficiently.

Changes:

- Front prop shaft removal no longer required.
- Rear prop shaft removal no longer required.
- Exhaust down-pipe procedure has been updated in the new procedure.
 - The workshop manual procedure is correct, but the exhaust down-pipe service time incorrectly included the removal of the engine acoustic cover and an exhaust heatshield, now deleted.
- Handbrake drum removal no longer necessary.

Action: Should it become necessary to remove the transmission oil cooler pipes on a Discovery II Td5 Automatic, please refer to the relevant procedure detailed in this bulletin.

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.**

 **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.**

 **NOTE: Superseded repair time - 44.24.15 - Oil cooler pipes - Renew - 4.00 hours.**

 **NOTE: Superseded repair time - 44.24.18 - Oil cooler feed pipe - Renew - 3.90 hours.**

 **NOTE: Superseded repair time - 44.24.21 - Oil cooler return pipe - Renew - 0.80 hours.**

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| DESCRIPTION | SRO | TIME |
|--------------------------------|-----------------|------------|
| Oil cooler pipes - Renew | 44.24.15 | 2.30 hours |
| Oil cooler feed pipe - Renew | 44.24.18 | 2.10 hours |
| Oil cooler return pipe - Renew | 44.24.21 | 1.10 hours |



NOTE: Normal Warranty procedures apply.

SERVICE PROCEDURE:

44.24.15 - Oil Cooler Pipes - Renew

Remove

- 1 Position vehicle on a suitable lift.
- 2 Remove the battery cover and disconnect the battery ground lead.
- 3 Remove the engine acoustic cover.
- 4 Remove the engine cooling fan cowl.
- 5 Release the securing clips and remove the intake charge air cooler hose.
- 6 Remove the air cleaner assembly.
- 7 Raise the vehicle on the lift.
- 8 Drain the automatic transmission oil. For additional information, refer to Discovery II Workshop Manual Section Maintenance - Automatic Gearbox.
- 9 Lower the vehicle on lift.
- 10 Position absorbent cloth under each oil cooler hose connection to collect oil spillage.

- 11  **CAUTION: Always install clean plugs to the open oil cooler connections to prevent contamination.**


Release the quick release connectors and disconnect the transmission oil cooler pipes from the transmission oil cooler.

- 12 Raise the vehicle on the lift.
- 13 Remove the exhaust front pipe.
- 14 Remove the bolt securing the transmission oil cooler pipe clip to the engine sump.
- 15 Remove the bolt securing the oil cooler pipe and release the bracket from the auxiliary housing.
- 16 Remove the nut securing the transmission oil cooler pipe clamp and release the clamp.

- 17  **CAUTION: Always install clean plugs to the open oil cooler connections to prevent contamination.**

Release the oil cooler pipe unions from the transmission and discard the O-ring seals.

Install

- 18 Clean the oil cooler pipe unions and install new O-rings.
- 19  **CAUTION: Remove any installed connection plugs before installing pipes.**



NOTE: Install the securing clamp nut and bolts but do not tighten at this stage.

Align/install the oil cooler pipes in to the oil cooler and securing clamps to the transmission.

- 20 Tighten the oil cooler securing clamps, nut and bolts to 10Nm (7lbf-ft).
- 21 Tighten the oil cooler unions to the transmission to 25Nm (18lbf-ft).
- 22 Clean away any oil spillage.
- 23 Install the exhaust front pipe.
- 24 Lower the vehicle on the lift.

25  **CAUTION: Remove any installed connection plugs before installing pipes.**

Connect the transmission oil cooler pipes to the transmission oil cooler.

26 Remove the absorbent cloth and clean away any oil spillage.

27 Install the air cleaner assembly.

28 Install the intake charge air cooler hose and tighten the hose clips.

29 Install and secure the cooling fan cowl.

30 Install the engine acoustic cover.

31 Connect the battery ground lead, install and secure the battery cover.

32 Refill the transmission with transmission fluid. For additional information, refer to Discovery II Workshop Manual Section Maintenance - Automatic Gearbox.

SERVICE PROCEDURE:

44.24.18 - Oil Cooler Feed Pipe - Renew

Remove

1 Position vehicle on a suitable lift.

2 Remove the battery cover and disconnect the battery ground lead.

3 Remove the engine acoustic cover.

4 Remove the engine cooling fan cowl.

5 Release the securing clips and remove the intake charge air cooler hose.

6 Remove the air cleaner assembly.

7 Raise the vehicle on the lift.

8 Drain the automatic transmission oil. For additional information, refer to Discovery II Workshop Manual Section Maintenance - Automatic Gearbox.

9 Lower the vehicle on lift.

10 Position absorbent cloth under the oil cooler hose connection to collect oil spillage.

11  **CAUTION: Always install clean plugs to the open oil cooler connections to prevent contamination.**

Release the quick release connector and disconnect the transmission oil cooler feed pipe from the transmission oil cooler.

12 Raise the vehicle on the lift.

13 Remove the exhaust front pipe.

14 Remove the bolt securing the transmission oil cooler pipe clip to the engine sump.

15 Remove the bolt securing the oil cooler pipe and release the bracket from the auxiliary housing.

16 Remove the nut securing the transmission oil cooler pipe clamp and release the clamp.

17  **CAUTION: Always install clean plugs to the open oil cooler connections to prevent contamination.**

Release the oil cooler pipe union from the transmission and discard the O-ring seal.

Install

18 Clean the oil cooler pipe union and install a new O-ring.

19  **CAUTION: Remove any installed connection plugs before installing pipes.**

 **NOTE: Install the securing clamp nut and bolts but do not tighten at this stage.**

Align/install the oil cooler pipe in to the oil cooler and securing clamps to the transmission.

20Tighten the oil cooler securing clamps, nut and bolts to 10Nm (7lbf-ft).

21Tighten the oil cooler union to the transmission to 25Nm (18lbf-ft).

22Clean away any oil spillage.

23Install the exhaust front pipe.

24Lower the vehicle on the lift.

25  **CAUTION: Remove any installed connection plugs before installing pipes.**

Connect the transmission oil cooler feed pipe to transmission oil cooler.

26Remove the absorbent cloth and clean away any oil spillage.

27Install the air cleaner assembly.

28Install the intake charge air cooler hose and tighten the hose clips.

29Install and secure the cooling fan cowl.

30Install the engine acoustic cover.

31Connect the battery ground lead, install and secure the battery cover.

32Refill transmission with transmission fluid. For additional information, refer to Discovery II Workshop Manual Section Maintenance - Automatic Gearbox.

SERVICE PROCEDURE:

44.24.21 - Oil Cooler Return Pipe - Renew

Remove

1Position vehicle on a suitable lift.

2Remove the battery cover and disconnect the battery ground lead.

3Remove the engine acoustic cover.

4Remove the engine cooling fan cowl.

5Release the securing clips and remove the intake charge air cooler hose.

6Raise the vehicle on the lift.

7Drain the automatic transmission oil. For additional information, refer to Discovery II Workshop Manual Section Maintenance - Automatic Gearbox.

8Lower the vehicle on lift.

9Position absorbent cloth under the oil cooler hose connection to collect oil spillage.

10  **CAUTION: Always install clean plugs to the open oil cooler connections to prevent contamination.**

Release the quick release connector and disconnect the transmission oil cooler feed pipe from the transmission oil cooler.

11Raise the vehicle on the lift.

12Remove the bolt securing the oil cooler pipe and release the bracket from the auxiliary housing.

13Remove the nut securing the transmission oil cooler pipe clamp and release the clamp.

14  **CAUTION: Always install clean plugs to the open oil cooler connections to prevent contamination.**

Release the oil cooler pipe union from the transmission and discard the O-ring seal.

Install

15Clean the oil cooler pipe union and install a new O-ring.

16  **CAUTION: Remove any installed connection plugs before installing pipes.**



NOTE: Install the securing clamp nut and bolts but do not tighten at this stage.

Align/install the oil cooler pipe into the oil cooler and securing clamps to the transmission.

17 Tighten the oil cooler securing clamps, nut and bolts to 10Nm (7lbf-ft).

18 Tighten the oil cooler union to the transmission to 25Nm (18lbf-ft).

19 Clean away any oil spillage.

20 Lower the vehicle on the lift.

21  **CAUTION: Remove any installed connection plugs before installing pipes.**

Connect the transmission oil cooler feed pipe to transmission oil cooler.

22 Remove the absorbent cloth and clean away any oil spillage.

23 Install the air cleaner assembly.

24 Install the intake charge air cooler hose and tighten the hose clips.

25 Install and secure the cooling fan cowl.

26 Install the engine acoustic cover.

27 Connect the battery ground lead, install and secure the battery cover.

28 Refill transmission with transmission fluid. For additional information, refer to Discovery II Workshop Manual Section Maintenance - Automatic Gearbox.