

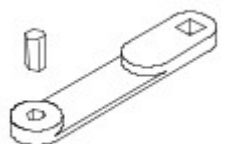
PUBLISHED: 18-SEP-2019
2020.0 DEFENDER (LE), 311-01

AUTOMATIC TRANSMISSION

TRANSMISSION FLUID DRAIN AND REFILL (G2391367)

GENERAL PROCEDURES

SPECIAL TOOL(S)



307-45

307-452

Wrench, Transmission Filler Plug

GENERAL EQUIPMENT

EQUIPMENT NAME
Jaguar diagnostic equipment
Jaguar Land Rover approved diagnostic equipment

PART(S)

STEP	PART NAME	QUANTITY
Draining Step 14	Transmission fluid drain plug	1

DRAINING



WARNING:

- Observe due care when working near a hot exhaust system.
- Observe due care when draining, as the fluid can be very hot.



NOTE:

- This procedure contains some variation in the illustrations depending on the vehicle specification, but the essential information is always correct.
- This procedure contains illustrations showing certain components removed to provide extra clarity.

1.

- The following steps must be observed before starting the transmission fluid drain and refill.
- The vehicle must be on a horizontal ramp.
- Make sure that the Electric Park Brake (EPB) is applied.
- Make sure the Transmission Control Switch (TCS) is in the Park (P) position.

2.

Raise and support the vehicle on a suitable 2 post lift.

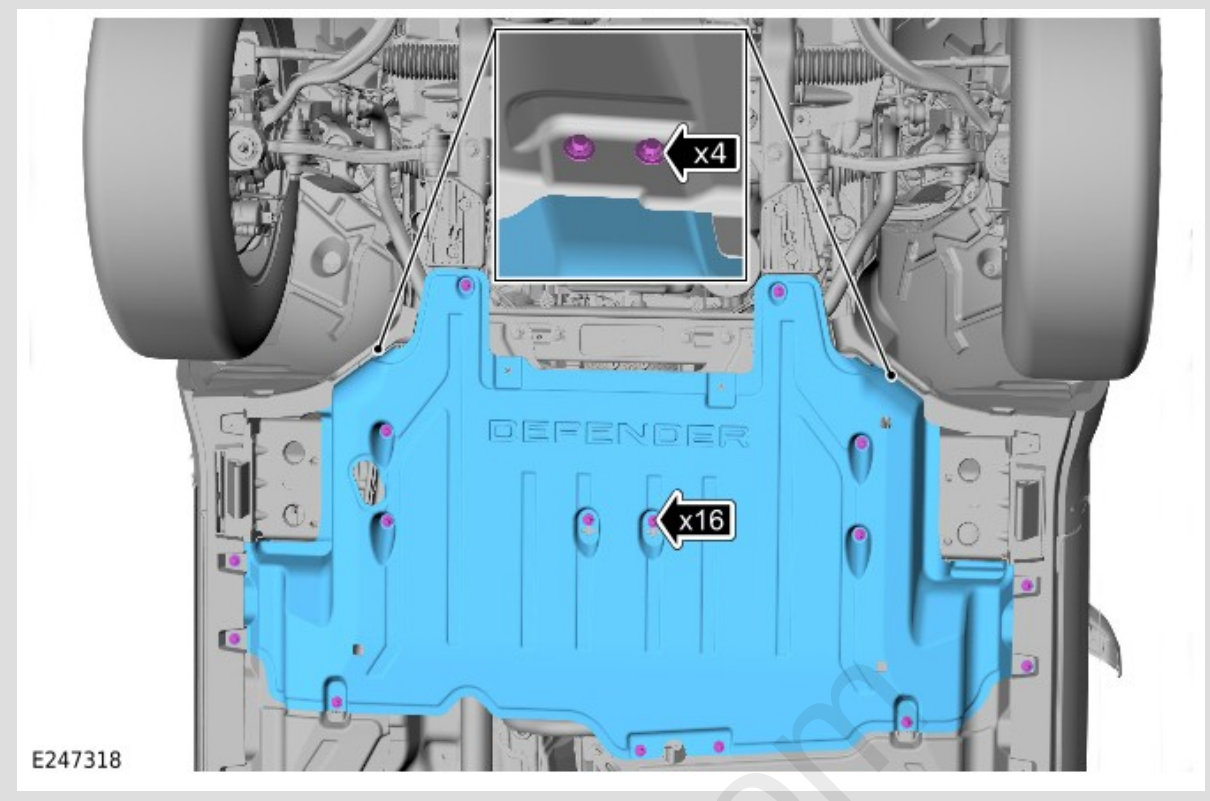
Refer to: [Jacking and Lifting](#) (100-02 Jacking and Lifting, Description and Operation).

3.

Remove the engine undershield.

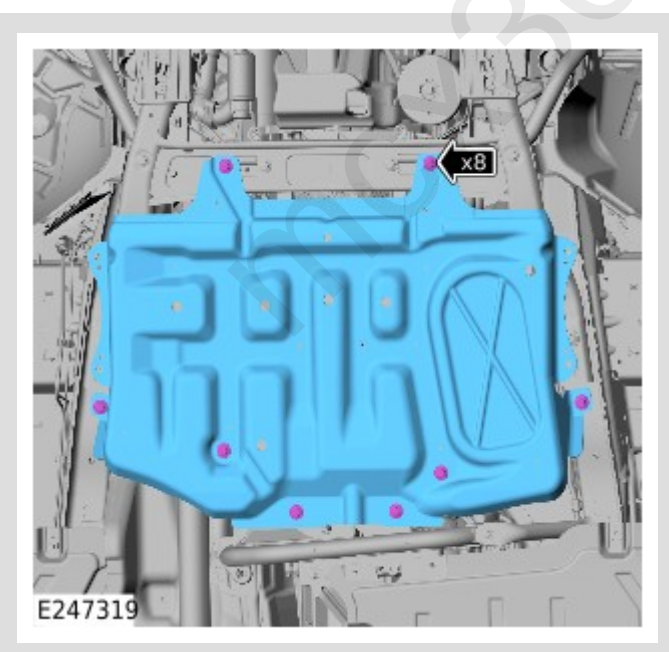
Refer to: [Engine Undershield](#) (501-02 Front End Body Panels, Removal and Installation).

4.



- Remove the 20 bolts.
- Remove the transmission undershield.

5.



- Remove the 8 bolts.
- Remove the transmission undershield.

6. Lower the vehicle.

7.

- Connect the Jaguar Land Rover (JLR) approved diagnostic equipment to the vehicle.
General Equipment: [Jaguar diagnostic equipment](#)
- Start the engine and allow to idle.
- Switch off the Air Conditioning (A/C) system and other electrical components.

8.

 CAUTION:

Using Jaguar Land Rover (JLR) approved diagnostic equipment, make sure the transmission temperature is between 30°C (86°F) and 50°C (122°F) before starting the transmission fluid level check.

- Use the JLR approved diagnostic equipment to check the transmission fluid temperature.
- If the transmission fluid temperature is lower than 30°C (86°F). Allow the transmission to warm up above 30°C (86°F) with the engine idling in the P position, when at temperature proceed with the transmission fluid drain.
- If the transmission fluid temperature is above 50°C (122°F), switch off the engine and allow the transmission to cool down, then repeat steps 7 and 8.

9.

Switch off the engine.

10.

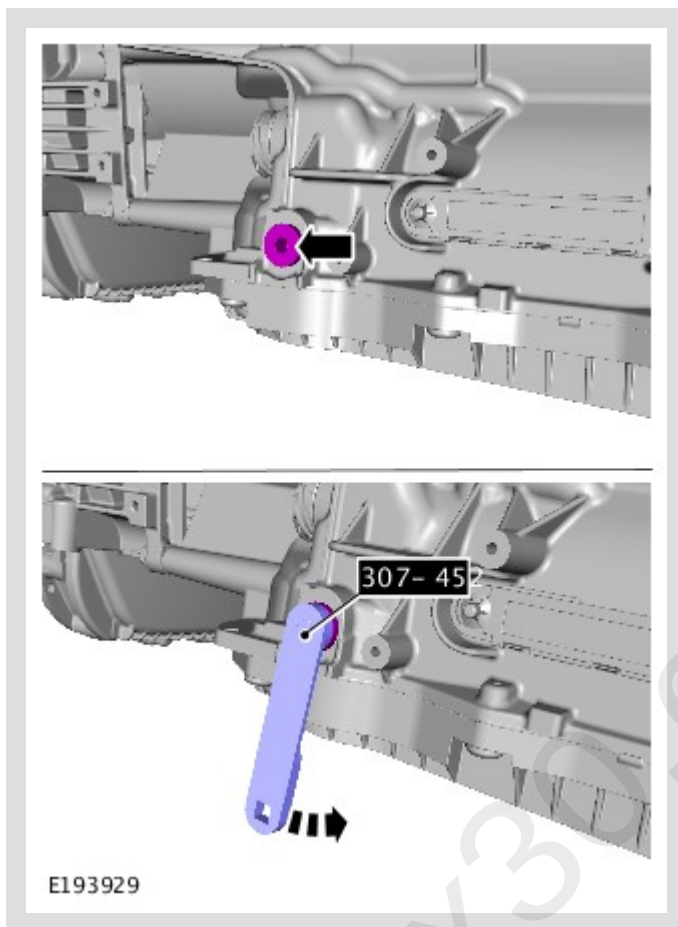
Raise the vehicle.

11.

Place a container under the transmission.

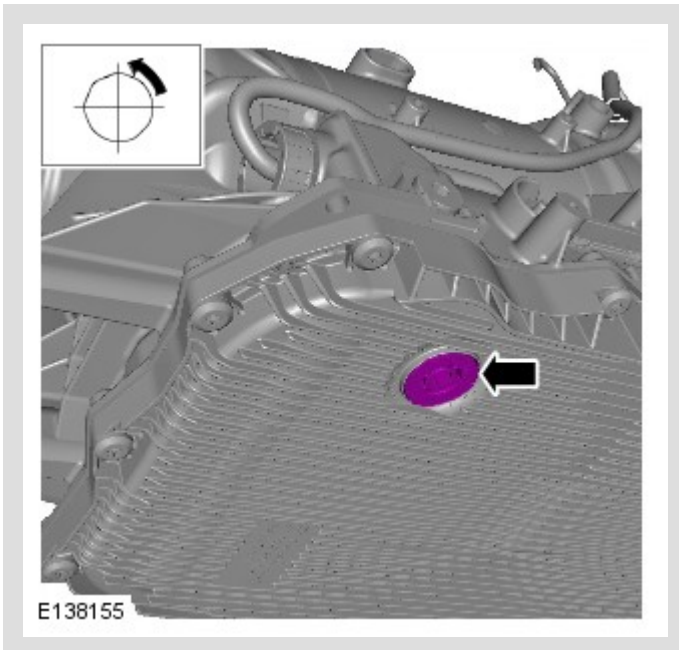
ⓘ CAUTION:

Only continue with the transmission fluid drain if the transmission temperature is between 30°C (86°C) and 50°C (122°).



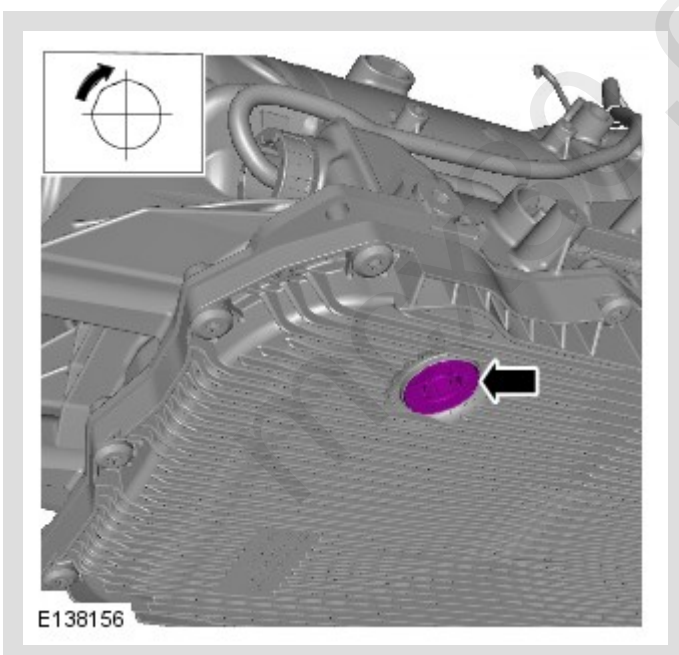
- Use the special tool to remove the transmission filler plug, do not discard.
Special Tool(s): [307-452](#)

13.



- Remove and discard the transmission fluid drain plug.
- Allow the transmission fluid to drain.

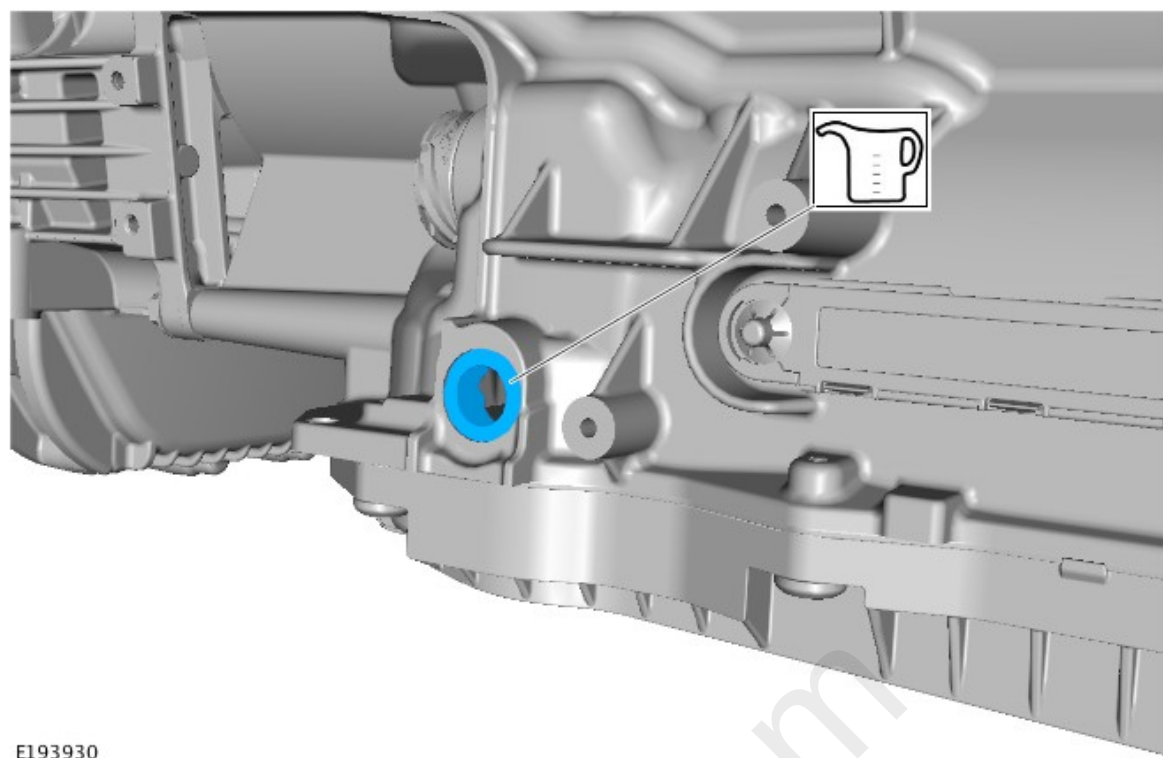
14.



- Install and tighten the new transmission fluid filler plug.
Renew Part: [Transmission fluid drain plug](#) Quantity: 1.
Torque: 8Nm
- Clean the area around the transmission fluid drain plug, Wipe away any excess fluid.

FILLING

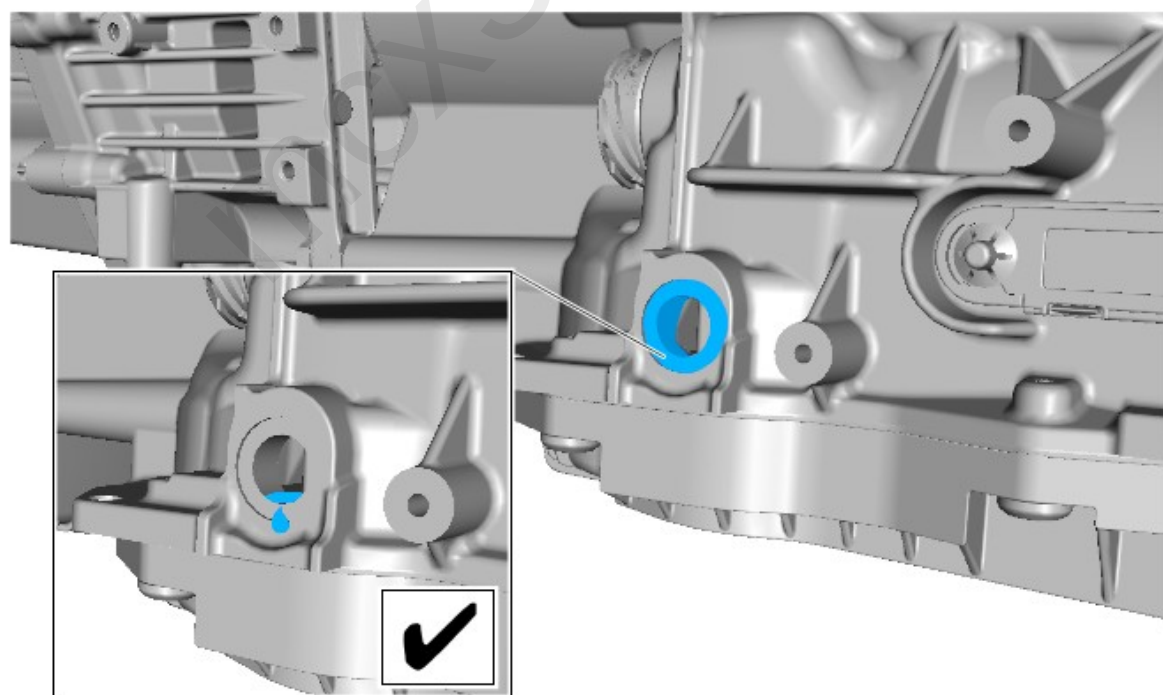
1.



Fill the transmission with the recommended transmission fluid until fluid flows out of the transmission filler hole.

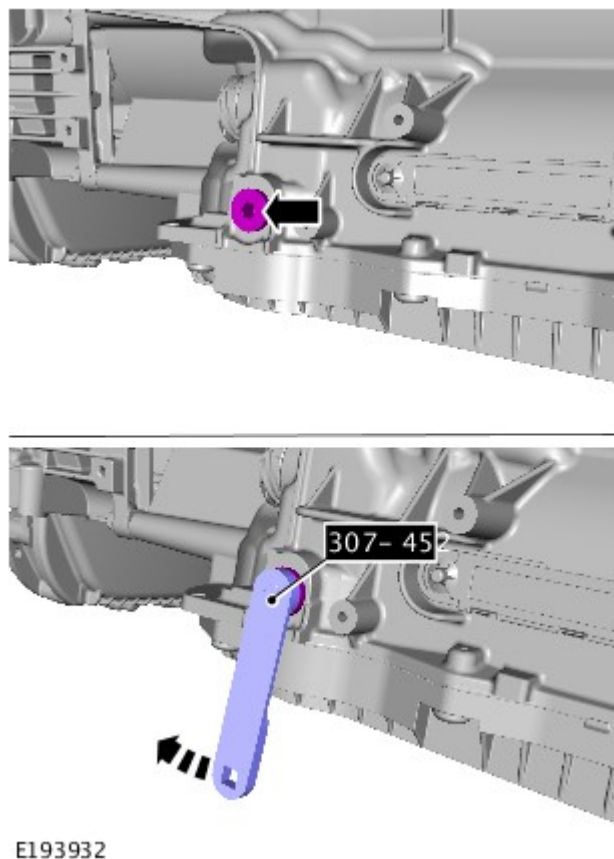
Refer to: [Specifications](#) (311-01 Automatic Transmission, Specifications).

2.



Allow the transmission fluid to drain from the transmission fluid filler plug hole until the flow stops.

3.



- Use the special tool to install and tighten the original transmission filler plug.

Special Tool(s): [307-452](#)

4. Remove the special tool.

Special Tool(s): [307-452](#)

5. Clean the area around the transmission fluid filler plug.

6. Lower the vehicle.

7.



NOTE:

Make sure that the transmission is not in the default mode, if this is the case, stop and correct the cause first and then restart the transmission fluid level check.

- Connect the Jaguar Land Rover (JLR) approved diagnostic equipment to the vehicle.
General Equipment: [Jaguar Land Rover approved diagnostic equipment](#)
- Start the engine, and allow to idle.
- Switch off the Air Conditioning (A/C) system and other electrical components.

8.

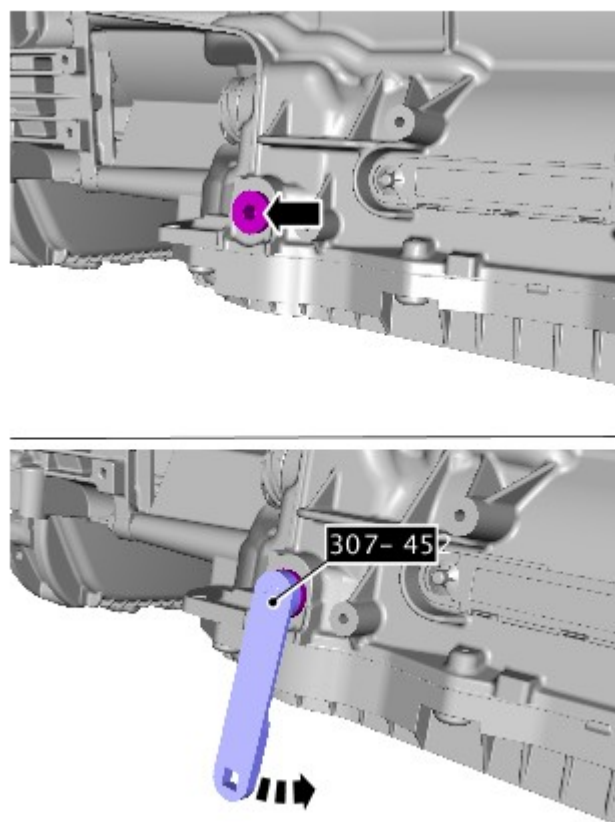
- Apply and hold the brake pedal.
- Select reverse gear and wait for 10 seconds.
- Select drive, then manual 1st gear and wait for 10 seconds.
- Select 2nd gear and wait for 10 seconds.
- Select Park (P) on the Transmission Control Switch (TCS).

9.

Raise the engine speed to 2000 Revolutions Per Minute (RPM) and hold for 30 seconds. Then return to idle speed.

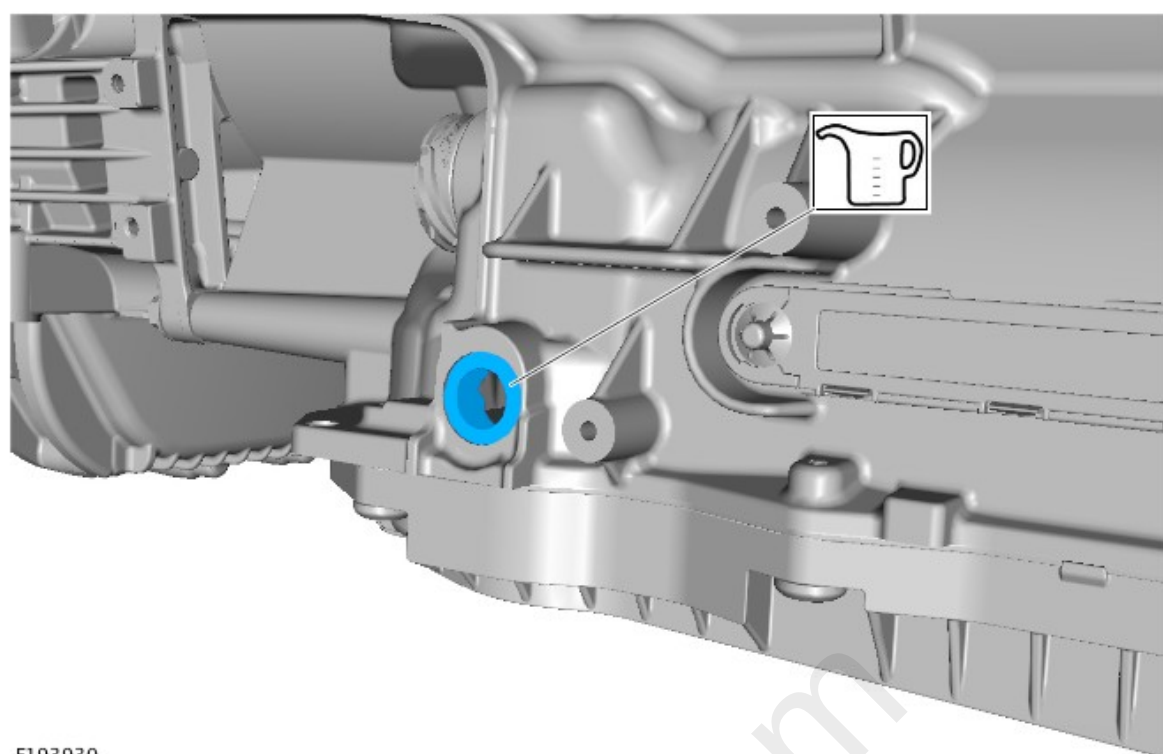
10.

- Using the JLR approved diagnostic equipment, check the transmission fluid temperature.
 - If the transmission fluid temperature is lower than 30°C (86°F). Allow the transmission to warm up above 30°C (86°F) with the engine idling in the (P) position, then proceed with the transmission fluid level check.
 - If the transmission fluid temperature is above 50°C (122°F), switch off the engine and allow the transmission to cool down, then repeat steps 8 and 9.
-



- Remove and discard the transmission fluid filler plug.
Special Tool(s): [307-452](#)
- If fluid flows out of the filler hole, proceed to step 13.
- If fluid does not flow out of the filler hole, proceed to step 12.

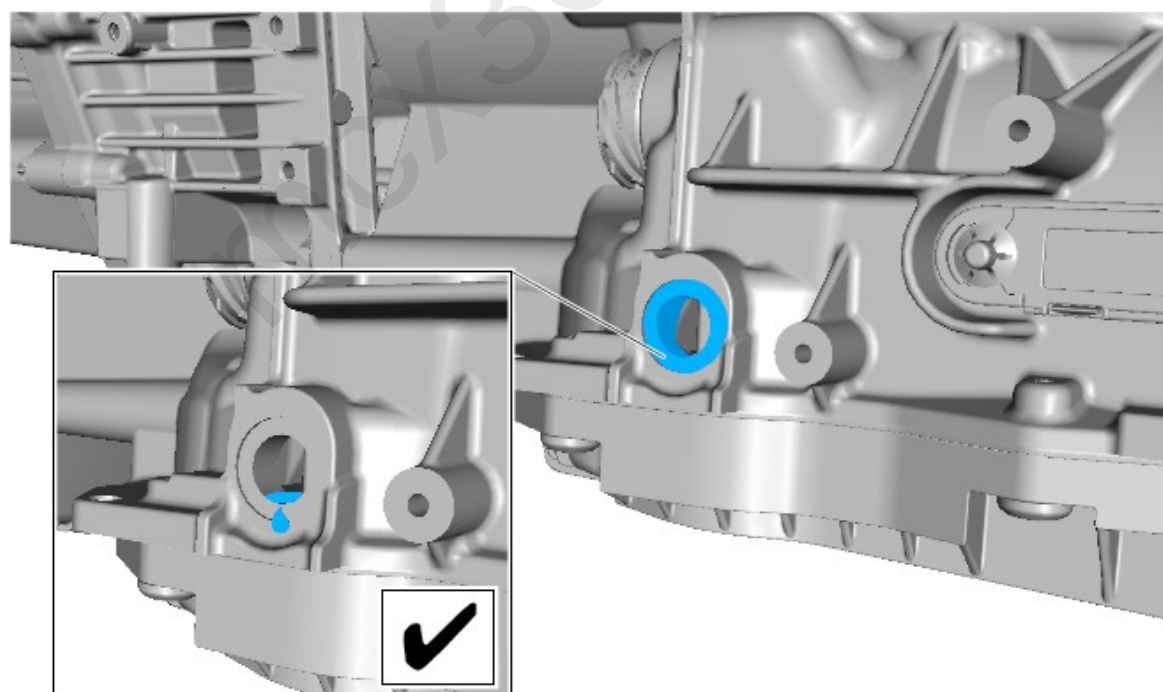
12.



E193930

Fill the transmission with the recommended transmission fluid until fluid flows out of the transmission filler hole.

13.



E193931

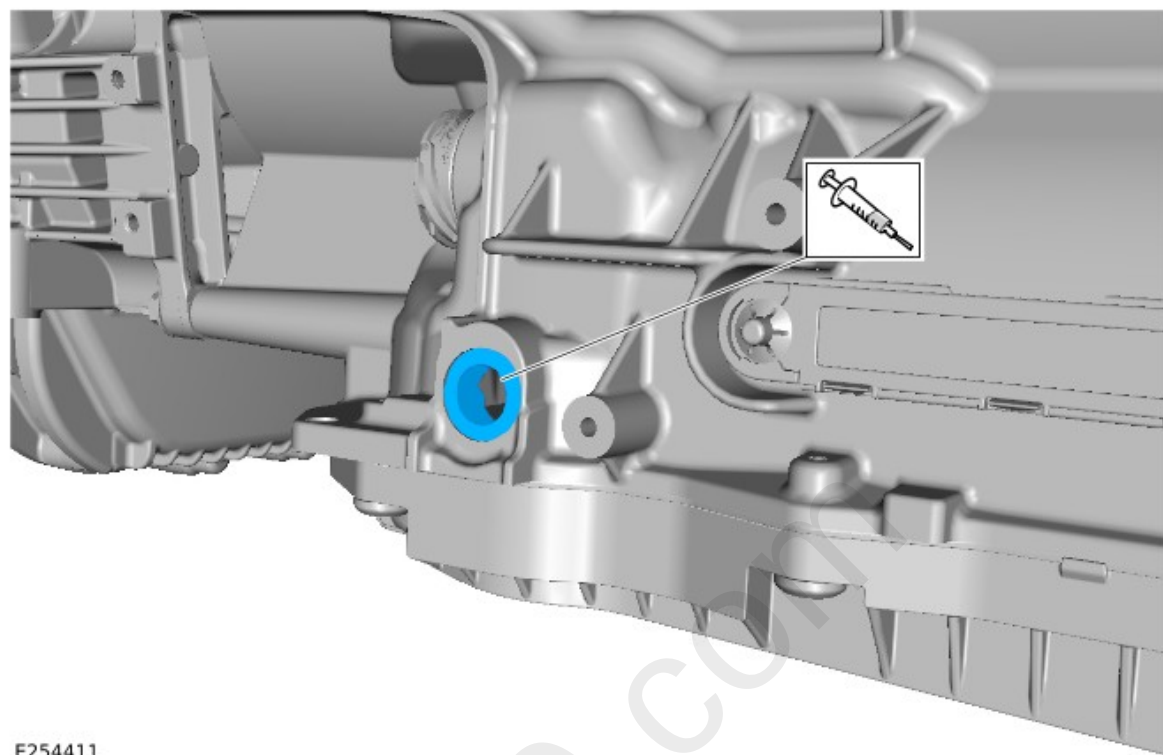
Allow the transmission fluid to drain from the transmission fluid filler plug hole until the flow stops.

14.



WARNING:

This step is only required for 3.0L Petrol vehicles.



Use a suitable tool to drain 350ml of transmission fluid from the automatic transmission filler hole.

15.

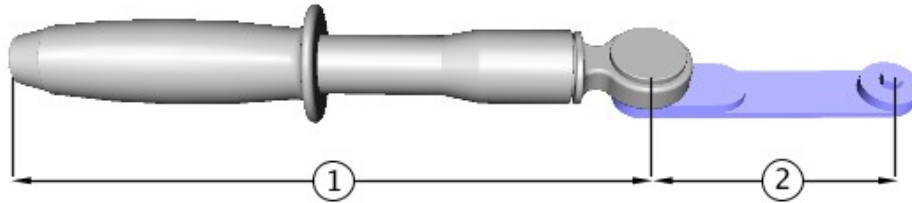
Use the special tool to install and tighten a new fluid filler plug.

Special Tool(s): [307-452](#)

16.

**WARNING:**

Make sure the transmission fluid filler plug is tightened to the correct specification. The torque correction formula below must be followed to prevent damage to the transmission case.



E194197

- To make sure the transmission fill plug is torqued to the correct specification. Using the special tool and torque wrench the following calculation steps must be followed.
- Step 1. Multiply 35 Nm by the effective length of the torque wrench (1).
- Step 2. Add the effective length of the special tool (2) to the effective length of the torque wrench (1).
- Step 3. Divide the total of step 1 by the total of step 2.
- Step 4. Set the torque wrench to the figure arrived at in step 3.
- Step 5. Tighten the automatic transmission fluid fill plug to the torque given by the calculation.

17.

Remove the special tool.

Special Tool(s): [307-452](#)

18.

Clean the area around the filler plug, wipe away any excess fluid and remove the container.

19.

- Install the transmission undershield.
- Install and tighten the 8 bolts.

Torque: **20Nm**

20.

- Install the transmission undershield.
- Install and tighten the 20 bolts.

Torque: **10Nm**

21. Install the engine undershield.

Refer to: [Engine Undershield](#) (501-02 Front End Body Panels, Removal and Installation).

22. Disconnect the Jaguar Land Rover (JLR) approved diagnostics equipment from the vehicle.

General Equipment: [Jaguar diagnostic equipment](#)

cmIjaGFyZG1vbnRvbjsyMDIwLTA5LTE3VDIwOjA3OjMxLjczMio7OTAuMTk5LjEyMS4xMTc7

mcx30.com