JLRTB02102NAS2

TECHNICAL BULLETIN

10 FEB 2023

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.

INFORMATION

This reissue replaces all previous versions. Please destroy all previous versions.

This bulletin supersedes TSB JLRTB02102NAS1/2022 dated 19 JUL 2022, which should either be destroyed or clearly marked to show it is no longer valid (e.g. with a line across the page). Only refer to the electronic version of this Technical Bulletin in TOPIx.

Changes are highlighted in blue

SECTION:

303-01

SUBJECT/CONCERN:

Engine Oil Leak From Cylinder Head

AFFECTED VEHICLE RANGE:

MODEL:	MODEL YEAR:	VIN:	ASSEMBLY PLANT:	APPLICABILITY:
Defender (LE)	2021-2022	062430-114881	Nitra (Slovakia)	V8 S/C 5.0L Petrol
Range Rover (LG)	2021-2022	444501-472638	Solihull	V8 S/C 5.0L Petrol
Range Rover Sport (LW)	2021	792447-796409	Solihull	V8 S/C 5.0L Petrol
Range Rover Sport (LW)	2022	200039-236845	Solihull	V8 S/C 5.0L Petrol
F-PACE (X761)	2021-2022	684486-693218	Solihull	V8 S/C 5.0L Petrol
F-TYPE (X152)	2021-2022	K76670-K79060	Castle Bromwich	V8 S/C 5.0L Petrol

MARKETS:

NORTH AMERICA

CONDITION SUMMARY:

SITUATION:

The customer has raised a concern about an engine oil leak evident under the vehicle. Further investigation has found that engine oil is leaking from one or more of the oil gallery ball bearing plugs on rear of the cylinder heads.

CAUSE:

Casting distortion during the ball bearing plug insertion process.

ACTION:

Follow the instruction(s) below.

This Technical Bulletin has been updated to amend the Parts section.

PARTS:

CAUTION:

The manufacturer's instructions must be followed when preparing the LOCTITE® adhesive.

NOTE:

*An allowance equivalent to £120.00 has been allocated to locally source LOCTITE® EA 3478 adhesive, 1 Scotch-Brite™ pad and a 1 liter engine oil top up.

PART NUMBER	DESCRIPTION	QUANTITY
F-PACE		
*ZZZ999	LOCTITE® adhesive, Scotch-Brite™ pad and 1 liter engine oil top up	£120
LR178517	Aluminum disc	6
T4A12521	Halfshaft circlip	2
C2P12731	Halfshaft nut	2
C2P11385	Yoke to shock absorber bolt	2
XR848057	Yoke to shock absorber nut	2
T2H17786	Yoke to lower control arm bolt	2
T2H6322	Knuckle upper bolt	2
XR848057	Knuckle upper nut	2
T2H3159	Lower ball joint nut	2
C2Z2224	Stabilizer link nut - To LA999999	2
C2P7444	Stabilizer link nut - From MA000001	2
T4N8037	Track rod end nut	2
T4A16359	Brake caliper bolt	4
T2H13851	Front differential fill plug	1
T2H13852	Front differential drain plug	2
C2D25075	Torque converter bolt	4

PART NUMBER	DESCRIPTION	QUANTITY
T2H9243	Front driveshaft bolt	4
C2D2087	Rear driveshaft bolt	6/12
C2D49255	Transmission oil pipe O-ring	2
JDE32544	Exhaust clamp	2
XR836503	Exhaust nut	4
JLM209722	Engine coolant top-up	1
F-TYPE		
*ZZZ999	LOCTITE® adhesive, Scotch-Brite™ pad and 1 liter engine oil top up	£120
LR178517	Aluminum disc	6
XR836503	Exhaust nut	4
Range Rover/Range Rover Sport/Defender		
*ZZZ999	LOCTITE® adhesive, Scotch-Brite™ pad and 1 liter engine oil top up	£120
LR178517	Aluminum disc	6
LR035857	Exhaust nut	4

WARRANTY:

NOTE:

* When submitting your Warranty claim within the Warranty portal, use the Condition Code list shown to select the Condition Code which best describes the vehicle defect.

NOTES:

- Repair procedures are under constant review, and therefore times are subject to change; those quoted here must be taken as guidance only. Use TOPIx to obtain the latest repair time.
- The JLR claims submission system 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
JLRTB - Oil gallery blanking plugs - Modification - All vehicles except F-PACE	99.01.75	1.8	*	JPLA6C032AB, JPLA6C032BB
JLRTB - Oil gallery blanking plugs - Modification - F-PACE vehicles	99.01.75	8.5	*	JPLA6C032AB, JPLA6C032BB

NOTE:

Normal Warranty procedures apply.

SERVICE INFORMATION:

1. Only engines manufactured by the Jaguar Land Rover (JLR) Engine Manufacturing Center are affected by this Technical Bulletin.

SERVICE INSTRUCTION A - F-PACE

1. Remove the engine for access only (see TOPIx Workshop Manual section 303-01: Engine - V8 S/C 5.0L Petrol - Removal and Installation - Engine - All Wheel Drive (AWD)).

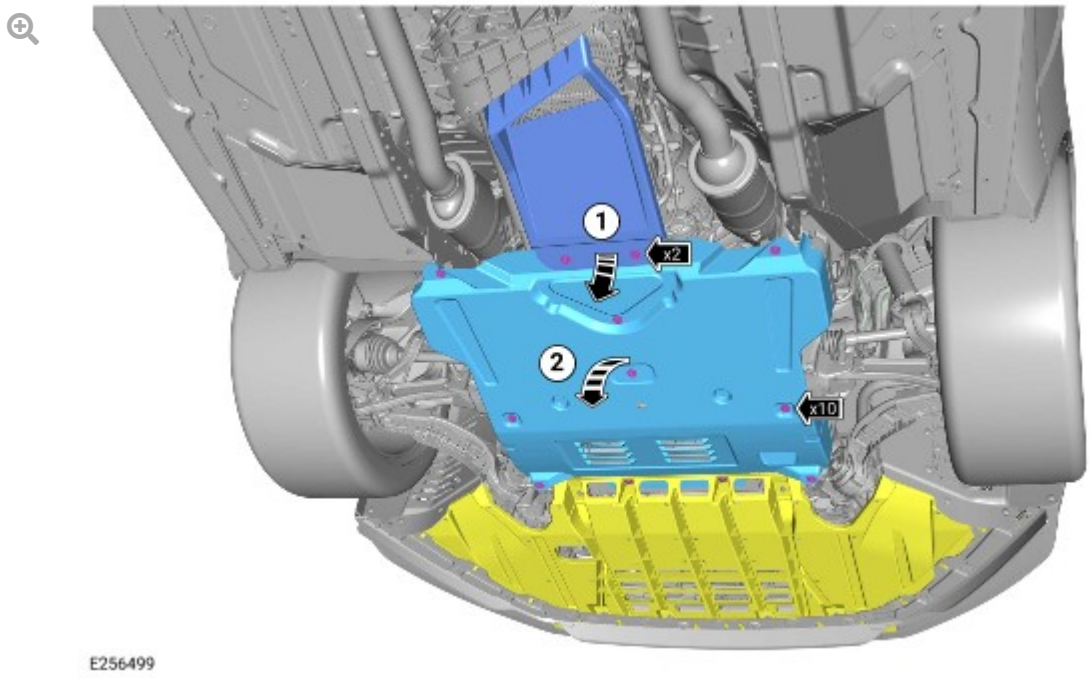
SERVICE INSTRUCTION B - RANGE ROVER, RANGE ROVER SPORT AND DEFENDER

1. Remove the exhaust system for access only (see TOPIx Workshop Manual section 309-00: Exhaust System - V8 S/C 5.0L Petrol - Removal and Installation - Exhaust System).

SERVICE INSTRUCTION C - F-TYPE

1. Raise and support the vehicle on a suitable 2 post lift (see TOPIx Workshop Manual section 100-02: Jacking and lifting - Description and Operation - Lifting).

2.



E256499

Remove the engine undershield for access.

1. Remove the 2 bolts and remove the transmission undershield.
2. Remove the 10 bolts and remove the engine undershield.

3.

E256153

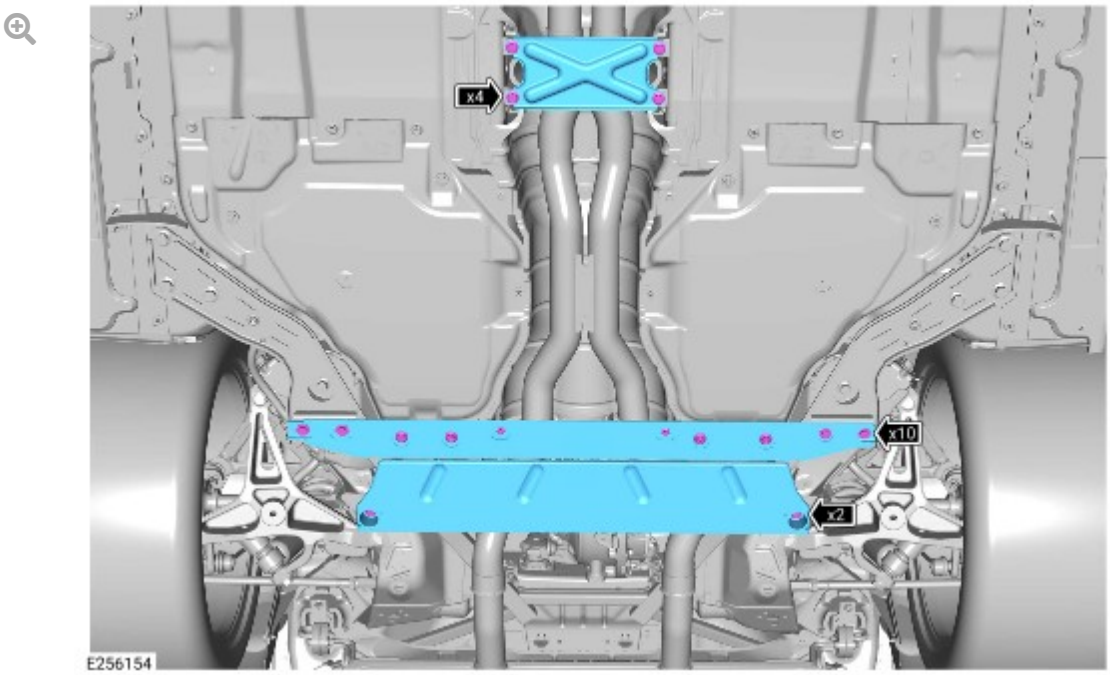
Remove the rear bumper panel.

- Remove the 6 screws.
- Remove the 10 clips.

4.

NOTE:

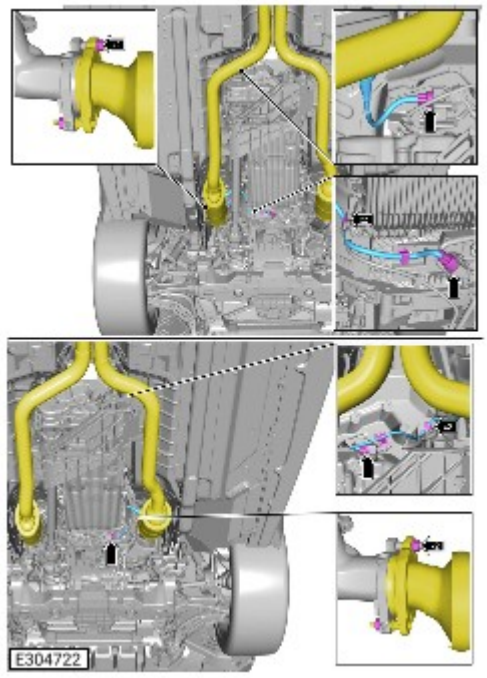
Note the installed location of the bolts.



Remove the 3 cross braces.

- Remove the 4 bolts and remove the front cross brace.
  - Torque: **48 Nm**
- Remove the 10 bolts and remove the middle cross brace.
  - Torque:
    - M6 bolts: **4.8 Nm**
    - M8 bolts: **25 Nm**
    - M8 torx bolts: **20 Nm**
- Remove the 2 bolts and remove the rear cross brace.
  - Torque: **63 Nm**

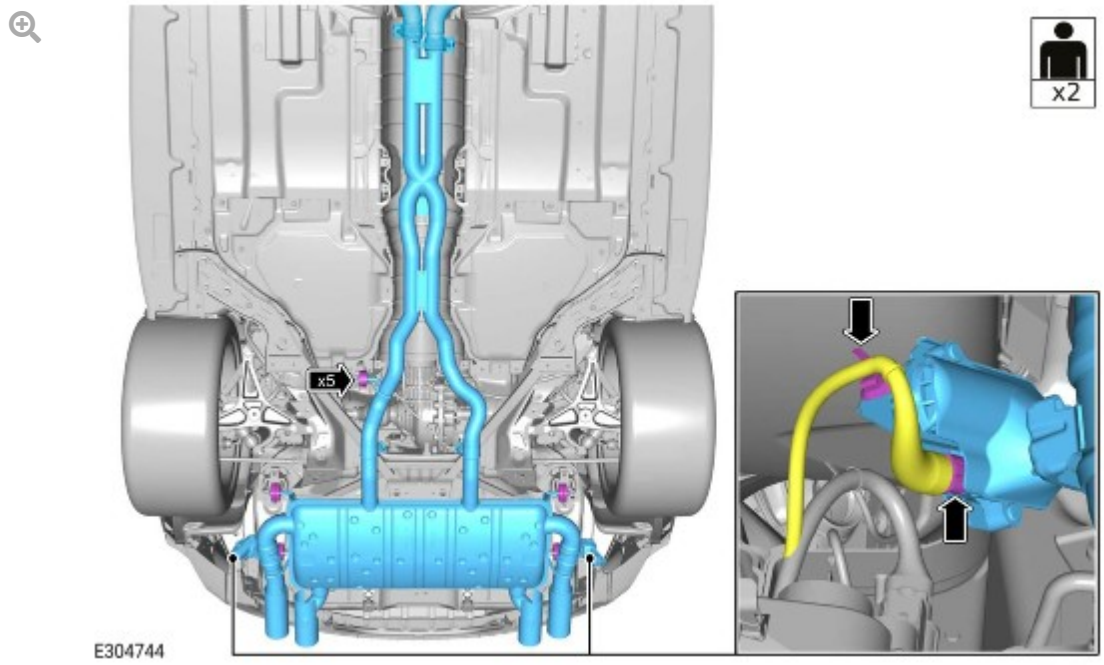
5.



Release the catalytic converter and gasoline particulate filter assemblies.

- Release the 4 clips and disconnect 2 the rear Heated Oxygen Sensor (HO2S) electrical connectors.
- Disconnect 2 the front HO2S electrical connectors.
- Remove the 4 nuts.
  - Torque: **40 Nm**

6.



With assistance, remove the exhaust system.

- Release and disconnect the 2 electrical connectors.
- Release the 5 exhaust hangers.

SERVICE INSTRUCTION D - ALL VEHICLES

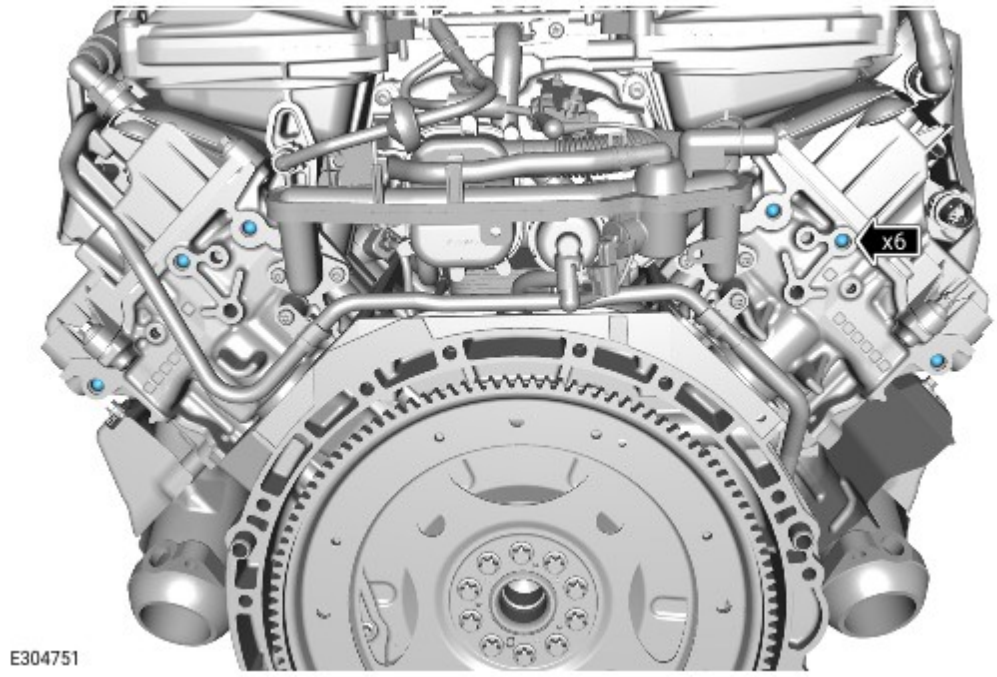
CAUTION:

There are 2 adhesive curing stages during this Service Instruction, 6 hours and a further 16 hours. The engine **must not** be started until the adhesive has fully cured.

NOTES:

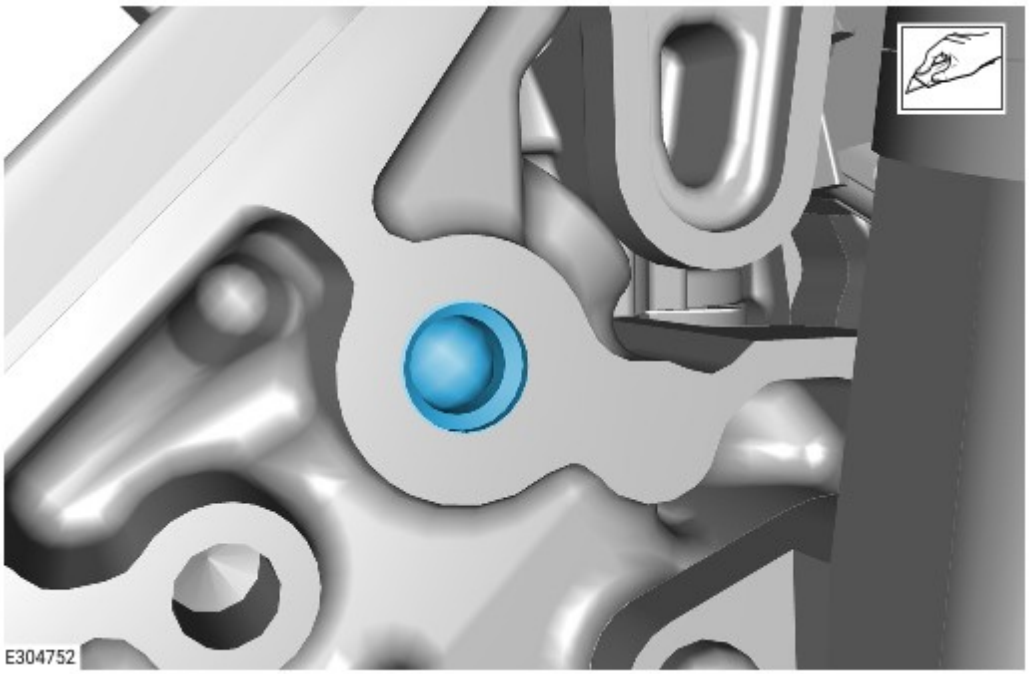
- Some components shown removed for clarity.
- Some variation in the illustrations may occur, but the essential information is always correct.

1.



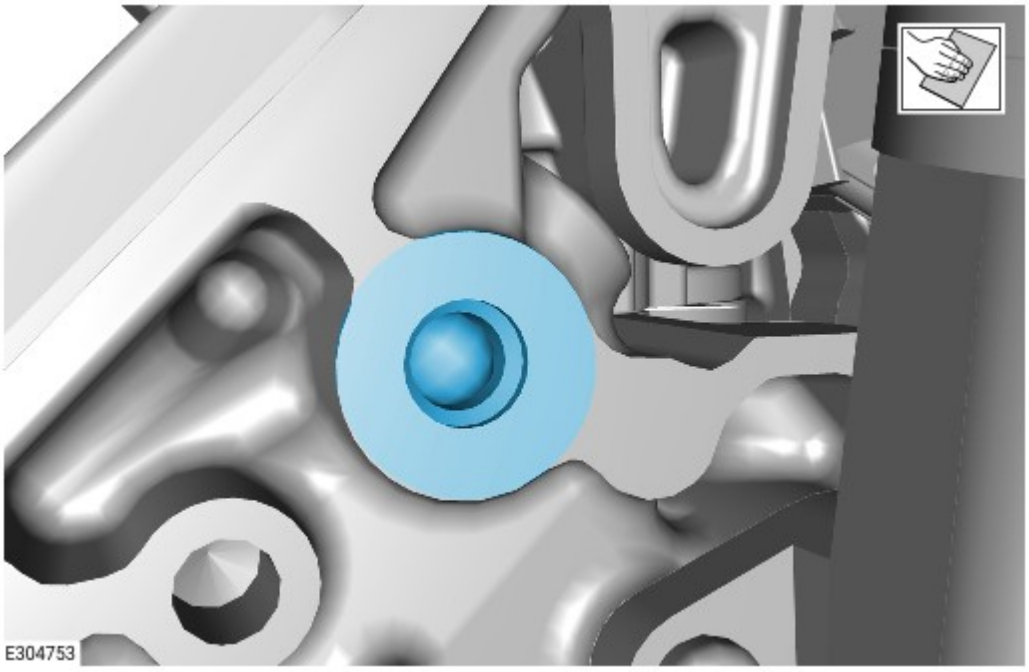
This illustration shows the location of the 6 ball bearing plugs that must be sealed as part of this Technical Bulletin. **The steps 2 to 12 must be completed for each of the 6 ball bearing plugs.**

2.



Use a suitable tool to remove any sealant from in and around the ball bearing plug recess.

3.



Prepare the surface in and around the ball bearing plug recess using a wire brush or a Scotch-Brite™ pad.

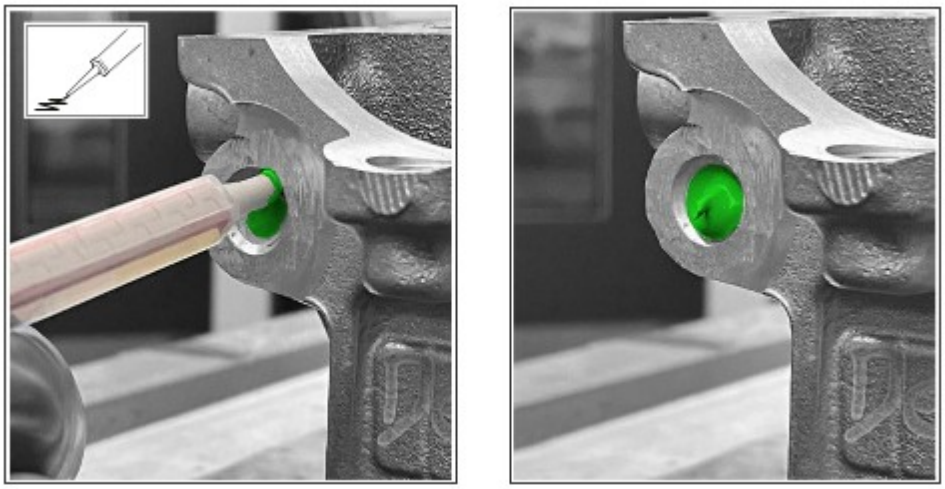
4. Clean the area using brake cleaner and a lint free cloth.

5. Prepare the LOCTITE® adhesive by following the manufacturer's instructions.

6.

NOTE:

Make sure the LOCTITE® adhesive does not protrude beyond the surface of the cylinder head.



E304774

Fill the ball bearing plug recess with LOCTITE® adhesive.

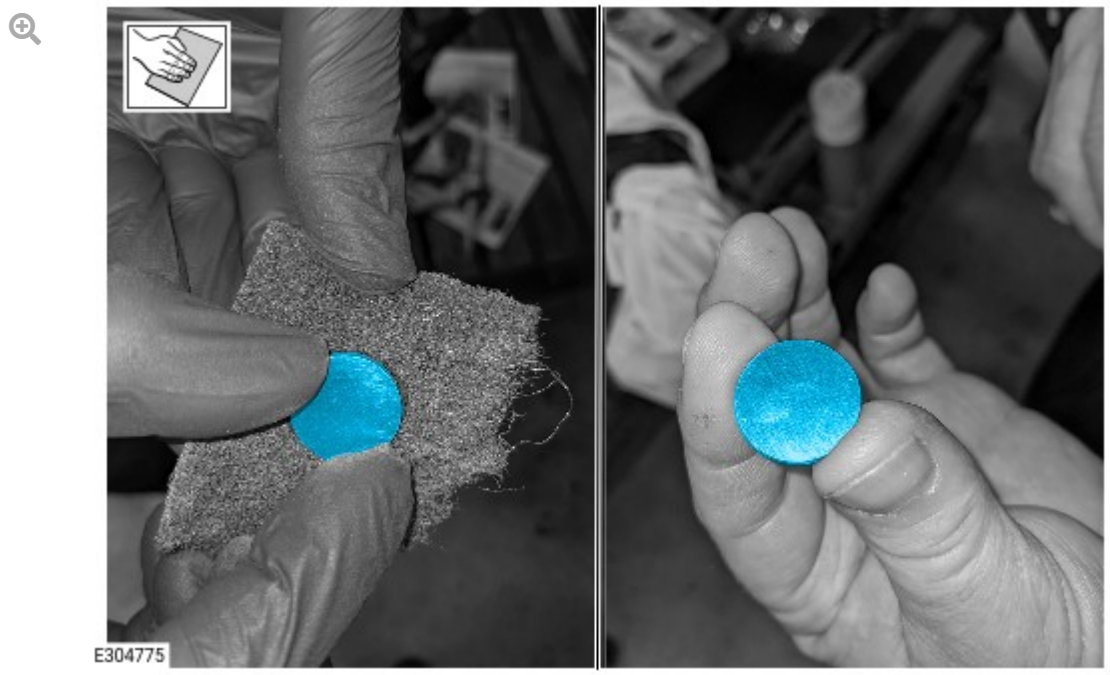
7.

CAUTION:

Do not start the engine until after the final adhesive curing stage in step 12.

Allow 6 hours for the LOCTITE® adhesive to cure.

8.



Prepare both sides of the aluminum disc using a Scotch-Brite™ pad to key the surfaces.

9.

NOTE:

Make sure the surface of the aluminum disc is dry before continuing to the next step.

Clean the surface of the aluminum disc using brake cleaner.

10.

NOTE:

Make sure enough LOCTITE® adhesive is applied to the aluminum disc to allow the excess to be expelled around the outside of the aluminum disc during the next step.

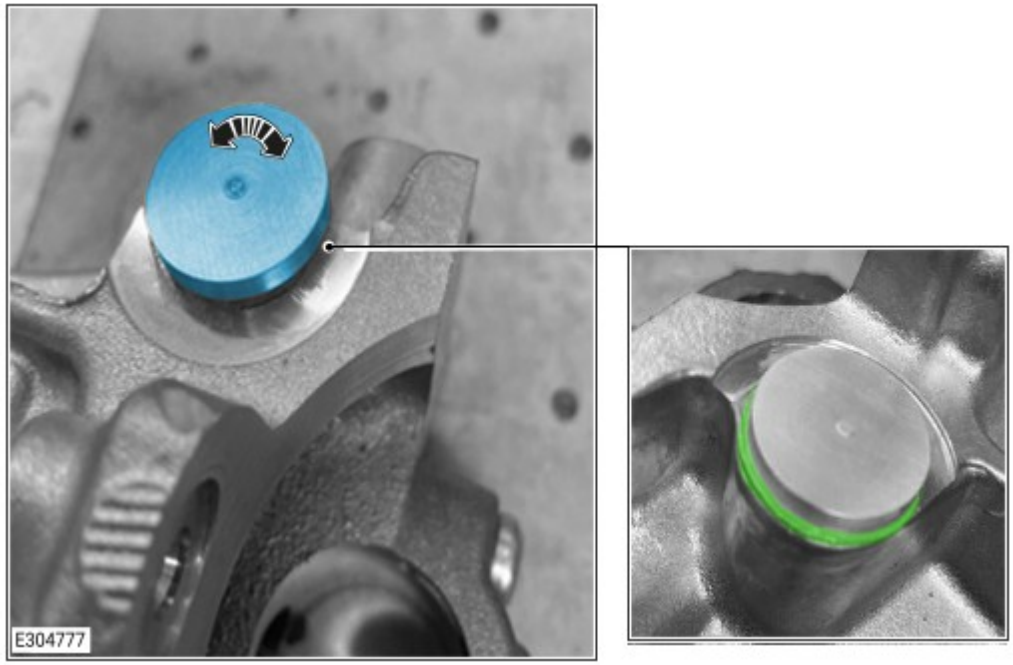
E304776

Apply LOCTITE® adhesive to center of the aluminum disc.

11.

NOTE:

Make sure the LOCTITE® adhesive is evident around the outside of the whole aluminum disc.



Press the aluminum disc into the center of the prepared ball bearing recess. Settle the aluminum disc in a clockwise to counter-clockwise motion to allow the LOCTITE® adhesive to spread to all extremities. Apply enough pressure the allow the excess LOCTITE® adhesive to be expelled around the outside of the aluminum disc, as shown in the illustration.

12.

CAUTION:

Do not start the engine until the adhesive has cured for 16 hours.

NOTE:

Apply adhesive tape across the aluminum disc to make sure the disc does not move during curing.

Allow the LOCTITE® adhesive to cure for 16 hours.

13.

NOTE:

Make sure any residual oil has been cleaned before returning the vehicle to the customer.

Reverse the steps from the applicable Service Instruction section.

- **F-PACE vehicles -** Service Instruction A - Step 1.
- **Range Rover, Range Rover Sport and Defender vehicles -** Service Instruction B - Step 1.
- **F-TYPE vehicles -** Service Instruction C - Steps 1 to 6.

14. Check and top up the engine oil level, as required.