

# TECHNICAL BULLETIN

LTB00902NAS3

23 MAY 2016



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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.

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

Changes are highlighted in gray

## **SECTION: 309-00**

Engine MIL Illuminated With DTC P2096-00 or P2097-00 Stored

### **AFFECTED VEHICLE RANGE:**

#### **Discovery Sport (LC)**

**Model Year:** 2016

**VIN:** 544577-605042

GTDi 2.0L Petrol/GTDi 2.0L Petrol - SULEV

**Assembly Plant:** Halewood

#### **Range Rover Evoque (LV)**

**Model Year:** 2016

**VIN:** 077912-134807

GTDi 2.0L Petrol/GTDi 2.0L Petrol - SULEV

**Assembly Plant:** Halewood

### **MARKETS:**

NAS

### **CONDITION SUMMARY:**

**Situation:** The engine Malfunction Indicator Lamp (MIL) may be illuminated with Diagnostic Trouble Code (DTC) P2096-00 or P2097-00 stored in the Powertrain Control Module (PCM).

After DTC P2096-00 or P2097-00 is stored, one or more of the following misfire-related DTCs is also likely to be stored in the PCM: P0300-00, P0301-00, P0302-00, P0303-00, and/or P0304-00.

**Cause:** This may be caused by a PCM software error.

**Action:** If the snapshot data show that one or more of the misfire-related DTCs has set **AFTER** DTC P2096-00 or P2097-00 is stored, follow the Service Instruction for DTC P2096-00 or P2097-00 outlined below.

If the snapshot data show that one or more of the misfire-related DTCs has set **BEFORE** DTC P2096-00 or P2097-00 is stored, investigate as per normal diagnostics. To be performed as a separate claim.

### **PARTS:**

No Parts Required

### **TOOLS:**



**NOTE: This Active Bulletin will display a functional programming shortcut if accessed within a diagnostic session.**

Jaguar Land Rover-approved diagnostic tool with latest DVD and Calibration File

Jaguar Land Rover-approved Midtronics battery power supply

High Pressure Diagnostic Leak Detector  
95-0106



E184192

**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.

DESCRIPTION	SRO	TIME (HOURS)	CONDITION CODE	CAUSAL PART
Reconfigure the Powertrain Control Module	<b>12.90.13</b>	0.2	04	LR057872
High Pressure Diagnostic Leak Detector test - With exhaust installed	<b>30.10.89.49</b>	0.7	04	LR057872
High Pressure Diagnostic Leak Detector test - With exhaust removed	<b>30.10.89.48</b>	0.9	04	LR057872

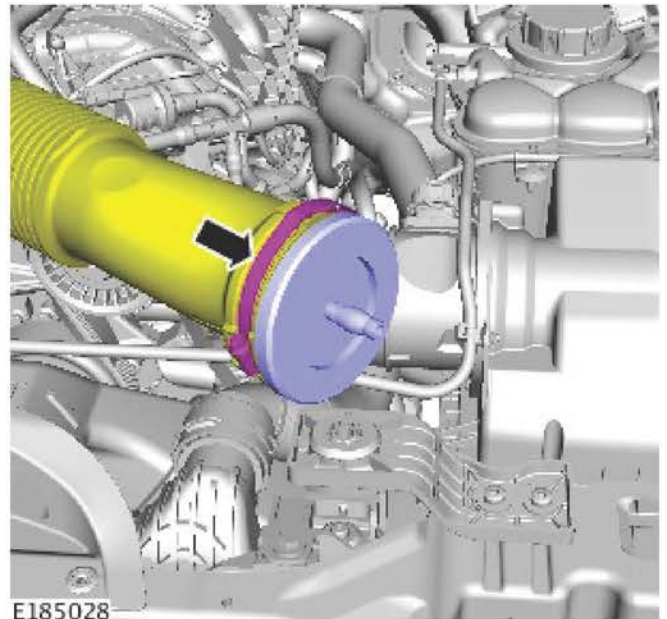
 **NOTE:** Normal Warranty procedures apply.

**SERVICE INSTRUCTION:**

1. Remove the air cleaner (see TOPIx Workshop Manual section 303-12B / 303-12C: Intake Air Distribution and Filtering).

2.  **WARNING:** Use the adapters supplied in the High Pressure Diagnostic Leak Detector kit.

Insert a suitable air intake adapter and a suitable block-off coupler to block off the inlet pipe.



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3.  **CAUTION:** Never use dye/Ultraviolet (UV) dye in intake or exhaust systems; it may coat or harm critical sensors.

 **NOTE:** Maximum to refill when empty: 2 fl. oz. (60 ml) .

Check and top up (if required) the vapor producing fluid reservoir.

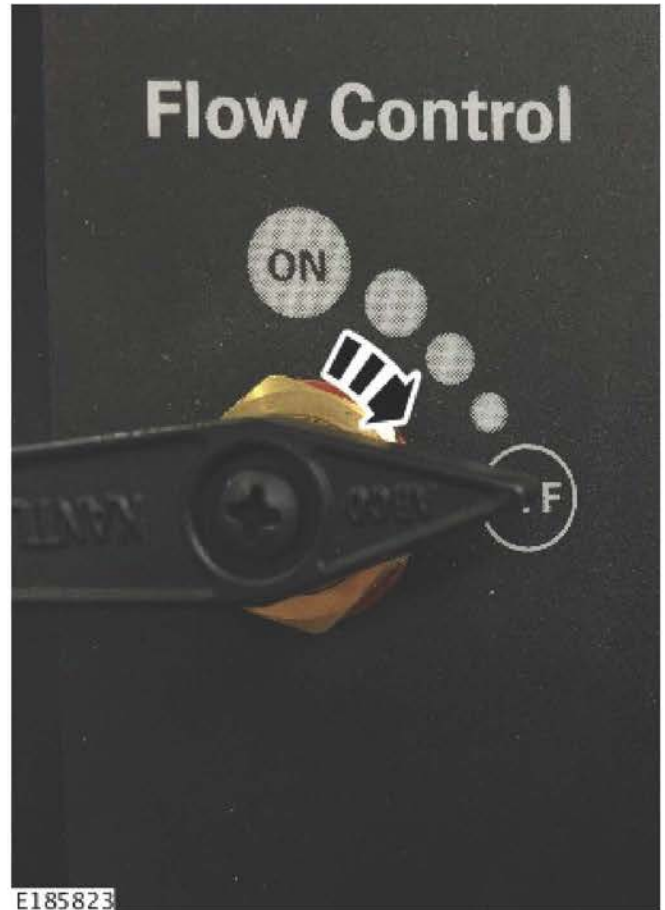
4.  **CAUTION:** Do not connect the High Pressure Diagnostic Leak Detector to a battery charger, battery

support unit, or jumper box.

**⚠ CAUTION: Never connect the High Pressure Diagnostic Leak Detector to the vehicle with the engine running.**

Connect the High Pressure Diagnostic Leak Detector to a suitable power supply.

5. Connect the High Pressure Diagnostic Leak Detector to a suitable air supply.
6. Switch the flow control valve to the OFF position.



7. Pull the pressure regulator valve OUT.



8. **⚠ CAUTION: Do not exceed 0.5 bar (7.5 psi) test**



**pressure or damage to components can occur.**

Set the test pressure to 0.5 bar (7.5 psi).



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9. Push the pressure regulator valve IN to lock it.



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10.  **NOTE: Some variation in the illustrations may occur, but the essential information is always correct.**

Insert the leak detector's PowerSmoke™ adapter into the tailpipe.



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- 11.**  **NOTE: Some variation in the illustrations may occur, but the essential information is always correct.**

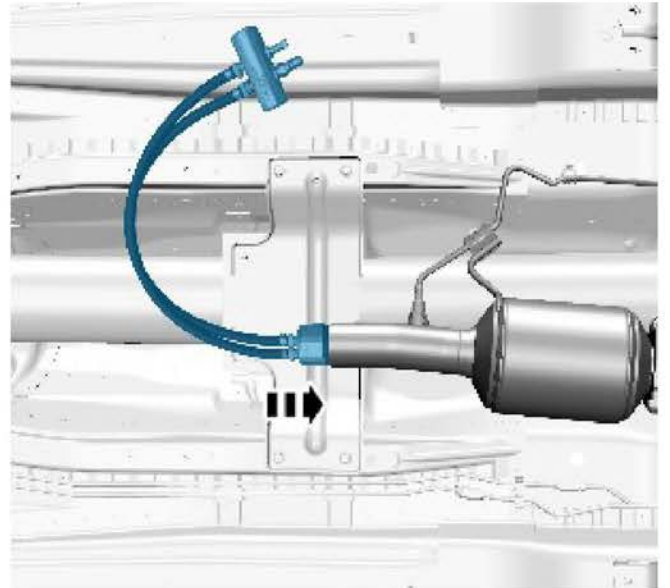
Connect the block-off coupler to one of the tail pipe PowerSmoke™ adapters. Use a suitable tire inflator to inflate the tailpipe PowerSmoke™ adapter bladder.

- Connect the leak detector to the other tailpipe. Use a suitable tire inflator to inflate the tailpipe PowerSmoke™ adapter bladder.
  - If the appropriate PowerSmoke™ adapters **DO** seal the tailpipe/s completely, continue to **Step 15**.
  - If the appropriate PowerSmoke™ adapters **DO NOT** seal the tailpipe/s completely, continue to **Step 12**.



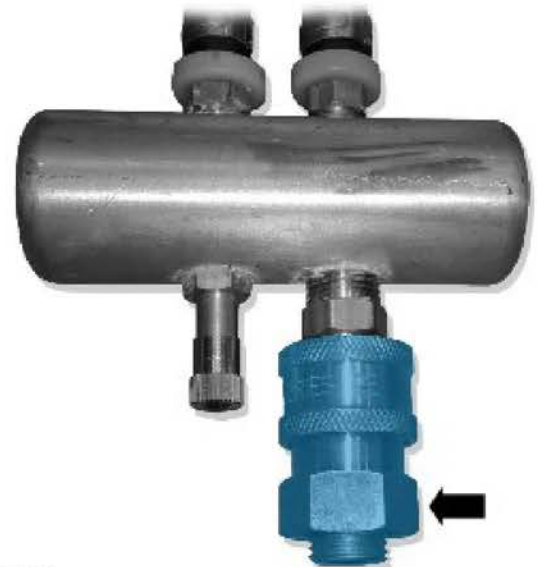
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- 12.** Remove the Exhaust System (see TOPIx Workshop Manual section 309-00A: Exhaust System).
- 13.** Install a PowerSmoke™ adaptor into the catalytic converter. Use a suitable tire inflator to inflate the tailpipe PowerSmoke™ adaptor bladder.



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- 14.** Connect the High Pressure Diagnostic Leak Detector to the PowerSmoke™ adaptor.



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- 15.** Press the START switch to begin a 10-minute vapor cycle.



16. Turn the flow control valve ON to release pressure/vapor.



17.  **NOTE:** Do not loosen the heated oxygen sensor (HO2S) before attempting to re-torque.

 **NOTE:** Some variation in the illustrations may occur, but the essential information is always correct.

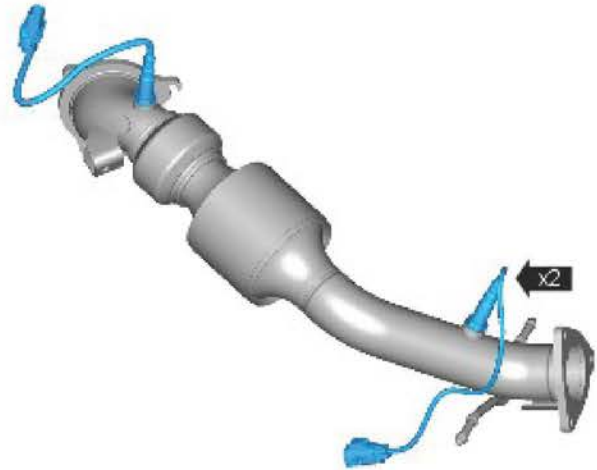
 **NOTE:** The Turbocharger waste-gate operating



shaft is a clearance fit in the shaft bush which becomes sealed once the engine is at operating temperature. It is therefore normal for a 'leak' to be identified when following this service instruction on an engine which is not at operating temperature.

Inspect the exhaust system for air leaks around **all** the HO2S and the exhaust.

- If a HO2S leak is found, torque the HO2S to the correct specification as shown in TOPIx.
- If a HO2S leak is not found, continue to the next step.



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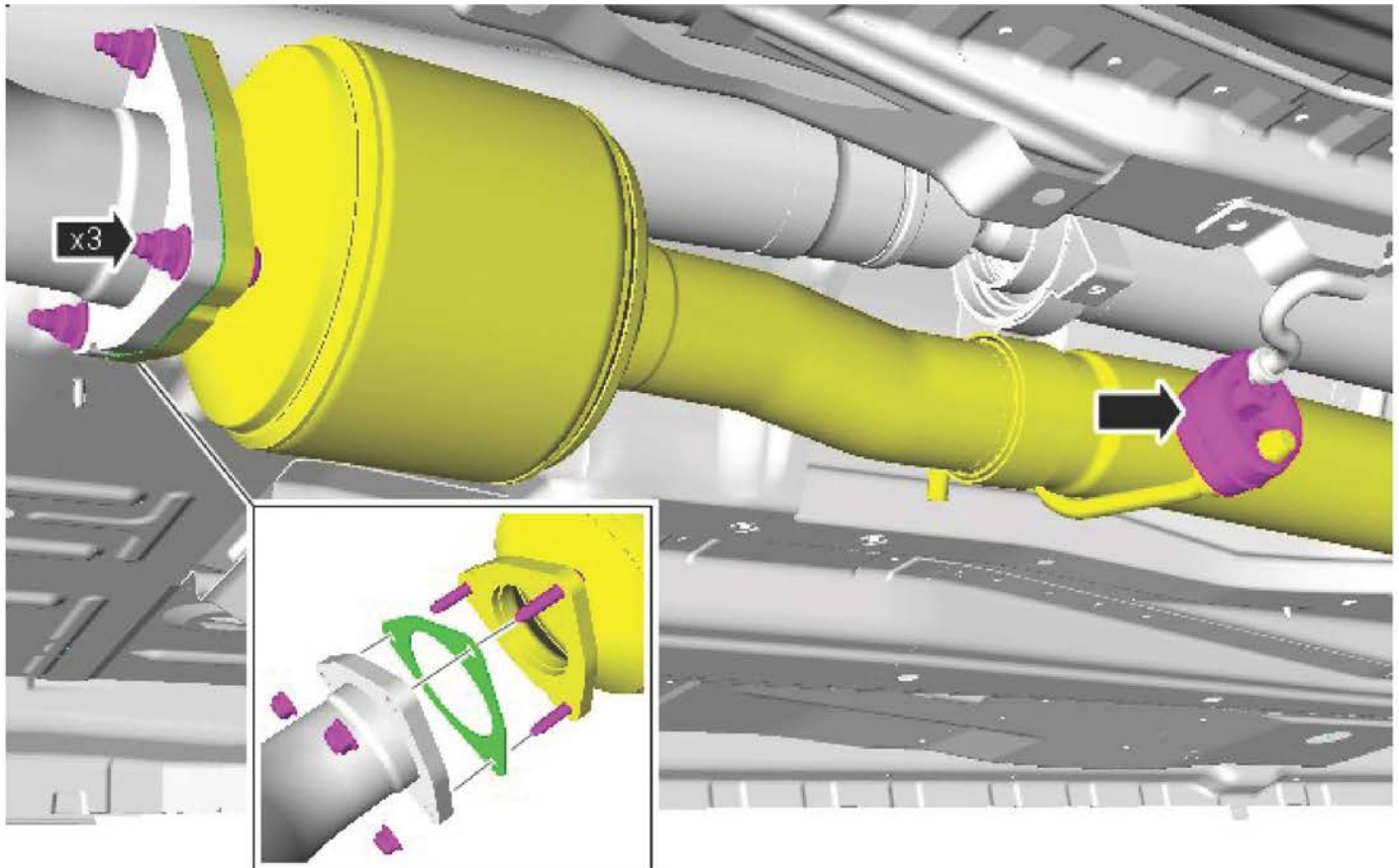
18.  **NOTE: Some variation in the illustrations may occur, but the essential information is always correct.**

 **NOTE: Do not loosen the bolts before attempting to torque.**

Inspect the exhaust system for air leaks around the exhaust three-bolt flange:

- If an exhaust leak is found, torque the bolts to the correct specification as shown in TOPIx.
  - Continue to:
    - Step 19 if the Exhaust System was removed.
    - Step 20 if the Exhaust System was not removed.
- If an exhaust leak is not found, continue to:
  - Step 19 if the Exhaust System was removed.
  - Step 20 if the Exhaust System was not removed.





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19. Install the Exhaust System (see TOPIx Workshop Manual section 309-00A: Exhaust System).
20. Install the Air Cleaner (see TOPIx Workshop Manual section 303-12B / 303-12C: Intake Air Distribution and Filtering).

**⚠ CAUTION: A Jaguar Land Rover-approved Midtronics battery power supply must be connected to the vehicle battery during diagnosis / module programming.**

**⚠ CAUTION: Ensure all ignition ON/OFF requests are carried out; failure to perform these steps may cause damage to control modules in the vehicle.**

**⚠ NOTE: The Jaguar Land Rover-approved diagnostic tool must be loaded with DVD144.06 v.230 or later.**

21. Connect the Jaguar Land Rover-approved Midtronics battery power supply to the vehicle battery.
22. Turn ignition ON (engine not running).
23. Connect the Jaguar Land Rover-approved diagnostic tool to the vehicle and begin a new session.
24. Follow the on-screen prompts, allowing the diagnostic tool to read the VIN, identify the vehicle, and initiating the data collect sequence.
25. Select '**Diagnosis**' from the Session Type screen.
26. Select the '**Selected Symptoms**' tab and then select:
  - **Electrical - Instruments - Warning lamps - Engine malfunction lamp - Lamp illuminated**
27. Select '**continue**'.
28. Select the '**Recommendations**' tab and then select '**Run**' to perform the '**Configure existing module - Powertrain control module**' option.
29. Follow all on-screen instructions to complete this task, ensuring all Diagnostic Trouble Codes (DTC) are cleared.

30. When all tasks are complete, select the '**Session**' tab and then select the '**Close Session**' option.
31. Disconnect the diagnostic tool and battery power supply from the vehicle.