

LTB01084NAS1



TECHNICAL BULLETIN

24 AUG 2017

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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.

INFORMATION

SECTION:

303-14A: Electronic Engine Controls - TDV6 3.0L Diesel

SUBJECT/CONCERN:

'Incorrect Diesel Exhaust Fluid (DEF) Quality Detected' Warning Message Displayed On The Instrument Cluster With DTC P2BA9 Stored

AFFECTED VEHICLE RANGE:

MODEL:	MODEL YEAR:	VIN:	ASSEMBLY PLANT:	APPLICABILITY:
Discovery (LR)	2017	000155-026580	Solihull	TDV6 3.0L Diesel
Range Rover Sport (LW)	2016	519971-599874	Solihull	TDV6 3.0L Diesel
Range Rover Sport (LW)	2016-2017	100369-160065	Solihull	TDV6 3.0L Diesel
Range Rover Sport (LW)	2016-2017	617562-689350	Solihull	TDV6 3.0L Diesel
Range Rover (LG)	2016-2017	219083-359945	Solihull	TDV6 3.0L Diesel

MARKETS:

NORTH AMERICA except United States Minor Outlying Islands

CONDITION SUMMARY:

SITUATION:

The engine Malfunction Indicator Lamp (MIL) may be illuminated with 'No Engine Restarts in XXX miles. Incorrect Diesel Exhaust Fluid Quality Detected' warning message displayed on the Instrument Cluster.

During diagnosis, the technician may find Diagnostic Trouble Code (DTC) P2BA9-00 and/or P2BA9-92, which may be accompanied by DTCs P2BAE and P2BAF, stored in the Powertrain Control Module (PCM).

CAUSE:

This may be caused by one or more of the following:

- Sensitivity of the PCM software related to the Selective Catalyst Reduction (SCR) control.
- Incorrect Diesel Exhaust Fluid (DEF).
- An air leak in the engine intake system.

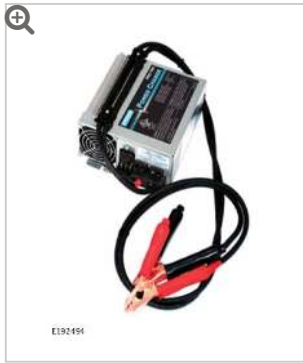
ACTION:

Should a customer express this concern, follow the appropriate Diagnostic Procedure ('A' or 'B') below.

PARTS:

No Parts Required

TOOLS:



Jaguar Land
Rover-approved
Midtronics
battery power
supply



Jaguar Land
Rover-approved
diagnostic tool
with latest SDD
software,
Calibration File



Jaguar Land
Rover-approved
diagnostic tool
with latest
PATHFINDER
software



95-0106

Jaguar
Landrover
approved high
pressure
diagnostic leak
detector



JLR-44-862

Diesel Exhaust
Fluid (DEF)
quality
hydrometer

WARRANTY:

NOTE:

If a Standard Repair Operation (SRO) is not available, a non-standard operation number can be claimed. Refer to the Global Warranty Compliance and Procedures Manual, section G.2.2: NON-STANDARD OPERATIONS.

NOTES:

- 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.
- 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

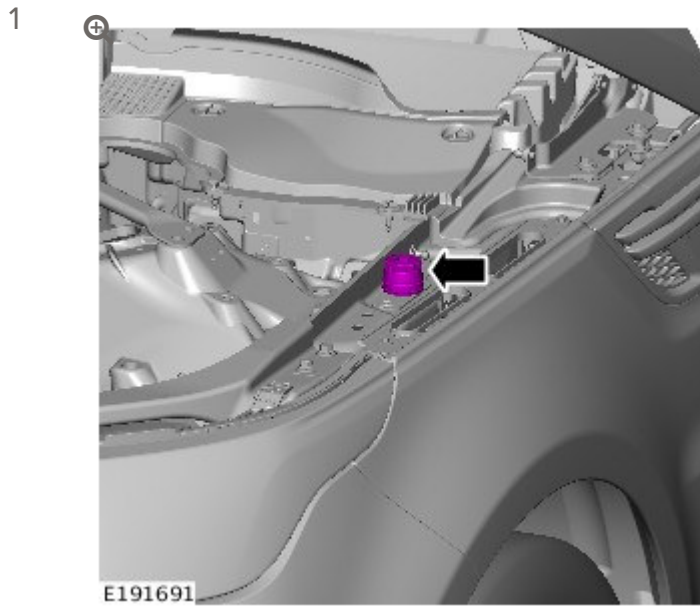
DESCRIPTION	SRO	TIME (HOURS)	CONDITION CODE	CAUSAL PART
Powertrain Control Module (PCM) - Software Update	18.90.90	0.2	04	LR079607
Tank - Diesel Exhaust Fluid (DEF) - Quality test	17.50.37.01	0.3	04	LR079607
Leakage test using smoke test equipment	01.01.28	0.4	04	LR079067
Reset Selective Catalyst Reduction (SCR) monitor with diagnostics	17.90.10	0.1	04	LR079067

NOTE:

Normal Warranty procedures apply.

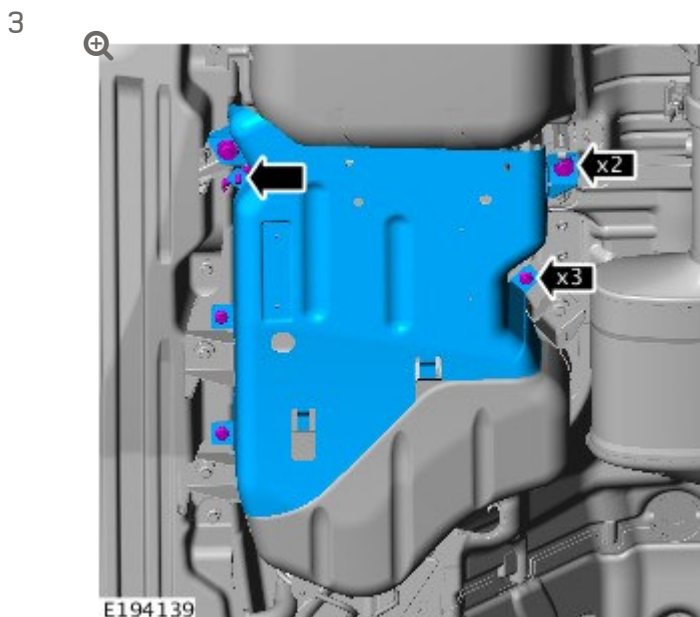
DIESEL EXHAUST FLUID QUALITY TEST

If Diesel Exhaust Fluid (DEF) added to the vehicle by the customer is found to be of poor quality this will not be paid for under warranty. Make sure the customer is aware of any possible costs prior to completing any repair work.



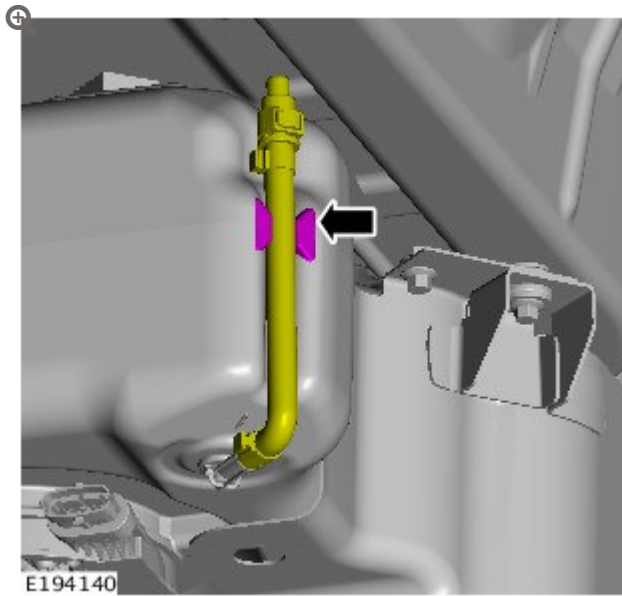
Remove the Diesel Exhaust Fluid (DEF) filler cap.

-
- 2 Raise and support the vehicle (see TOPIx Workshop Manual section: 100-02 Jacking and Lifting, Description and Operation).
-



Remove the 5 bolts and the retaining clip.

4



Remove the drain tube from the retaining clip.

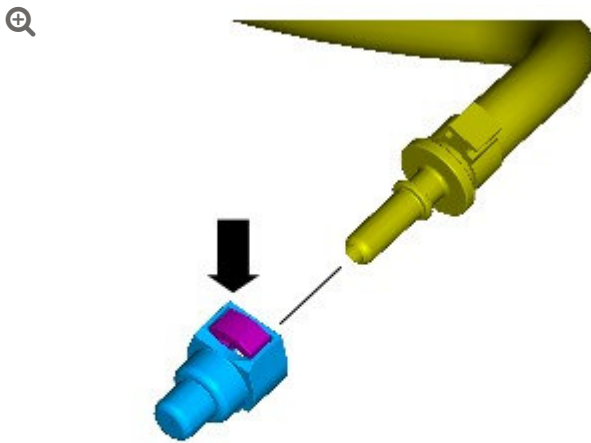
5

WARNING:

Be prepared to catch escaping fluid.

NOTE:

Make sure that the area around the component is clean and free of foreign material.



E190505

Remove the blanking cap and drain approximately 50 ml of the fluid into a suitable container to purge the drain pipe of impurities.

- When 50 ml has been drained into a suitable container, install the blanking cap.
- Insert the drain tube into the retaining clip.

6 Remove the blanking cap and allow approximately 50 ml of the fluid to drain into a clean container.

7

NOTE:

Make sure a different clean container is used for all 3 test samples.

Repeat Steps 4-6 2 more times.

8



E183165

Using the DEF quality hydrometer, check the DEF is within the acceptable (green) scale.

- If the fluid is in the green scale when tested (on all 3 test case samples), **go to Step 9.**
- If the fluid is not in the green scale (on 1 or more of the 3 test case samples), drain and replace the DEF (refer to TOPlx Workshop Manual section 303-08A: General Procedures - Diesel Exhaust Fluid Tank Drain and Refill).

9 Reverse Steps 1-3.

SERVICE PROCEDURE:

-
- 1 Complete a leakage test on the intake system using smoke test equipment (see TOPlx Workshop Manual section 303-00: Engine system general information - General procedures - Leakage test using smoke test equipment).

- Areas where leaks have been found include, but are not limited to:
 - Mass Air Flow (MAF) sensor
 - Turbocharger (before and after)
 - Charger air radiator, hoses, and hose clamps
- If no leak is found, go to the appropriate Diagnostic Procedure ('A' or 'B') below.
- If a leak is found, repair as per TOPIx repair procedures and raise an Electronic Product Quality Report (EPQR) detailing the error state found, with photographs where possible.
- After completing the repair, repeat test to confirm the defect found is no longer evident.
- If any further diagnostic assistance is required, raise a Technical Assistance (TA) request.

DIAGNOSTIC PROCEDURE 'A': SDD

This Diagnostic Procedure is only for vehicles requiring the Jaguar Land Rover-approved diagnostic tool with Symptom Driven Diagnostics (SDD).

After updating the Powertrain Control Module (PCM) with the latest software, the message 'Incorrect Diesel Exhaust Fluid Quality Detected' may now default to 'Diesel Exhaust Fluid Dosing System Malfunction' and DTC P2BA9-00/92 may be cleared. When the 'Reset selective catalyst reduction quality' monitor has been successfully completed (see procedure below), the warning message in the Instrument Cluster (IC) will no longer be displayed. The remaining DTCs (P2BAE/P2BAF) can now be cleared from the PCM.

CAUTIONS:

- A Jaguar Land Rover-approved Midtronics battery power supply must be connected to the vehicle battery during diagnosis / module programming.
- All ignition ON/OFF requests must be carried out. Failure to perform these steps may cause damage to control modules in the vehicle.

NOTE:

Use DDW to check for Field Service Action program eligibility requiring a Powertrain Control Module (PCM) software update. If eligible, perform and claim the update as per that program.

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- 1 Connect the Jaguar Land Rover-approved Midtronics battery power supply to the vehicle battery.

-
- 2 Switch the ignition ON (engine not running).

- 3

NOTE:

The Jaguar Land Rover-approved diagnostic tool must be loaded with DVD150.04 Calibration File 275 (or later).

Connect the Jaguar Land Rover-approved diagnostic tool to the vehicle and begin a new session.

-
- 4 Follow the on-screen prompts, allowing the diagnostic tool to read the VIN, identify the vehicle, and initiating the data collect sequence.

-
- 5 If the hyperlink is not available:

- 1 Select **Diagnosis** from the Session Type screen.
- 2 Select the **Selected Symptoms** tab.
- 3 Select one of the following symptoms:

- **Electrical - Instruments - Warning lamps - Engine malfunction lamp - Lamp illuminated** or
- **Electrical - Instruments - Information and message center - Message display area - Powertrain**

4 Select **continue**.

5 Select the **Recommendations** tab.

6 Select **Run** to perform the '**Configure existing module - Powertrain control module**' option.

6 Follow all on-screen instructions until the application completes successfully.

1 When all tasks are complete, go to the next Step.

7 If the hyperlink is not available:

1 Select **Diagnosis** from the Session Type screen.

2 Select one of the following symptoms:

- **Electrical - Instruments - Warning lamps - Engine malfunction lamp - Lamp illuminated** or
- **Electrical - Instruments - Information and message center - Message display area - Powertrain**

3 Select **continue**.

4 Select the **Recommendations** tab.

5 Select **Run** to perform the '**Configure existing module - Powertrain - Reset selective catalyst reduction quality monitor**' option.

8 Follow all on-screen instructions until the application completes successfully.

1 When prompted, select the **Clear DTCs** option following completion of the software download.

2 When all tasks are complete, go to the next Step.

9 Exit the current session.

1 Select the **Session** tab.

2 Select the **Close Session** option.

10 Disconnect the diagnostic tool and battery power supply from the vehicle.

DIAGNOSTIC PROCEDURE 'B': PATHFINDER

This Diagnostic Procedure is only for vehicles requiring the Jaguar Land Rover-approved diagnostic tool with PATHFINDER.

After updating the Powertrain Control Module (PCM) with the latest software, the message 'Incorrect Diesel Exhaust Fluid Quality Detected' may now default to 'Diesel Exhaust Fluid Dosing System Malfunction' and DTC P2BA9-00/92 may be cleared. When the 'Reset selective catalyst reduction quality' monitor has been successfully completed (see procedure below), the warning message in the Instrument Cluster (IC) will no longer be displayed. The remaining DTCs (P2BAE/P2BAF) can now be cleared from the PCM.

CAUTIONS:

- A Jaguar Land Rover-approved Midtronics battery power supply must be connected to the vehicle battery during diagnosis / module programming.
- All ignition ON/OFF requests must be carried out. Failure to perform these steps may cause damage to control modules in the vehicle.

NOTE:

Use DDW to check for Field Service Action program eligibility requiring a Powertrain Control Module (PCM) software update. If eligible, perform and claim the update as per that program.

-
- 1 Connect the Jaguar Land Rover-approved Midtronics battery power supply to the vehicle battery.

- 2

NOTE:

The Jaguar Land Rover-approved diagnostic tool must be loaded with PATHFINDER version 95 (or later).

Connect the Jaguar Land Rover-approved diagnostic tool to the vehicle and begin a new session.

-
- 3 Follow the on-screen prompts.

NOTE:

Failure to complete the following steps could result in damage to the vehicle.

-
- 4 Select **ECU Diagnostics**.

-
- 5 Select **Powertrain control module (PCM)**.

-
- 6 Select **Update ECU**.

- 1 Follow all on-screen instructions until the application completes successfully.
- 2 When all tasks are complete, go to the next Step.

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- 7 Select **ECU Functions**.

-
- 8 Select **Reset Selective Catalyst Reduction Quality Monitor**.
- 1 Follow all on-screen instructions until the application completes successfully.
 - 2 When all tasks are complete, go to the next Step.

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- 9 Exit the current session.
- 1 If required, reset the vehicle to **Transit mode**.
 - 2 Select the **Exit** icon.

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- 10 Disconnect the diagnostic tool and battery power supply from the vehicle.