

TECHNICAL BULLETIN

LTB00304NAS8

31 MAY 2013



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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. Only refer to the electronic version of this Technical Bulletin in TOPIx.

Changes are highlighted in gray

SECTION: 310-00

Fuel Gauge Operation / DTC U0128-00 Stored

AFFECTED VEHICLE RANGE:

LR4 (LA)	Model Year:	2010-2013
	VIN:	AA510178-DA656034
Range Rover Sport (LS)	Model Year:	2010-2013
	VIN:	AA212145-DA790997

MARKETS:

NAS

CONDITION SUMMARY:

Situation:

The fuel gauge may experience one or more of the following issues and Diagnostic Trouble Code (DTC) U0128-00 may be stored:

- fuel gauge erratic
- fuel gauge not working
- fuel gauge fluctuating
- fuel gauge switches on/off intermittently

If DTC U0128-00 **is** stored, update the Instrument Cluster (IC) software; if the gauge then reads correctly, release the vehicle. IDS must be loaded with **DVD133.04 v130** or later.

If DTC U0128-00 **is not** stored or if the issue remains after performing the IC software update, continue to the Repair Procedure outlined below.

If any of the issues above are present, carry out the fuel gauge diagnostics detailed in the Workshop Manual section 310-10: Fuel Tank Lines Diagnosis and Testing.



NOTE: SDD will be required to ascertain the fuel sender voltage readings.

If a failure to the harness or individual fuel sender cannot be verified at any point during the diagnostic stage,

then both fuel level senders and the flange should be replaced to avoid the possibility of a repeat repair.

For vehicles where DTC U0128 is not stored, monitor from the following VINs. From these VINs, several actions have been implemented including increased cross sectional area of the pump wires and a larger pre-pump filter.

- LR4 – CA626864;
- Range Rover Sport – CA752995



NOTE: All current fuel sender service stock are gold pins.

Gold pin terminals for the fuel senders were introduced from production from the following VINs:

- LR4 – BA595923;
- Range Rover Sport – BA712004.

Cause: These issues may be caused by:

- Software issue within the instrument cluster (DTC U0128-00);
- Fretting corrosion across the fuel sender harness pins inside the fuel tank (black connectors) or possible backed out pins in any of the following areas, internal to the fuel tank (sender wiring), fuel pump module and/or flange assembly.

Action: In the event of a customer concern of the above, check if DTC U0128-00 is stored and carry out the IC software update (if required). If DTC U0128-00 is not stored, first check the vehicle harness to fuel tank flange connection before commencing any further work (see step 11 in the Service Instruction). Also check all connections for backed out pins (see step 12 in the Service Instruction).

PARTS:



NOTE: Only to be used if no wiring fault is found AND DTC U0128-00 is NOT present.

CN100509	Clip	Quantity: 1
LR000966	Gasket	Quantity: 1
LR028456	Flange - Gasoline	Quantity: 1
LR015940	Front (passive) float sender – LR4	Quantity: 1
LR014999	Rear (active) float sender – LR4	Quantity: 1
LR015377	Front (passive) float sender – Range Rover Sport	Quantity: 1
LR042716	Rear (active) float sender – Range Rover Sport	Quantity: 1

TOOLS:



NOTE: This document is an 'Active Bulletin' that will display a functional programming shortcut if accessed within a diagnostic session using SDD.

IDS with latest IDS-DVD and Calibration File; first available on DVD133.04 v.130
Jaguar Land Rover-approved Midtronics Vehicle Power Supply

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
Fuel gauge inaccurate - Diagnostics only	19.90.89.30	0.60	X2	LR021911
Sender units – Fuel tank gauge - Both - Replace	88.25.41	1.20	X2	LR021911
Software download - Instrument pack	88.90.04	0.20	X2	LR021911



NOTE: Normal Warranty policies and procedures apply.

DIAGNOSTIC / REPAIR PROCEDURE

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



CAUTION: A Jaguar Land Rover-approved Midtronics Vehicle Power Supply must be connected to the vehicle battery during IDS / SDD diagnosis / module programming.



NOTE: IDS must be loaded with DVD133.04 v.130 or later.

Connect the Jaguar Land Rover-approved Midtronics Vehicle Power Supply to the vehicle battery.

2. Turn ignition 'ON' (engine not running).
3. Connect the Integrated Diagnostic System (IDS) to the vehicle and begin a new Symptom Driven Diagnostics (SDD) session.
4. Follow the on-screen prompts, allowing SDD to read the VIN and identify the vehicle.
5. Select 'Diagnosis' from the Session Type screen.
6. Select the 'Selected Symptoms' tab, and then select the following:
 - Electrical > Instruments > Gauges > Fuel Gauge
7. Select the 'Related DTC view' tab and view the DTCs.
 - If Instrument Cluster (IC) DTC U0128-00 **is** present, continue to step 8.
 - If Instrument Cluster (IC) DTC U0128-00 **is not** present, continue to step 9.
8. From the Recommendations tab, select '**Run**' to perform the 'Configure existing module – Instrument cluster control module' option.
 - Follow all on-screen instructions to complete this task.
9. Exit the current session.
10. Disconnect the IDS and the vehicle power supply from the vehicle.
11. Recheck for reported fuel gauge issue symptoms:
 - Issue fixed? No further action required.
 - Issue still apparent? Continue to step 12.
12. **NOTE: Lower the fuel tank only sufficiently to access the top of the fuel tank.**

Use a suitable transmission jack to lower the fuel tank only sufficiently to access the top of the fuel tank (refer to TOPIx Workshop Manual section 303-01C / D: Fuel Tank and Lines)

- 13.** The first area to check before commencing any further work is the vehicle harness to fuel tank connection. A poor connection may exist where the harness plugs into the flange.

1. To test, with the ignition turned 'OFF' and connector in place, pull the connector upwards to give a worse case scenario connection situation.

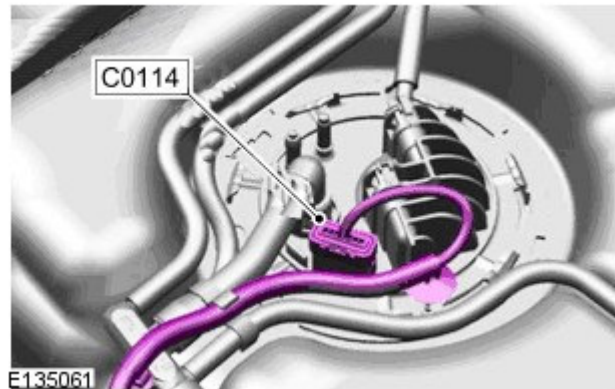
2. Turn the ignition 'ON'.

- does the gauge drop to zero?

3. Repeat several times.

- If fault is found, remove connector and ensure pin connections are not loose and that they are correctly retained in the connector housing.

- If no fault can be found, confirm the connector is fitted and pushed fully home and continue with further diagnostics as detailed TOPIx Workshop Manual section 310-01C / D: Fuel Tank and Lines Diagnosis and Testing.



- 14.**  **NOTE: Typical in-tank fuel module and sender components; not all derivatives will have the same number of connectors.**

Backed-out pin/wire could be any of the wires on the connector assembly; all **must** be checked.

