



# TECHNICAL BULLETIN

LTB00304NAS7

20-DEC-12

ISSUE '7' CHANGES ARE HIGHLIGHTED IN GRAY

## SECTION: 310

### Fuel Gauge Operation / DTC U0128-00 Stored

#### AFFECTED VEHICLE RANGE:

LR4 (L319)

VIN: AA510742-DA656034

Model Year: 2010-2013

Range Rover Sport (L320)

VIN: AA212147-BA299999

BA700000-DA790997

Model Year: 2010-2013

#### CONDITION SUMMARY:

**Situation:** The fuel gauge may experience one or more of the following issues:

- Fuel Gauge Erratic.
- Fuel Gauge Not Working.
- Fuel Gauge Fluctuating.
- Fuel Gauge Switches On/Off Intermittently.

If DTC U0128-00 is present, download the revised software to the Instrument Cluster. SDD must be loaded with DVD 130 Patch 2 Calibration File 108 or later. If the problem remains after carrying out the download or DTC U0128-00 is not stored continue with the Bulletin.

If the symptoms detailed above are present on the vehicle, please carry out the fuel gauge diagnostics detailed in TOPIx section 310-01: *Fuel Tank and 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 please 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.

Gold pin terminals for the fuel senders were introduced from production from the following VINs: LR4 – BA595923; Range Rover Sport – BA712004.

**NOTE:** All current fuel sender service stock is gold pins.

**Cause:** 1) Software issue within the instrument cluster (DTC U0128-00); 2) 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:** Should a customer express concern, check if DTC U0128-00 is stored and carry out the download to the instrument cluster if required. If DTC U0128-00 is not stored the first area to check before commencing any further work is the vehicle harness to fuel tank flange connection. Also check all connections for backed out pins.

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.

**PARTS:**

△ **NOTE:** Parts to be used only if no wiring fault is found.

CN100509 .....	Clip	Qty: 1
LR000966 .....	Gasket	Qty: 1
LR028456 .....	Flange	Qty: 1
LR014999 .....	Rear (active) float sender - LR4	Qty: 1
LR015940 .....	Front (passive) float sender - LR4	Qty: 1
LR015377 .....	Front (passive) float sender - Range Rover Sport	Qty: 1
LR021911 .....	Rear (active) float sender - Range Rover Sport	Qty: 1

**TOOLS:**

IDS with latest IDS-DVD and Calibration File; software first available on IDS-DVD130.02 v.108  
Land Rover-approved Midtronics Vehicle Power Supply  
Refer to Workshop Manual for any required special tools

**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 DDW to obtain the latest repair time.

DDW requires the use of causal part numbers. Labor only claims must show the causal part number with a quantity of zero.

<i>DESCRIPTION</i>	<i>SRO</i>	<i>TIME (HOURS)</i>	<i>CONDITION CODE</i>	<i>CAUSAL PART</i>
Fuel gauge inaccurate – Diagnostics only	19.90.89.30	0.60	X2	LR021911
Sender units – Fuel tank gauge – Front and rear– Renew	88.25.41	1.20	X2	LR021911
Update Instrument cluster software	88.90.04	0.20	X2	LR021911

*Normal Warranty policies and procedures apply*

**REPAIR PROCEDURE**

⚠ **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 Land Rover-approved Midtronics Vehicle Power Supply must be connected to the vehicle battery during IDS diagnosis / module programming.

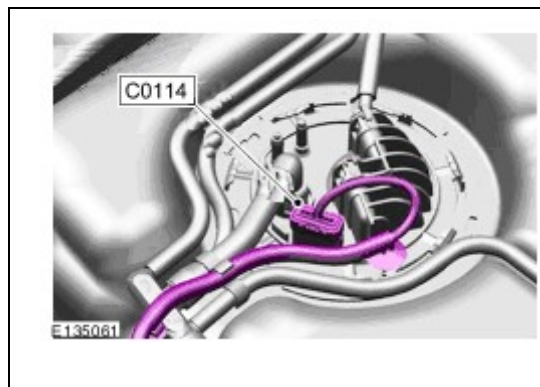
1. Connect the Land Rover-approved Midtronics Vehicle Power Supply to the vehicle battery.
2. Turn ignition 'ON' (engine not running).

△ **NOTE:** IDS must be loaded with IDS-DVD130.02 v.108 or later.

3. Connect the 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. From the Session Type selection screen, choose 'Diagnosis'.
6. Select the 'Selected Symptoms' tab, and then select:
  - Electrical > Instruments > Gauges > Fuel gauge
7. Select 'Related' DTC view tab and view any stored DTCs.

- If DTC U0128-00 is stored in the Instrument Cluster, continue to step 8.
  - If DTC U0128-00 is not stored in the Instrument Cluster, continue to step 13.
8. Select the 'Recommendations' tab.
  9. 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.
  10. Exit the current session.
  11. Disconnect the IDS and the Midtronics Vehicle Power Supply from the vehicle.
  12. Check for fuel gauge issue:
    - If the issue is repaired, no further action is required.
    - If the issue is not repaired, continue to step 13.
  13. Refer to Workshop Manual section 310-01 and use a suitable transmission jack to lower the fuel tank only enough to access the top of the fuel tank.

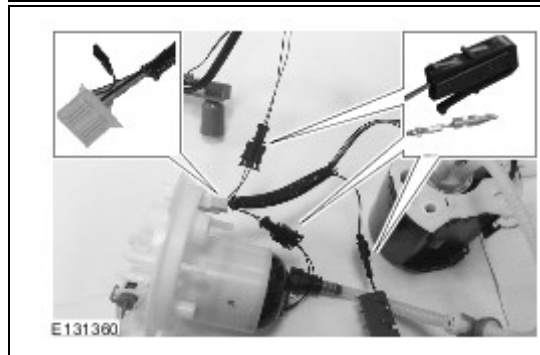
14. The first area to check before commencing any further work is the vehicle harness to fuel tank connection. A poor connection may exist where the harness plugs into the flange (see E135061). To test, with the ignition turned off and connector in place, pull the connector upwards to give a worst case scenario connection situation. Turn on the ignition, does the gauge drop to zero, 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 section 310-01.



15. Refer to Workshop Manual section 310-01 and perform the appropriate diagnostic and repair procedure(s).

△ **NOTE: Not all derivatives will have the same number of connectors. Fuel tank module / sender components removed from fuel tank for clarity.**

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



16. 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.