

TECHNICAL BULLETIN  
 JTB00301NAS1  
 26 MAR 2014



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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 Jaguar service facility to determine whether this bulletin applies to a specific vehicle.

**SECTION: 310-00**

Fuel Gauge Operation

**AFFECTED VEHICLE RANGE:**

**XK Range (X150)**

**Model Year:** 2010-2012  
**VIN:** B32753-B47682

**XF (X250)**

**Model Year:** 2010-2012  
**VIN:** R47154-S23314

**Engine:** V8 5.0L Petrol  
 V8 S/C 5.0L Petrol

**MARKETS:**

NAS

**CONDITION SUMMARY:**

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

- Fuel gauge inoperative;
- Fuel gauge not showing more than ½ full;
- Fuel gauge fluctuates; and/or
- Fuel gauge switches on/off intermittently.

**Cause:** These issues may be caused by:

- Backed-out pins in any of the following areas:
  - internal to the fuel tank (sender wiring);
  - fuel pump module; and/or
  - fuel tank flange assembly.
- Fretting corrosion across the fuel sender harness pins inside the fuel tank (black connectors).



**NOTE:** Refer to TOPIx Workshop Manual, Section 310-01: Fuel Tank and Lines Diagnosis and Testing; if a harness or fuel sender fault cannot be identified, follow the Service Instruction outlined below.



**NOTE:** Please advise the customer, if possible, to bring the vehicle in with the fuel tank level below ¼ full.

**Action:** Should a customer express this concern, follow the Service Instruction outlined below.

**PARTS:**



**CAUTION:** The splice joint connector is specific to this repair and must be used and crimped using special tool 418-116A (YRW500010).


|          |                         |                            |
|----------|-------------------------|----------------------------|
| C2P8274  | Gasket - Fuel tank - XK | Quantity: 1                |
| C2Z27711 | Splice joint connector  | Quantity: 6 (as necessary) |
| C2Z7361  | Gasket - Fuel tank - XF | Quantity: 1                |

**TOOLS:**

Crimping Pliers  
418-116A / YRW500010

**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 sender harness modification - XF | <b>86.94.80</b> | 0.8          | X2             | C2Z23190    |
| Fuel sender harness modification - XK | <b>86.94.80</b> | 5.1          | X2             | C2P24405    |


 **NOTE: Normal Warranty procedures apply.**

**SERVICE INSTRUCTION:**

1. Carry out fuel system pressure release (see TOPIx Workshop Manual, Section 310-00).
2. Disconnect the battery ground cable (see TOPIx Workshop Manual, Section 414-01).

 **WARNING: Make sure that the fuel system has been de-pressurized before disconnecting any fuel connections.**

3. Carry out fuel tank drain (see TOPIx Workshop Manual, Section 310-00).

4.  **CAUTION: Inspect the fuel tank flange electrical connector for sign of damage or backed out pins before removing the fuel tank flange. Any repair carried out to the fuel tank flange electrical connector should be carried out as a separate warranty claim.**


Remove the fuel pump and sender unit (see TOPIx Workshop Manual, Section 310-01).


5. Place the fuel pump and sender unit on a clean work surface.


 **CAUTION: To reduce the chance of incorrect wiring of the harnesses, wherever possible, only repair one wire at a time.**


 **NOTE: The number of black connectors shown in the fuel tank on a vehicle may vary from the procedure shown below. To achieve the best possible repair, replace as many of the black connectors (up to three [3] in total) as possible.**


 **NOTE: XF shown; XK similar.**

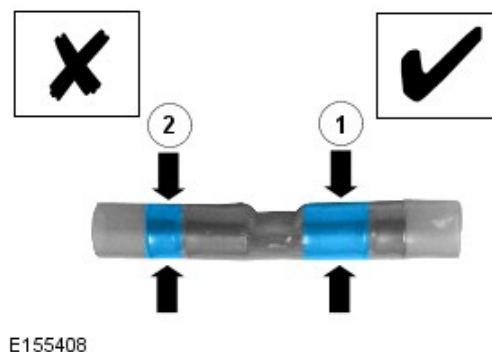
6.  **CAUTION: To reduce the chance of incorrect wiring of the harnesses, wherever possible, only repair one wire at a time.**

 **CAUTION: Make sure that the splice is crimped in the correct location.**

 **CAUTION: Make sure that the splice is crimped using special tool 418-116A / YRW500010.**

 **CAUTION: Make sure that the splice with the part number listed above is used. Failure to follow these instructions may result in a poor repair.**


 **NOTE: The number of black connectors shown in the fuel tank on a vehicle may vary from the procedure shown below. To achieve the best possible repair, replace as many of the black connectors (up to three [3] in total) as possible.**




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

When installing the splices, make sure that the splice is crimped in the correct location.

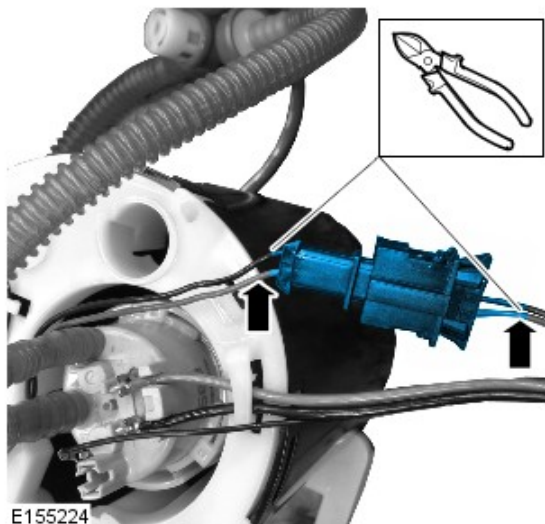
- 'Tick' / '1' - correct crimp location
- 'X' / '2' - incorrect crimp location

7.  **CAUTION: Make sure the wiring is cut as close to the connector as possible.**

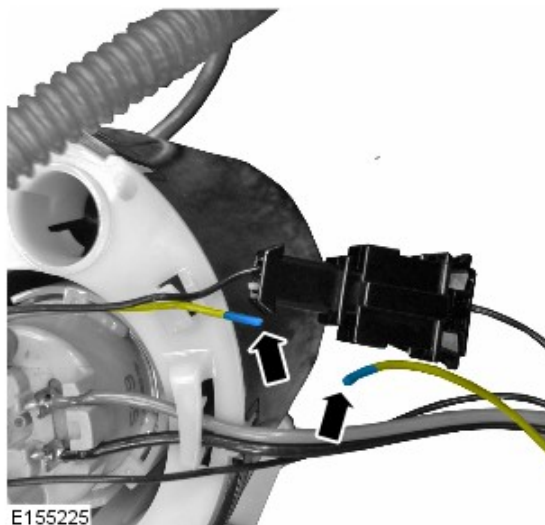
 **NOTE: A total of three (3) black two-pin connectors may be found. Replace only one at a time.**


Identify a black two-pin connector to be removed.

- Cut wiring as close to the connector as possible.

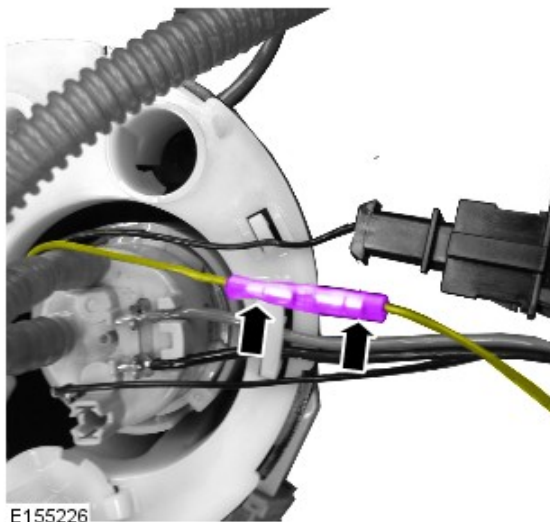


8. Using a suitable tool, remove 5mm of insulation from the end of each wire.



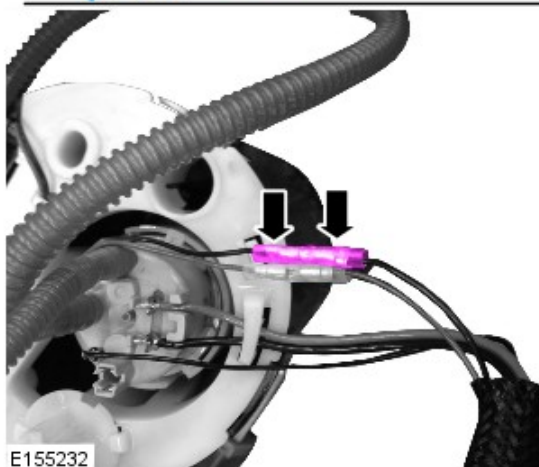
9.  **CAUTION: After crimping the connection, perform a gentle pull test to make sure that a sufficiently strong connection has been created. If required, remove and replace the splice.**

Using Crimping Tool 418-116A / YRW500010, install and crimp a splice to the ends of each wire.



10. Repeat steps 8-9 to the other wire in the connector.

- Discard the connector.



11. Repeat steps 7-10 to **all** black two-pin connectors (up to three [3] in total).

12. Using a suitable tie strap, secure the two splices together.



E 155409

13.  **CAUTION: Make sure the wiring is cut as close to the connector as possible.**

Identify the ground connector (two black wires) to be removed.

- Cut wiring as close to the connector as possible.
- Discard the connector.

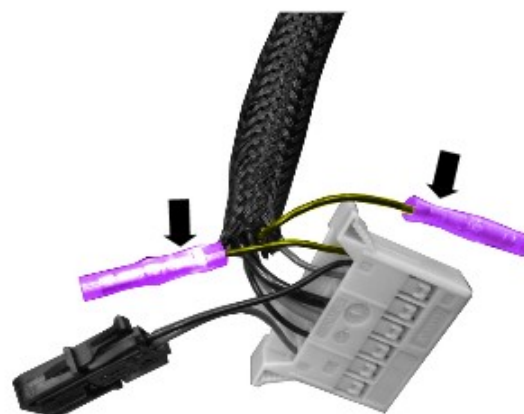


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14. Using a suitable tool, remove 5mm of insulation from the end of each wire.

15.  **NOTE: Do not connect the two splices until step 19.**


Using Crimping Tool 418-116A / YRW500010, install and crimp a splice to the end of each wire.




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16.  **CAUTION: Do not install the fuel tank flange at this point.**

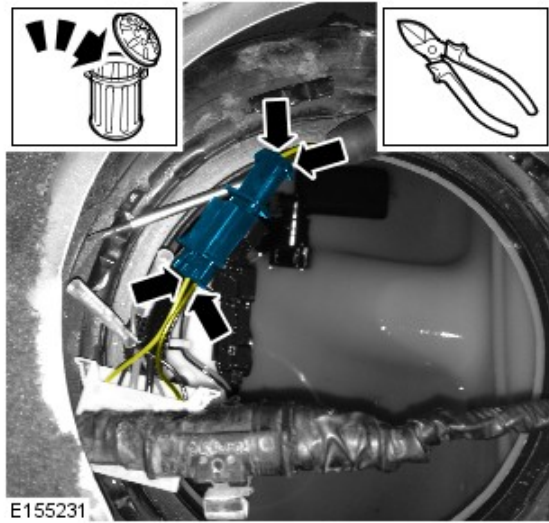
Install the fuel pump and sender unit into the fuel tank (see TOPIx Workshop Manual, Section 310-01).


17.  **CAUTION: Make sure the wiring is cut as close to the connector as possible.**

 **CAUTION: Make sure that the correct wires are re-connected to each other.**

Identify the connector to be removed.

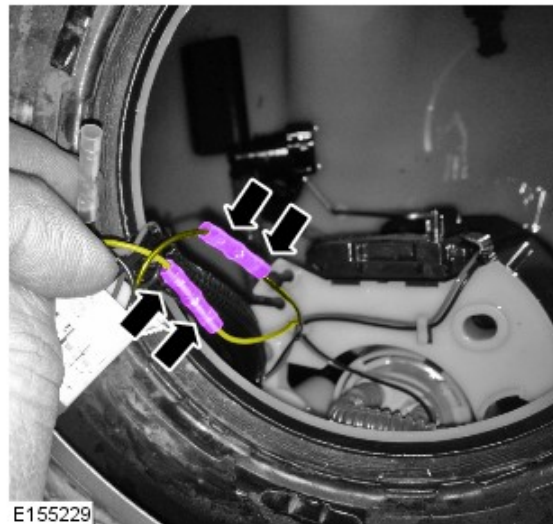
- Carefully withdraw the connector out of the tank.
- Cut the wires shown as close to the connector as possible.
- Discard the connector.




18.  **CAUTION: After crimping the connection, perform a gentle pull test to make sure that a sufficiently strong connection has been created. If required, remove and replace the splice.**

Using a suitable tool, remove 5mm of insulation from the end of each wire.

- Using Crimping Tool 418-116A / YRW500010, install and crimp a splice to the ends of each wire.
- Using a suitable tie strap, secure the two splices together.

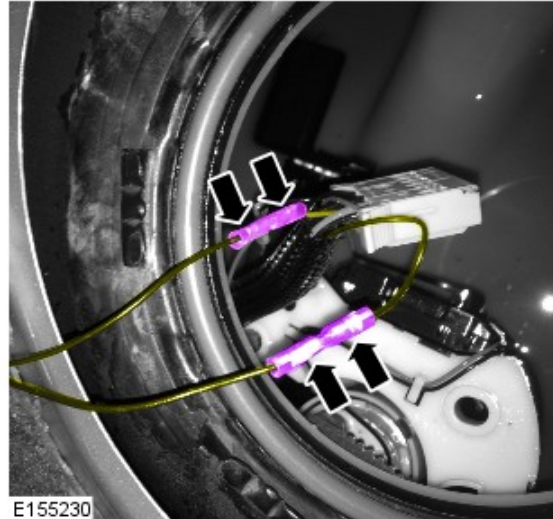




19.  **CAUTION: After crimping the connection, perform a gentle pull test to make sure that a sufficiently strong connection has been created. If required, remove and replace the splice.**

Connect the two ground wires from the base of the fuel tank flange to the two splices installed in step 15.

- Position the fuel tank flange close to the fuel tank.
- Using a suitable tool, remove 5mm of insulation from the end of each wire.
- Using Crimping Tool 418-116A / YRW500010, install and crimp a splice to the ends of each wire.
- Using a suitable tie strap, secure the two splices together.



20. Refer to the Resistance Values Checks table below and check the resistance values across fuel tank flange pins listed:

- If the resistance value is between 46.2 and 1002.2 ohms, continue to the next step.
- If the resistance value is outside this range, further investigation is required. Must be performed as a separate claim.

21.  **CAUTION: A successful resistance values check (step 20) must be carried out before continuing to install the fuel pump and sender unit.**

Complete the installation of the fuel pump and sender unit (see TOPIx Workshop Manual, Section 310-01).

22. Read and clear all Diagnostic Trouble Codes (DTC).

Resistance Values Checks

| Check No. | Pin No. |   | Lower Resistance Value (Ohms) | Upper Resistance Value (Ohms) |
|-----------|---------|---|-------------------------------|-------------------------------|
| 1         | 1       | 2 | 46.2                          | 1002.2                        |
| 2         | 1       | 6 | 46.2                          | 1002.2                        |