

Reference	SSM72087
Models	XF / X250 XJ / X351
Title	XF/XJ Eco Stop/Start Additional Diagnostics Information
Category	Electrical
Last modified	04-Dec-2014 00:00:00
Symptom	203000 Basic Electrical
Attachments	Unique DTC Code.pdf

Content

Issue: A customer may report one of the following symptoms:

- 1) Battery Charging Warning message or Eco Stop Inhibited message is displayed in the instrument cluster
- 2) Eco Stop is non-functional over a number of drive cycles
- 3) The vehicle experiences an un-commanded shutdown after an ECO Stop event and requires an ignition restart.

Cause: Various conditions can lead to the concern, as detailed below

Action: **Check the car is in the affected vehicle range (see VIN list per model below)**

XF 2013 MY> S61362

3.0 V6 Petrol
5.0 V8 Petrol
5.0 V8 S/C Petrol

XF 2014 MY> U09026

2.0 GTDi I4 Petrol

XJ 2013 MY> V39427

3.0 V6 Petrol
5.0 V8 Petrol
5.0 V8 S/C Petrol

XJ 2014 MY> V58603

2.0 GTDi I4 Petrol

If the vehicle is within one of the VIN ranges above, then follow the instructions below;

ENSURE GATEWAY MODULE SOFTWARE IS UPDATED TO THE LATEST LEVEL BEFORE BEGINNING DTC DIAGNOSIS**1. CAUTION: This procedure requires SDD DVD135.01 and Calibration File 145 loaded or later.**

Connect the Jaguar approved battery support unit / power supply.

2. Connect SDD to the vehicle and begin a new diagnostic session, by reading the VIN for the current vehicle and initiating the data collect sequence.

3. Follow the SDD prompts.

4. Using the Midtronics Device check to see that the main and secondary batteries have a good state of charge and are serviceable.

5. Where no internet access is available.

A) Select the Diagnosis Session Type.

B) Select the Symptoms tab and enter any of the following Symptom(s).

• Powertrain - Engine system - Engine performance - Engine stalls.

C) Select the Recommendations tab.

D) Configure existing module - Gateway module.

6. Cycle ignition. After engine has started listen in the boot of the vehicle for the Dual Battery Fuse Box (DBFB) Self-Test Routine. After

40-60 seconds of the vehicle starting the DBFB will test the two internal contacts on and off. A successful routine will generate 4 cyclic audible clicks from the DBFB, as the contactors charge and discharge. If 4 audible clicks are not heard then, using SDD, read the DTC's logged and refer to the DTC table shown in step 10 and attached as a PDF file to this SSM.

If the battery has been disconnected go to step 7, else go to step 8

7. If battery has been disconnected reset Battery Monitor – Incorrect battery monitor state will cause the alternator to enter a cyclic continuous charge mode and ECO Stop will not function. Throttle Adaptions will also need to be reset.

8. Conduct a drive cycle to ensure Eco Stop is functioning. Ensure that the seatbelt is on, electrical load on the vehicle is kept to a minimum and the outside temperature is >5C(41F)

9. If ECO Stop is correctly activated during the drive cycle return the vehicle to the customer, advising of the parameters that can inhibit the operation of ECO Stop.

10. If ECO Stop does not activate after the drive cycle and a DTC is generated please refer to the information in the DTC table attached, after ensuring that all wiring and earth points leading into the Dual Battery Module, Dual Battery Fusebox, Secondary Battery and Gateway module connector are correctly seated and the circuits are complete.

NOTE: In order for Eco Stop to be *active* a number of criteria need to be fulfilled such as:

Temperature > 5c (41F)

Battery Charge State > 70%

Seatbelt On

Door Closed

Speed before stop >5mph

Sufficient pressure applied to brake pedal during stop

Vehicle electrical loading

Ratings:

Technicians - Please rate this SSM and provide comments so that future communications can be improved.

1 = Poor – Basic information provided – The SSM does not help me resolve the customer concern.

3 = Average – Adequate information provided – The SSM partially helps me resolve the customer concern.

5 = Excellent – All required information provided to resolve the customer concern.

Unique DTC Code	DTC Description	Customer Symptoms What symptom will the customer typically report when the main fault condition occurs e.g. "warning lamp on"	Local Help Text Description For 'Standard' or 'Complex' DTCs: Text that shows the suspected fault area specific to this vehicle
P0620-00	Generator Control Circuit	Charging Warning lamp on Stop Start does not work	Check the battery and generator connections for security Ensure generator drive belt correctly tensioned Using the manufacturers approved diagnostic system carry out the guided diagnostic routine - Special applications/Battery/Power supply service mode diagnostic (0x2027). Clear the diagnostic trouble code and retest If the problem persists, check and install new generator as required
P065B-16	Generator Control Circuit Range/Performance	Charging Warning lamp on Stop Start does not work	Check for diagnostic trouble code P0620-00 or P065C-01 or P0A1A-87 or P0A3B-68 if logged, investigate this diagnostic trouble code first Refer to the battery care manual and verify that the vehicle battery is fully charged and serviceable before continuing with further diagnostic tests Check the battery and generator connections for security Refer to the electrical circuit diagrams and check the LIN Bus circuit between the Gateway Module and the generator for circuit fault
P065B-17	Generator Control Circuit Range/Performance	Charging Warning lamp on Stop Start does not work	NOTE: This DTC may be logged due to boost starting or battery charging Check for diagnostic trouble code P0620-00 or P065C-01 or P0A1A-87 or P0A3B-68 if logged, investigate this diagnostic trouble code first Check the battery and generator connections for security Refer to the electrical circuit diagrams and check the LIN Bus circuit between the Gateway Module and the generator for circuit fault
P065C-01	Generator Mechanical Performance	Charging Warning lamp on Stop Start does not work	Check / reset the generator drive belt tension

P0A1A-87	Generator Control Module	Charging Warning lamp on Stop Start does not work	Check the battery and generator connections for security Refer to the electrical circuit diagrams and check the LIN Bus circuit between the Gateway Module and the generator for circuit fault. Clear the diagnostic trouble code and retest If the problem persists, check and install new generator as required
P0A3B-68	Generator Over Temperature	Stop Start does not work	Check generator wiring and connectors for evidence of heat damage Investigate the cause of generator over temperature event Clear the diagnostic trouble code and retest
B11DB-49	Battery Monitoring Module "A"	Stop Start does not work	NOTE: Please disconnect primary battery for 60 seconds before continuing (Note Step 7 Above) Clear the diagnostic trouble code and retest. If the problem persists, check and install new Battery Monitoring System Control Module as required
B11DB-87	Battery Monitoring Module "A"	Stop Start does not work	Refer to the electrical circuit diagrams and check the connection between the Battery Monitoring System Control Module and the battery Refer to the electrical circuit diagrams and check the LIN Bus circuit between the Gateway Module and the Battery Monitoring System Control Module for circuit fault. Clear the diagnostic trouble code and retest If the problem persists, check and install new Battery Monitoring System Control Module as required

B13C3-92	Dual Battery Module - Dual Battery Fuse Box	Charge warning lamp is illuminated / stop-start is inhibited / warning messages appear on instrument cluster / flickering of cluster / dimmed lights during eco-start	Refer to the electrical circuit diagrams and check the connection between the Gateway Module and the Dual Battery Junction Box - Circuit MESS_M - Check connections are secure and wiring integrity Refer to the electrical circuit diagrams and check the connection between the Dual Battery Junction Box and the Gateway Module - Circuit FET_DIAGNOSTICS - Check connections are secure and wiring integrity If no wiring/connector faults are found, check and install a new Dual Battery Junction Box. Run dual battery system diagnostic service routine
B13C3-96	Dual Battery Module - Dual Battery Fuse Box	Warning messages appear on instrument cluster / flickering of cluster / dimmed lights during eco-start	Clear the diagnostic trouble code and retest. If fault persists, check and install a new Dual Battery Junction Box and run dual battery system diagnostic service routine
B13C4-87	Dual Battery Module	Stop Start does not work	Refer to the electrical circuit diagrams and check the LIN Bus circuit between the Gateway Module and the Dual Battery Module for circuit fault. Clear the diagnostic trouble code and retest If the problem persists, check and install new Dual Battery Module as required
B13C4-96	Dual Battery Module	Charge warning lamp is illuminated / stop-start is inhibited / warning messages appear on instrument cluster / flickering of cluster / dimmed lights during eco-start	Clear the diagnostic trouble code and retest. If fault persists, check and install a new Dual Battery Junction Box and run dual battery system diagnostic service routine

B13C5-92	Secondary Battery	Warning messages appear on instrument cluster / flickering of cluster / dimmed lights during eco-start	Refer to the electrical circuit diagrams and check connections are secure and wiring integrity of Gateway Module circuit - Circuit MESS_P - Refer to the electrical circuit diagrams and check connections are secure and wiring integrity of Dual Battery Junction Box circuits - Circuit GATEWAY, Circuit BATT_2 - Refer to the electrical circuit diagrams and check power and ground connections of second battery If no wiring/connector faults are found, check condition of secondary battery and replace as required. Run secondary battery diagnostic service routine. Clear the diagnostic trouble code and retest If fault persists, check and install a new Dual Battery Module. Clear the diagnostic trouble code and retest .
B13D6-49	Battery Monitoring Module "B"	Stop Start does not work	NOTE: Please disconnect secondary battery for 60 seconds before continuing Clear the diagnostic trouble code and retest. If the problem persists, check and install new Battery Monitoring System Control Module as required
B13D6-87	Battery Monitoring Module "B"	Stop Start does not work	Refer to the electrical circuit diagrams and check the LIN Bus circuit between the Gateway Module and the Battery Monitoring System Control Module for circuit fault. Clear the diagnostic trouble code and retest If the problem persists, check and install new Battery Monitoring System Control Module as required

B1402-96	Dual Battery Fuse Box - Contactor 1	Charge warning lamp is illuminated / stop-start is inhibited / warning messages appear on instrument cluster / flickering of cluster / dimmed lights during eco-start	Check to ensure that the main power cables from rear breakthrough studs to the studs located in the inner front right hand wing have been connected correctly and that the generator and starter cables have not been transposed. Refer to the electrical circuit diagrams and check the contactor 1 control circuit between the Dual Battery Module and the Dual Battery Junction Box - Circuit CONTACTOR_1_CTRL, Circuit GND - Check connections are secure and wiring integrity Refer to the electrical circuit diagrams and check the Dual Battery Junction Box circuits - Circuit FET_DIAGNOSTICS, Circuit GND , main battery to body earth strap. Check connections are secure and wiring integrity If no wiring/connector faults are found, check and install a new Dual Battery Module. Run dual battery system diagnostic service routine. Clear the diagnostic trouble code and retest If fault persists, check and install a new Dual Battery Junction Box. Run dual battery system diagnostic service routine
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<p>B1403-96</p>	<p>Dual Battery Fuse Box - Contactor 2</p>	<p>Charge warning lamp is illuminated / stop-start is inhibited / warning messages appear on instrument cluster / flickering of cluster / dimmed lights during eco-start</p>	<p>Refer to the electrical circuit diagrams and check the contactor 2 control circuit between the Dual Battery Module and the Dual Battery Junction Box - Circuit CONTACTOR_2_CTRL, Circuit GND, main battery to earth strap for positive location of main battery earth to body - Check connections are secure and wiring integrity Refer to the electrical circuit diagrams and check the Dual Battery Junction Box circuits - Circuit BATT_2, Circuit GATEWAY, Circuit GND - Check connections are secure and wiring integrity If no wiring/connector faults are found, check and install a new Dual Battery Module. Run dual battery system diagnostic service routine. Clear the diagnostic trouble code and retest If fault persists, check and install a new Dual Battery Junction Box. Run dual battery system diagnostic service routine</p>
<p>B1412-01</p>	<p>Quiescent Relay Box</p>	<p>Possible loss of power to module groups in Infotainment and HVAC</p>	<p>Refer to the electrical circuit diagrams and check the circuit between the Auxiliary Junction Box and the Quiescent Relay Box for circuit fault. Clear the diagnostic trouble code and retest Refer to the electrical circuit diagrams and check the circuit between the Gateway Module and the Quiescent Relay Box for circuit fault. Clear the diagnostic trouble code and retest If fault persists, check and install new Quiescent Relay Box</p>
<p>B1412-87</p>	<p>Quiescent Relay Box</p>	<p>Possible loss of power to module groups in Infotainment and HVAC</p>	<p>Refer to the electrical circuit diagrams and check the LIN Bus circuit between the Gateway Module and the Quiescent Relay Box for circuit fault. Clear the diagnostic trouble code and retest If fault persists, check and install new Quiescent Relay Box</p>

B1412-96	Quiescent Relay Box	Possible loss of power to module groups in Infotainment and HVAC	Using the manufacturers approved diagnostic system carry out the guided diagnostic routine - Special applications/Battery/Quiescent relay box internal check diagnostic (0x2054). Clear the diagnostic trouble code and retest If fault persists, check and install new Quiescent Relay Box
U0001-88	High Speed CAN Communication Bus	Stop Start does not work	Using the manufacturer approved diagnostic system, complete a CAN network integrity test
U0010-88	Medium Speed CAN Communication Bus	Stop Start does not work	Using the manufacturer approved diagnostic system, complete a CAN network integrity test
U0300-46	Internal Control Module Software Incompatibility	Stop Start does not work	Clear the diagnostic trouble code and retest. Refer to the electrical circuit diagrams and check the power and ground connections to the Gateway Module. Using the manufacturer approved diagnostic system, complete a CAN network integrity test. Clear the diagnostic trouble code and retest If fault persists, check and install a new Gateway Module as required
U1A14-00	CAN Initialisation Failure	Stop Start does not work	Clear the diagnostic trouble code and retest. Refer to the electrical circuit diagrams and check the power and ground connections to the Gateway Module. Using the manufacturer approved diagnostic system, complete a CAN network integrity test. Clear the diagnostic trouble code and retest If fault persists, check and install a new Gateway Module as required

<p>U2100-00</p>	<p>Initial Configuration Not Complete</p>	<p>Stop Start does not work</p>	<p>Re-configure the central junction box using the manufacturer approved diagnostic system. Clear the diagnostic trouble code and retest Refer to the electrical circuit diagrams and check the power and ground connections to the central junction box and the Gateway Module Using the manufacturer approved diagnostic system, complete a CAN network integrity test. Refer to the electrical circuit diagrams and check the CAN network between the central junction box and Gateway Module. Clear the diagnostic trouble code and retest If fault persists, check and install a new central junction box as required</p>
<p>U3000-04</p>	<p>Control Module</p>	<p>Charge warning lamp is illuminated or fault message is displayed on instrument cluster. Stop-start is inhibited. May see flicker on cluster or dimmed lights during eco-starts</p>	<p>NOTE: Check vehicle primary battery service history to confirm if battery was removed and re-fitted. If so return to step 6 above. Re-configure the Gateway Module using the manufacturer approved diagnostic system. Clear the diagnostic trouble code and retest If fault persists, check and install a new Gateway Module as required</p>