

Reference	SSM74458
Models	I-PACE / X590
Title	Quiescent Battery Drain Concerns; I-Pace (X590).
Category	Electrical
Last modified	19-Jun-2019 00:00:00
Symptom	203000 Basic Electrical

Content **Issue:**
 Customers and Retailers are reporting issues related to low, discharged or 12v battery related warning messages on Jaguar I-Pace (X590).

Note. This SSM is an interim measure to assist in resolution and diagnosis of Quiescent Drain concerns.

Cause:

12V Battery voltage being depleted due to a Quiescent Drain being introduced onto the vehicle due to the CAN (Controlled Area Network) being kept awake by the TCU (Telematics Control Unit) and/or the Passive Entry Passive Start System modules not shutting down correctly.

Actions:

Action 1: Carry out Diagnostic: CAN stay awake

To confirm the condition is present or has been resolved follow the steps below:

1. Close all doors, open bonnet and activate latch (**micro switch**) with a screw driver (this is to simulate the bonnet closed condition).
2. Lock the vehicle with the key fob.
3. Leave the vehicle for a minimum of 10 minutes. (Do not unlock the vehicle).
4. Check the 12v battery voltage (Using a digital multi-meter). If >13.5 volts the DC/DC is active. Wait for the DC/DC to switch off (battery voltage will drop <13 v).
5. Look through the vehicle window and check for the LED illumination of the hazard switch.
 - If the hazard switch LED **is** illuminated after DC DC switches off, the CAN system is awake
 - If the hazard switch LED **is not** illuminated, there is no CAN keep awake on the car at the time of testing.

Action 2 Carry out diagnostic - PEPS Test

Enable the Passive Entry Passive Start System (PEPS) - if disabled:

- Lock the vehicle via remote key fob button press
- Hold Key Fob in one hand, press the button on the door handle with the other hand
- If the door unlocks the Passive Entry system is enabled (move on to next step in the diagnostic. **(Action 3)**)
- If the door does not unlock the Passive Entry system is disabled

- Re-enable the Passive Entry system:
 - Open Drivers door using the remote key fob
 - Switch on IGN (Without foot on brake press Start stop button)
 - Press the key fob buttons in the following order:
 - Front Load Space release button x3 then Lock x1

****Note this process must be completed within 4 seconds***
- Repeat diagnostic –Action 1 CAN stay awake To confirm the condition is present or has been resolved

Action 3 TCU Reset: Applies within vin range:F69000 to F80955

An automated service fix is available on Pathfinder for the TCU module not shutting down correctly. Please ensure Pathfinder minimum version 232 is loaded.

NOTE: The Jaguar Land Rover (JLR) approved diagnostic equipment will read the Vehicle Identification Number (VIN) for the vehicle and automatically take the vehicle out of 'Transportation mode' if required.

1. Connect the JLR approved battery support unit.
2. Connect the JLR approved diagnostic equipment to the vehicle and begin a new session.
3. Follow the JLR approved diagnostic equipment prompts.
4. Select 'ECU Diagnostics'.
5. Select 'Telematic control unit module' [TCU]
6. Select 'ECU Functions'
7. Select 'TCU Module Reset'.
8. Follow all on-screen instructions to complete this task.
9. Repeat Action 1 Diagnostic CAN stay awake
10. If not resolved follow pathfinder Telematics Guided Diagnostics Interior Electrical features > Telematics> Incontrol
11. When all of the tasks are complete, exit the session.
12. Disconnect the JLR approved diagnostic equipment and the JLR approved battery support unit.
13. Repeat diagnostic –Action 1 CAN stay awake To confirm the condition is present or has been resolved.

Action 4: Low Voltage System:Low Battery Diagnosis and Flat Battery Diagnosis).

Follow TOPIx Workshop Manual Diagnosis and Testing (414-01A: Battery Mounting and Cables – Low Voltage System:Low Battery Diagnosis and Flat Battery Diagnosis).

- Gather information about the vehicle usage conditions, for example:
 - Was a warning message was triggered?
 - When was a warning message
 - What was the HV battery state of charge?
 - Was the vehicle on charge?
 - How long had the vehicle been left locked?
 - Did the vehicle cut out?
 - Are there any accessories fitted?

- Visually inspect both primary and auxiliary 12v battery connections. Check torque figures in TOPIx section 414-01A: Battery Mounting and Cables – Low voltage System – Removal and Installation: Auxiliary Battery, Start Up Battery).
- Using a digital multimeter check that the DC/DC is providing power to both 12v batteries: Check battery voltage is between 13.2 and 15.2 volts in accessory and ignition position (Power mode 4 and 6).

- Using Jaguar Landrover approved diagnostic equipment check the Gateway Module (GWM) for related DTCs and refer to the relevant DTC index and diagnostic routine.

(UK Only) Raise a Technical Assistance (TA) and use the SSM number in the “Customer Concern/ Comments” field: Request support to investigate root cause, this will be escalated to an engineering support team, replacing the 12v battery without discovery of the cause may result in further failures and inconvenience to the customer.

If a root cause is discovered, please raise an EPQR to report it, attach the Pathfinder session file using 'Pathfinder Sessions'.