

Intermittent Battery Discharge

Service Category Power Source/Network

Section Battery/Charging

Market USA

Lexus Supports
ASE Certification 

Applicability

| YEAR(S) | MODEL(S) | ADDITIONAL INFORMATION |
|-------------|--------------|------------------------|
| 2013 - 2014 | ES350, GS350 | |
| 2014 - 2015 | IS250, IS350 | |

Introduction

Some 2013 – 2015 model year Lexus ES, GS, and IS vehicles may exhibit an intermittent discharged battery occurring with no apparent source of discharge found. One possible cause may be the Network Gateway Computer not properly going into sleep mode at key OFF. This can result in excessive parasitic draw and a discharged battery condition. Follow the procedure in this bulletin to identify and address this condition.

Production Change Information

This bulletin applies to vehicles equipped with the options and produced **BEFORE** the Production Change Effective VINs shown below.

| MODEL | DRIVETRAIN | EQUIPPED OPTIONS | PRODUCTION CHANGE EFFECTIVE VIN |
|-------|------------|---|---------------------------------|
| ES350 | 2WD | Blind Spot Monitor or Clearance Warning Sonar | JTHBK1GG#E2149103 |
| GS350 | AWD | Blind Spot Monitor or Lane Departure Alert | JTHCE1BL#E5028690 |
| GS350 | 2WD | | JTHBE1BL#E5044369 |
| IS250 | 2WD | Blind Spot Monitor or Clearance Warning Sonar | JTHBF1D2#F5048786 |
| IS250 | AWD | | JTHCF1D2#F5017491 |
| IS350 | 2WD | | JTHBE1D2#F5015465 |
| IS350 | AWD | | JTHCF1D2#F5006395 |

Intermittent Battery Discharge

Warranty Information

| OP CODE | DESCRIPTION | TIME | OFF | T1 | T2 |
|---------|---------------------------|------|---|----|----|
| EL1609 | R & R Network Gateway ECU | 1.2 | 89111-33070 89100-30180 89100-30151 | 87 | 74 |

APPLICABLE WARRANTY

- This repair is covered under the Lexus Basic Warranty. This warranty is in effect for 48 months or 50,000 miles, whichever occurs first, from the vehicle's in-service date.
- Warranty application is limited to occurrence of the specified condition described in this bulletin.

Parts Information

| MODEL | PART NUMBER | | PART NAME | QTY |
|--------------|-------------|-------------|---------------------------|-----|
| | PREVIOUS | NEW | | |
| ES350 | 89111-33070 | 89111-33110 | Computer, Network Gateway | 1 |
| GS350 | 89100-30180 | 89100-30181 | | |
| IS250, IS350 | 89100-30151 | 89100-30160 | | |

Intermittent Battery Discharge

Required Tools & Equipment

| SPECIAL SERVICE TOOLS (SST) | PART NUMBER | QTY |
|-----------------------------|-----------------------------|-----|
| GR8* | 00002-MCGR8 | 1 |

NOTE

Additional SSTs may be ordered by calling 1-800-933-8335.

| REQUIRED TOOLS & MATERIAL | QUANTITY |
|-------------------------------|----------|
| DVOM (Digital Volt Ohm Meter) | 1 |

| REQUIRED EQUIPMENT | SUPPLIER | PART NUMBER | QTY |
|-------------------------------|----------|--------------|-----|
| Techstream 2.0* | ADE | TS2UNIT | 1 |
| Techstream Lite | | TSLITEPDLR01 | |
| Techstream Lite (Green Cable) | | TSLP2DLR01 | |

* Essential SST.

NOTE

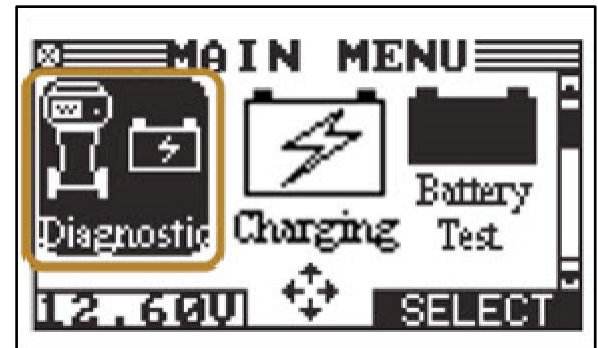
- Only ONE of the Techstream units listed above is required.
- Software version 11.10.034 or later is required.
- Additional Techstream units may be ordered by calling Approved Dealer Equipment (ADE) at 1-800-368-6787.

Intermittent Battery Discharge

Repair Procedure

1. Load test the battery with the GR8 Battery Diagnostic Station.
 - A. Select Diagnostic from the Main Menu.

Figure 1.



NOTE

- Repairs to correct a battery fail condition are NOT covered by this TSIB.
- GR8 Battery Diagnostic Station must be used to test battery.
- Do NOT use Battery Test function on the Main Menu.
- Detailed information on battery testing can be found in the *Battery Testing and Charging Best Practices* [Quick Training Guide – QL614C](#).

Did the battery pass the GR8 Diagnostic test?

- **YES** – Proceed to step 2.
- **NO – STOP!** Battery Test fail condition MUST be corrected before continuing with this bulletin.

Intermittent Battery Discharge

Charging System Test

2. Start the engine and maintain an engine speed of 2,000 RPM with all accessories OFF.

- A. Verify that the voltage and amperage are within specification:

Standard amperage: 10 A or less**

Standard voltage: 13.2 to 14.8 V

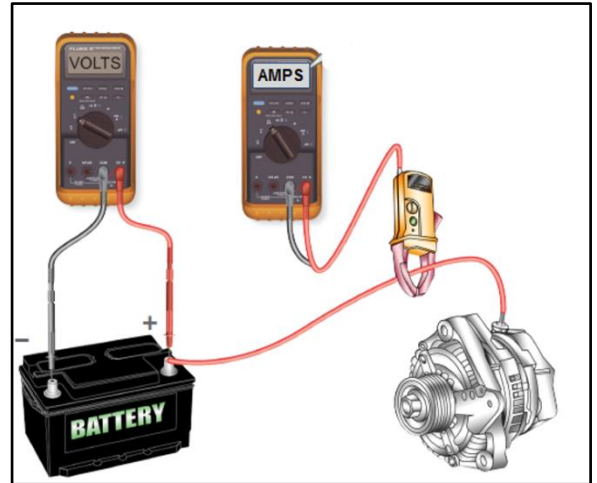
** Battery must be fully charged.

- B. With the engine running at 2,000 RPM, turn the high beam headlights ON and turn the heater blower switch to the "HI" position. Verify that the voltage and amperage are within specification:

Standard amperage: 30 A or more

Standard voltage: 13.2 to 14.8 V

Figure 3.



Did the Charging System pass the Charging System Test?

- **YES** – Proceed to step 3.
- **NO** – **STOP!** Charging System fail condition must be corrected before continuing with this bulletin.

NOTE

- Repairs to correct a Charging System Test fail condition are **NOT** covered by this TSIB.
- Detailed information on testing the charging system can be found in the *Toyota Starting, Charging and Parasitic Draw Tests* [Quick Training Guide QT611B](#).

Intermittent Battery Discharge

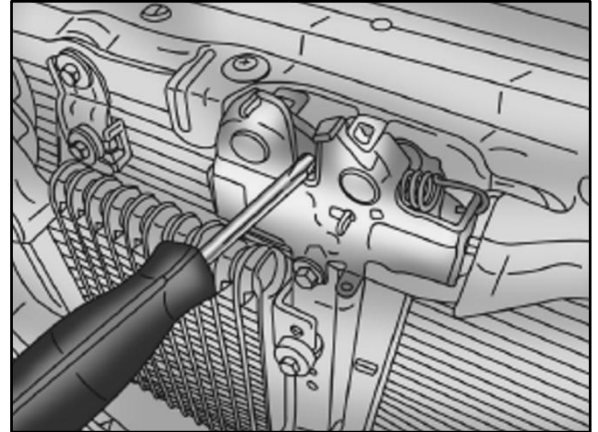
Parasitic Draw Test

3. Loosen the negative (-) battery cable so it will be easy to remove for the test.
 - A. Lock the hood latch using a screwdriver and roll the driver's window down.

NOTE

This closes the hood latch switch and enables the theft deterrent system in case it is the source of the parasitic draw.

Figure 4.



- B. Turn the ignition ON and then OFF.
- C. Turn OFF all electrical loads, close and lock the doors, then wait for the ECUs to go into sleep mode. This may take anywhere from 10 minutes to 2 hours dependent upon which vehicle is being serviced and what equipment is installed in the vehicle.
- D. Attach the negative (-) lead of the ammeter to the negative (-) battery post and the positive lead of the ammeter to the negative (-) battery cable end.

NOTE

- Place leads without disconnecting the battery cable.
- If the ammeter leads become disconnected from the battery post or battery cable during the test, reconnect the battery and restart the test from step B.
- If the ammeter leads become disconnected from the battery post or battery cable during the test refer to the applicable repair instructions on TIS for initialization procedures necessary when the battery terminal is disconnected/reconnected.
- Average milliamp setting should be used. Disregard Minimum and Maximum values for this test.

Figure 5.



Intermittent Battery Discharge

Parasitic Draw Test (Continued)

- E. Remove the negative (–) battery cable without breaking the circuit between the battery and vehicle, and record the meter reading.

NOTE

- After completing the parasitic draw test remove the screwdriver from the hood latch and operate the hood release lever
- Verify the hood latch is in the open position before attempting to close the hood.

Figure 6.**Standard average parasitic draw:**

Less than 50 milliamps average (0.050 amp)

Did the system (or vehicle) pass the Parasitic Draw Test?

- **YES** – Proceed to step 4.
- **NO** – Parasitic draw fail condition must be corrected before continuing with this bulletin.

NOTE

- Repairs to correct a Parasitic Draw Test fail condition are NOT covered by this TSIB.
- Detailed information on testing the parasitic draw can be found in the *Toyota Starting, Charging and Parasitic Draw Tests Quick Training Guide QT611B*.

Intermittent Battery Discharge

Network Gateway ECU

4. Remove the Network Gateway ECU and check the part number.
Refer to the Technical Information System (TIS), applicable model and model year Repair Manual:
 - [2013](#) / [2014](#) ES350:
Power Source/Network – Networking – “Networking: Network Gateway ECU: Removal”
 - [2013](#) / [2014](#) GS350:
Power Source/Network - Networking – “Networking: Network Gateway ECU: Removal”
 - [2014](#) / [2015](#) IS250 / IS350:
Power Source/Network - Networking – “Networking: Network Gateway ECU: Removal”

Is the Network Gateway ECU part number the same as the Previous Part Number shown in the Parts Information section?

 - **YES** – Proceed to step 5.
 - **NO** – This bulletin does NOT apply. Reinstall network Gateway ECU and continue diagnosis using the applicable Repair Manual.
5. Install the NEW Network Gateway ECU.
Refer to TIS, applicable model and model year Repair Manual:
 - [2013](#) / [2014](#) ES350:
Power Source/Network - Networking – “Networking: Network Gateway ECU: Installation”
 - [2013](#) / [2014](#) GS350:
Power Source/Network - Networking – “Networking: Network Gateway ECU: Installation”
 - [2014](#) / [2015](#) IS250 / IS350:
Power Source/Network - Networking – “Networking: Network Gateway ECU: Installation”
6. Clear Diagnostic Trouble Codes.
7. Using TIS Techstream, perform a Health Check and confirm no current DTCs are present.

NOTE

If current DTCs are present, diagnose per Repair Manual procedures.