SI M61 06 07
General Electrical Systems

March 2015
Technical Service

This Service Information bulletin supersedes SI M61 06 07 **dated May 2013.**

NEW designates changes to this revision

SUBJECT
Discharged Battery: Energy Diagnosis Must Be Performed

MODEL
NEW .

R55 (Cooper Clubman, Cooper S Clubman)

R56 (Cooper, Cooper S)

R57 (Cooper Convertible, Cooper S Convertible)

R58 (Cooper Coupe, Cooper S Coupe)

R59 (Cooper Roadster, Cooper S Roadster)

R60 (Cooper Countryman, Cooper S Countryman)

R61 (Cooper Paceman, Cooper S Paceman)

F55 (Cooper 4-door Hardtop)

F56 (Cooper 2-door Hardtop)

SITUATION
MINI electrical systems and advancements in vehicle technology have resulted in an increased demand on the vehicle battery. This SI will help the dealer handle “discharged battery” complaints.

A discharged battery can have various causes, most unrelated to the battery. A failed battery is often the symptom and not the cause. A fully serviceable battery fails when an electrical component causes the battery to discharge; the battery becomes internally damaged and must be replaced.

For more information, refer to http://www.batteryuniversity.com/parttwo-42B.htm. For this reason, replacing the battery is not usually a permanent repair. The cause of the discharged battery must be analyzed in order to guarantee a proper repair.

To repair the vehicle properly the first time in the workshop, the diagnostic test plans must be performed to completion, with all results taken into consideration.

Without performing the energy diagnosis test plan, the root cause of the discharged battery cannot be identified. This increases the chances of a repeat repair.

CAUSE
Discharged battery

PROCEDURE
Before starting diagnosis, refer to the attached flowchart which will guide you through this procedure, and can be used as a reference guide.

For all models, it is recommended that “Energy Diagnosis” be performed on all discharged battery complaints.

1. Fault analysis (Energy Diagnosis)

   Complete the energy diagnosis test plan on every vehicle with a discharged battery. There are currently two paths to access the energy diagnosis test plan:

   • If a power management fault is stored, ISTA will select the energy diagnosis test plan automatically.

   • The test plan can also be selected manually: Function structure>Body>Power supply>Energy Diagnosis.

2. Once the test plan has finished, the number **[1] “Most Likely Cause”** is automatically displayed if any faults are calculated by the test plan. Finish the test plan by processing all the “Most Likely Causes,” starting from [1], where the most recent cause of a discharged battery is listed. If no “Most Likely Causes” are calculated, the results screen will be displayed: “Most Likely Cause (0),” is undetermined.

3. The following is a list of reasons for a discharged battery, indicated by the results of the test plan.

   Examples of vehicle faults

   • Battery fault (aged battery – only on IBS-equipped vehicles)

   • Alternator fault

   • Vehicle is not entering sleep mode (sleep mode prevented)

   • Vehicle is constantly woken from sleep mode

   • Closed-circuit current is too high

   • Closed-circuit current infringement

   • Exhaustive battery charge **(for information only)**

   • Terminal 30g-f shutdown due to start capability limit **(for information only)**

   • Undetermined

   Examples of operating faults

   • Lights/hazard warning lights left on for too long

   • Terminal R or terminal 15 left on for too long (this fault may also be set when the vehicle is in the workshop – refer to the mileage that the fault set in order to determine this). Except for the vehicles listed below, the fault is set when the engine is off and terminal R or terminal 15 is left on for more than 30 minutes, and the power supply drops below 11.5 volts for at least 2 minutes. The amount of time that terminal R or terminal 15 is left on is accurate.

   • Vehicle parked for too long

   • Vehicle use when stationary

If a new battery is installed, the “Energy Diagnosis” test plan should be completed prior to registering the new battery. When the battery is registered, the stored energy history is deleted. This may cause the vehicle to return if the root cause of the discharged battery is not determined.

Closed-circuit current measurement (only vehicles equipped with Navigation SA609 and an IBS Intelligent Battery Sensor)

Use the following path to diagnose closed circuit current faults: Function selection\Service functions\Body\Power supply\Closed-circuit current\Evaluate closed circuit current monitoring.

Refer to the MINI diagnosis system functional description for further information.

Checking the charging system

Refer to the MINI diagnosis system for testing the alternator using the following path: Function selection\Complete vehicle\Body\Power supply\Alternator.

Checking the battery condition

Refer to SI M61 01 02 for battery requirements.

New battery registration

Registration of the new battery is necessary using the MINI diagnosis system service function. If the new battery is not registered, erroneous messages (check control) may appear.

Use the following path to register the new battery: Function selection\Service functions\Body\Power supply\Battery\Register battery change. Follow the test plan instructions.

Recharging the battery

Refer to SI M61 03 07 for information on connecting the battery charger.

WARRANTY INFORMATION

In order to claim an eligible faulty battery either under the MINI New Passenger Car Limited Warranty or the MINI Original Parts Warranty (In-dealer workshop repairs), the Energy Diagnosis test plan must be performed to completion.

When required, a Midtronics' Battery Test procedure must also be performed. The Midtronic battery tester printout(s) must be retained with the repair order.

To assist you in determining the warranty coverage on a battery, please refer to the following guidelines:

Covered under warranty when the results of the Energy Diagnosis test plan shows:

- A vehicle fault
- An undetermined fault; or
- An operating fault such as unfavorable driving profile (e.g., driven extremely short distances) and the Midtronics battery tester or Energy Diagnosis results indicate the battery needs to be replaced.

A "Stand-alone" faulty battery is claimed using the battery defect code listed in KSD2.

Other Repairs

If it is determined that some other covered vehicle fault and repair caused the battery to fail, the failed battery is to be claimed under the KSD2 defect code that applies to the failed (casual) component or repair (e.g. Alternator, permanent failure).

NEW **Not covered under warranty when the results of the Energy Diagnosis test plan show:**

- An operating fault such as leaving the lights on, vehicle parked too long (vehicle parked for extended periods without proper battery maintenance), battery not maintained, etc.

ATTACHMENTS

View PDF attachment **M610607_BN2000_Battery_Diagnosis**.