



SIM 61 01 02

2023-11-02

## BATTERY MAINTENANCE REQUIREMENTS: BATTERY CARE

This Service Information bulletin (Revision 16) replaces SI M61 01 02 dated March 2022.

### What's New:

- Complete revision of the Battery Maintenance and Care bulletin
- Updated attachment, Battery Log Form for 2024 Calendar Year
- Updated attachment, M610102\_BatteryCare\_Process\_Flyer
- Removal of M610102 Flowchart Attachment

<input type="checkbox"/>	THIS REPAIR IS MOBILE FRIENDLY
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### MODEL

E-Series	Model Description
All	All (new vehicles in MINI center inventory)

### SITUATION

Proper battery maintenance is vital when MINI vehicles are in your center's inventory. Allowing a vehicle's low-voltage battery to drop below 12.0 volts (12.0 V) permanently reduces the expected battery life and can lead to premature failure. For vehicles equipped with high-voltage (HV) batteries, (Plug-in Hybrid Electric Vehicle (PHEV) and Battery Electric Vehicle (BEV)), improper maintenance or handling may lead to a discharged HV battery, requiring replacement.

We provide a flexible battery maintenance system which every MINI dealer can use to meet their particular needs. This bulletin explains the Battery Charging Calendar (see attachment), charging system and battery voltage checking procedure below.

### INFORMATION

#### **PROCEDURE - 12V BATTERY SYSTEMS (INCLUDING PHEV/BEV VEHICLES)**

This procedure details the required battery maintenance and care at the following points while the vehicle is at your facility.

- Inspection upon delivery
- Assignment of vehicle usage (3 categories)
  1. Put on a dealer's lot (new vehicle display or supplemental inventory) **Section "B"**
  2. Vehicle is put into display stock (showroom or show display) **Section "C"**
  3. Vehicle storage (battery has been disconnected) **Section "D"**
- Vehicle battery charging
- New vehicle delivery

**NOTE:** The vehicle arrives marked with a color-coded round sticker on the windshield. Do not remove this sticker under any circumstance until the vehicle is retailed. The sticker corresponds to a calendar year quarterly time schedule for battery care.

#### **Inspection upon delivery**

When a new vehicle arrives at the dealer, please, follow the steps outlined below:

1. Remove the BATTERY LOG FORM (see attachment) from the glove compartment and complete **section "A"**.

2. Open the vehicle and make sure (TRA) transport mode is active. Press the Start/Stop button and wait until all (CCM) check control messages are displayed. Check the instrument cluster for any battery-related check control messages to help determine the condition of the 12-volt battery.

- When the transport mode is activated (set at the plant in all vehicles), an instrument cluster display is generated which quickly provides information of the battery condition. Please refer to the chart below for all applicable check control messages pertaining to the 12 Volt- battery.
- If the battery voltage is below 71% (12.5 V), fully charge the battery for at least 12 hours. Charging shall be discontinued no earlier than when the **charge current falls below 1.5 Amps**.

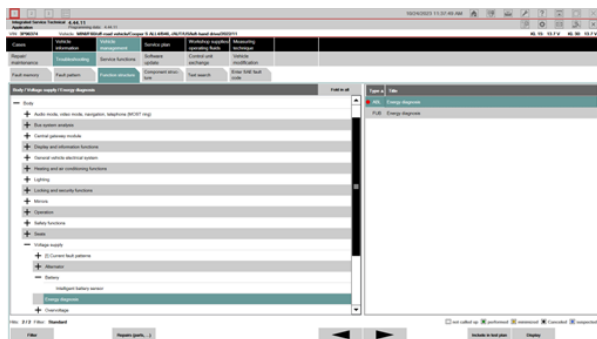
3. Check if the vehicle is due for charging according to **section “B”** in the charging calendar (is your vehicle assigned to the color of the current week?) of the BATTERY LOG FORM.

When the charging interval specified in the battery charging calendar becomes due, charging is necessary, the vehicle must be fully charged (preventive charging).

4. For PHEV/BEV vehicles, the high voltage (HV) battery must be charged if the SoC is below 30%. This situation can occur because of delays in transporting the vehicle to the dealer.

5. If the vehicle displays CCM 460 **“Replace Battery!”** or the 12V battery is less than **30% SoC (12 V)**, perform the following steps:

- Enter a comment with the VIN in the Bill of Lading (Delivery Receipt).
- Perform the energy diagnosis to check if there is a malfunction in the vehicle (refer to **SI M61 06 07 Discharged Battery: Energy Diagnosis Must Be Performed**).

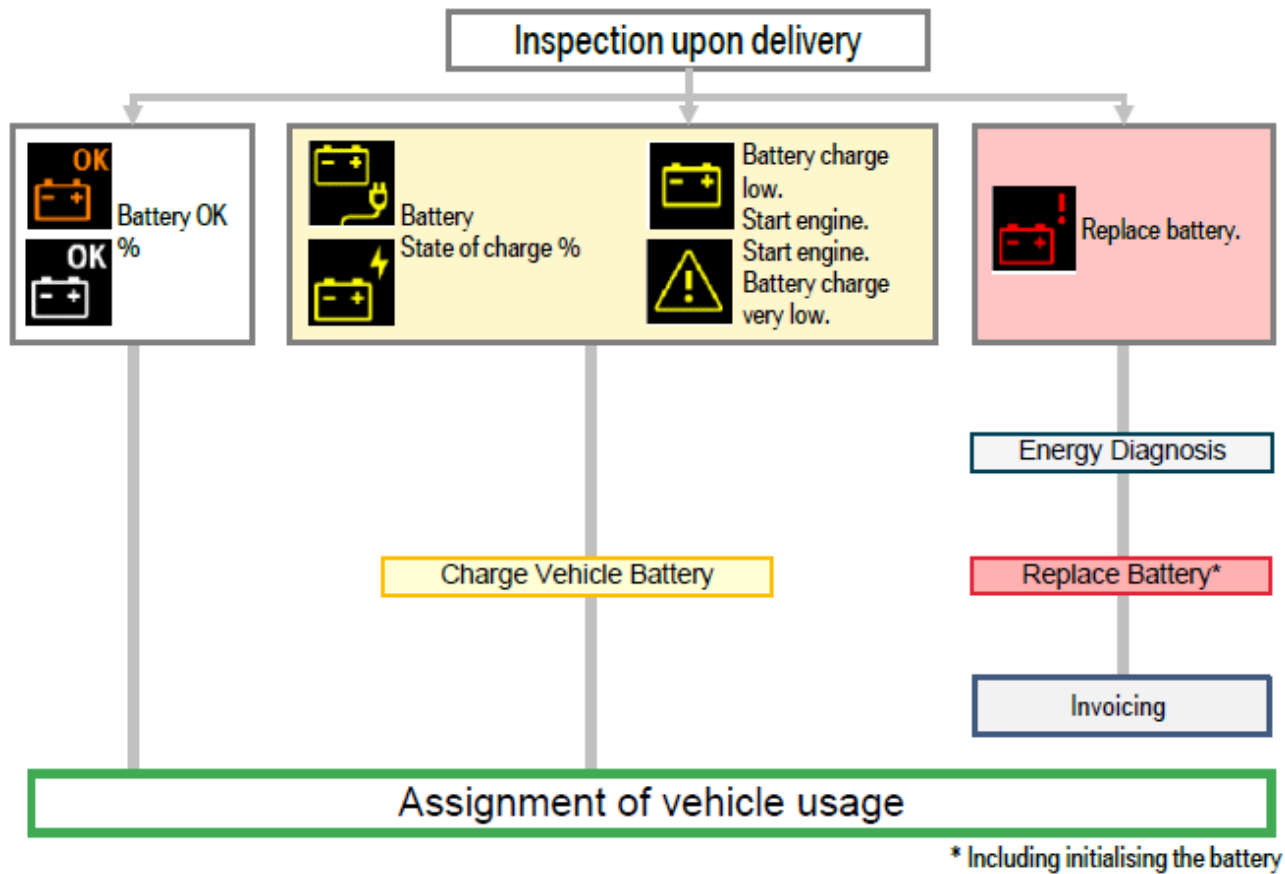


- Vehicle Management
- Troubleshooting
- Function structure
- Body
- Voltage supply
- Energy Diagnosis

- Submit a warranty claim with the comment: “Battery was delivered heavily discharged.”

**If the vehicle battery needs to be exchanged before diagnostics can be performed, do not register the battery until the root cause has been identified. When a 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.**

## Vehicle Check Control Displays and Actions



**NOTE:** Using a multi-meter upon delivery is not recommended, an accurate voltage value is only guaranteed after the 12 V battery has been resting for at least 4 hours.

### Assignment of vehicle usage

The new vehicle battery maintenance tracking system provides for 3 distinct categories of vehicles while in dealer inventory. Each category has different recommended actions:

#### 1. Put on a dealer's lot.

- The vehicle may be in storage (back lot) or in a new vehicle display (not in the showroom)
- The vehicle may or may not be in Transport Mode
- A four-week charging cycle and calendar have been recommended for this category of vehicles
  - a. The vehicle arrives marked with a color-coded round sticker on the windshield. These colored dots indicate when the vehicle's battery must be checked. Please, see **section "B"** of the BATTERY LOG FORM (four-week cycle).
  - b. When the charging interval specified in the battery charging calendar becomes due, charging is necessary, the vehicle must be fully charged (preventive charging).
  - c. Every time a battery is checked, record the voltage in **section "B"** of the BATTERY LOG FORM. Additionally, if equipped, the HV battery SoC must also be checked at these intervals and charged if below 30% in the SoC display.

#### 2. Vehicle is put in display stock (showroom or show display)

- The electrical system is "Customer ready".
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- The vehicle has been taken out of Transport Mode using the MINI Diagnosis System.
- The color dot system is not applicable while assigned to this usage.

When in the showroom display, vehicle batteries become depleted by continuous loads during demonstrations. The four-week charging cycle will not adequately maintain the 12 V battery. Shorter recharging intervals are required for these vehicles (e.g., every night) so that a total battery discharge is avoided.

- To ensure the 12V battery is maintained, connect a suitable power supply (refer to **SI M04 08 09**) to the under-hood jump start terminals.
- If the showroom vehicle battery must be disconnected due to state regulations, check the battery voltage on a regular basis to ensure the state of charge is maintained above 12.5 V or 71% SoC. We recommend default charging every night.
- Record when the 12 V battery is recharged in **section “C”** of the BATTERY LOG FORM. For dealers that have established their own battery maintenance procedure, **Section “C”** can be used to track the charging schedule of vehicles.
- For PHEV/BEV vehicles, energy is continuously drawn from the HV battery due to the “terminal 15 on” state. External 12 V power supplies will **NOT** charge or maintain the HV battery. To avoid deep discharge of the HV battery, a daily check of the charge level is necessary. It is recommended to charge the HV batteries overnight via the external charging port.

### 3. Vehicle storage (battery has been disconnected)

- The 12 V vehicle battery is fully charged, until charging current falls below 1.5 Amps.
- The 12 V vehicle battery is disconnected.

With the battery draw minimized, a 12-week charging cycle can be followed. The 12-week charging cycle requires the battery to be recharged at every check. Use **section “D”** of the BATTERY LOG FORM to document when charging has been performed.

The columns on the BATTERY LOG FORM are identified by the colors white, red, and green of the 12-week charging calendar, designating the months when the vehicles are to be charged. The windshield labels can also be used to track these vehicles, except for the 4th color, yellow. Therefore, vehicles received with a yellow label will need to be reassigned another color.

Since MINI uses only maintenance-free or AGM (absorbent glass mat) batteries, **DO NOT OPEN THE BATTERY OR ADD DISTILLED WATER!**

**Dispose of all batteries properly, observing legal regulations.**

### Vehicle battery charging

- **PROCEDURE FOR 12V BATTERY**

All 12 V batteries are charged from the engine compartment, whereby the charging process must be carried out via the jump-start terminals. This is the only way to ensure that the charging process in vehicles with an intelligent battery sensor (IBS) is correctly detected by the vehicle electronics. If the battery is charged directly at the battery terminals, the battery condition may be misinterpreted and, under certain circumstances, unwanted Check Control messages or fault codes may occur.

Battery charging must be performed using an approved battery charger (recommended charging voltage **14.8 V**). Refer to **SI M04 08 09** for recommended chargers.

For an optimized charging procedure, the ambient temperature should be **between 60°F and 75°F**. Under these conditions, the battery can be considered fully charged when the charge current **falls below 2.5 Amps**.

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Charging below 60°F should be avoided if possible since the capacity of the battery to take up current is reduced, and the charging time is extended considerably. However, if provisional charging **below 60°F is performed, the charging voltage must be set to 14.8 V**. Charging shall be discontinued no earlier than when the **charging current falls below 1.5 Amps**.

- procedure for high-voltage battery (PHEV/BEV vehicles)

Prolonged use of the “Emergency charging function” causes the HV battery to become totally discharged. This occurs when the 12 V battery is not properly maintained, and the SOC of the 12 V battery drops while the vehicle is in sleep mode. The vehicle is woken up and recharged from the HV battery.

On PHEV/BEV vehicles, the high-voltage battery packs should be checked at the same maintenance intervals as the 12V battery. If the high-voltage battery reaches a critical state of charge, the vehicles can no longer be driven by electric propulsion. In this case, the vehicles must be immediately charged.

It is possible to charge the HV battery installed in the vehicle via a power outlet or an external DC charger. Charging is complete when the charger and/or vehicle indicators display the status message “Charging complete.”



HV charge indicator, located in the instrument cluster

- Connect an approved 110 V or 220 V charging cable to the vehicle’s charge port

In transport mode, maximum SoC is limited to **30%**

### New vehicle delivery

**The CBS Handover Inspection must be performed as the last process step, immediately before delivery to the customer! Refer to Service Information bulletin “New Vehicle Preparation and Maintenance Requirements” for the affected vehicle model.**

Other battery-related steps to be performed prior to customer delivery:

- BATTERY LOG FORM should be removed from the BATTERY CHARGE LOG (binder) and filed in the vehicle file, to be available for future reference.
- To be sure that the vehicle is handed over with a fully charged battery (minimum state of charge of 12.5 V or 71% SoC), **start the engine before demonstrating the operation** of components to the customer during the time of delivery.

If, at any time, the vehicles battery open circuit voltage drops below 12.0 V, or a battery replacement is indicated during the CBS handover inspection; perform the Energy Diagnosis (refer to [SI M61 06 07](#)) to determine the cause. Any necessary repairs should be carried out and the battery **MUST BE REPLACED**. After diagnostics are performed, the replacement battery must be registered using the service function in the diagnosis equipment.

### GENERAL INFORMATION

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Note that the procedures outlined above are meant to be guidelines to assist MINI dealers in always assuring a sufficient state of charge of vehicle batteries. Following these procedures, however, will not **guarantee** a sufficient state of charge on all batteries. There may be exceptional cases (for example, recurrent movement of back lot vehicles) of excessive current which may call for more frequent recharging than otherwise necessary.

The above guidelines for proper battery maintenance are meant to provide maximum flexibility for every MINI dealer. Regional MINI personnel will be happy to assist with setting up an effective charging and monitoring program.

## **PARTS INFORMATION**

Obtain and confirm the part numbers for your specific vehicle by entering the chassis number in either ETK or AIR which considers specific equipment and/or options.

<b>Part Number</b>	<b>Description</b>	<b>Quantity</b>
01 00 2 411 748	Battery Charge Label - White	1 = 50 Labels
01 00 2 411 749	Battery Charge Label - Red	1 = 50 Labels
01 00 2 411 750	Battery Charge Label - Green	1 = 50 Labels
01 00 2 411 751	Battery Charge Label - Yellow	1 = 50 Labels

## **CLAIM INFORMATION**

This Service Information Bulletin provides technical-related information.

Damage and/or issues caused by outside influences are not covered under the MINI limited warranties.

Reimbursement for the battery maintenance step, one (1) FRU, is included to the applicable QC1 labor operation. Please refer to the “**SI M01 01 08** QC I Claim Payments for additional information.”

## **FEEDBACK REGARDING THIS BULLETIN**

Technical Feedback	To submit feedback for the technical topic of this bulletin: Submit your feedback in the rating box at the top of this bulletin
Warranty Feedback	To submit feedback for the CLAIMS section of this bulletin: Submit an IDS ticket to the Warranty Department, or use the chat available in the Warranty Documentation Portal
Parts Feedback	To submit feedback for the PARTS section of this bulletin: Submit an IDS ticket to the Parts Department

### Supporting Materials

[picture\\_as\\_pdf M610102\\_Battery\\_Log\\_Form\\_2024.pdf](#)

[picture\\_as\\_pdf M610102\\_BatteryCare\\_Process\\_Flyer.pdf](#)

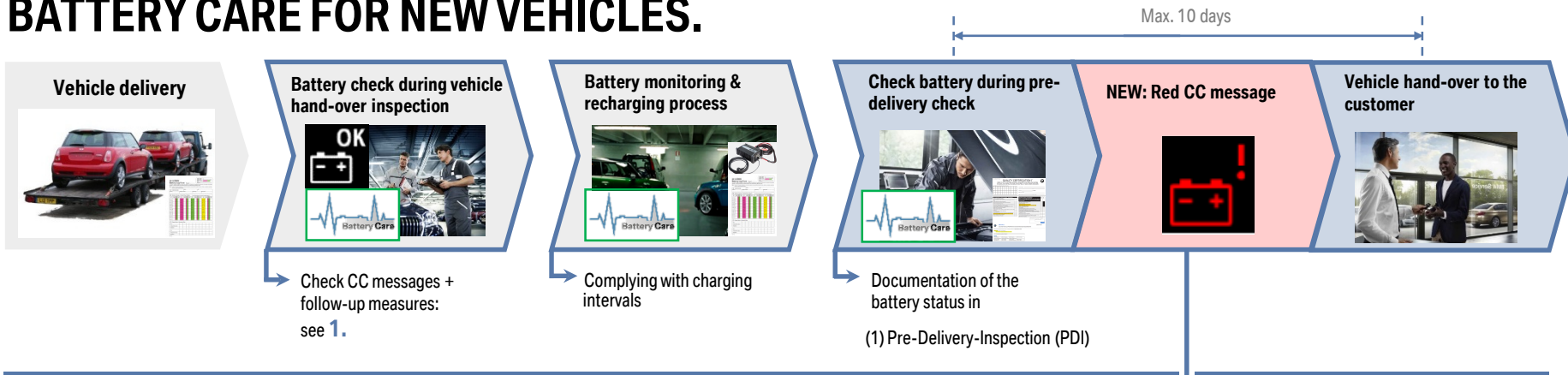






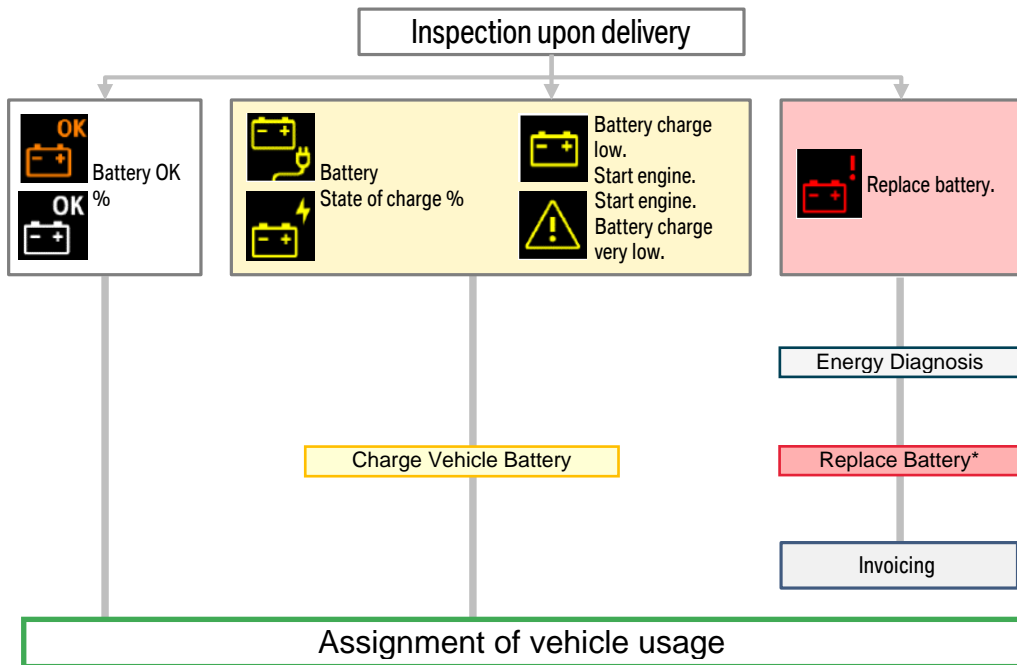


# BATTERY CARE FOR NEW VEHICLES.



## 1. VEHICLE HAND-OVER FROM THE TRANSPORTER.

As a dealer, you have the right to receive a vehicle with a properly serviced battery. To check this is the case, you should carry out the following steps:



\* Including initialising the battery

**Red CC message is also possible with transport mode deactivated** NEW

- If a battery has undergone exhaustive discharge, it was damaged in advance.
- A red CC message appears in the instrument cluster.
- This can only be deleted by exchanging the battery.
- Vehicle is not allowed to be handed over to the customer with a red CC message.

➔ Damaged batteries must be exchanged before hand-over to the customer!