

# How Do I Maintain Deep-Cycle Batteries?



Some battery types, like Lithium-ion, require little to no maintenance after the initial setup. Other battery types (especially flooded lead-acid) need regular upkeep to stay in good condition.

No matter what type of batteries you own, this article will help you program your battery bank and give some battery maintenance tips to keep your system running smoothly.

## Flooded Lead-Acid Battery Maintenance Tips

Flooded lead-acid batteries require regular maintenance to function properly. We recommend checks every 3 months to keep the battery bank tuned up.

Note: always follow proper safety procedures when working around batteries. Wear eye protection and gloves remove any jewellery, and secure loose clothing and long hair.

Add distilled when required, please note if you are not sure what to do, get a trained technician to do this for you.

**Note:** You should only use distilled water. Non-distilled water (ie: tap water) will introduce small particles and contaminants, which weakens the battery chemistry.

Only check water level when batteries are fully charged.

Open the vent lids to check the water level.

Clean terminal connections and cables to prevent corrosion.

## Other Routine Flooded Lead-Acid Battery Maintenance

Tighten the battery cable connections as needed. Wear gloves/eye protection and use insulated tools.

Clean terminal connections & cables to prevent corrosion.

Keep the top of the batteries clean from dust and debris to avoid creating a current pathway or electrical leakage across the top of the battery.

### **Sealed Lead-Acid Battery Maintenance**

Sealed lead-acid batteries do not need to be filled with water or equalized. They require very little maintenance other than the occasional check-up on the battery's state of charge.

### **Other Routine Sealed Lead-Acid Battery Maintenance**

Tighten the battery cable connections as needed. Wear gloves/eye protection and use insulated tools.

Clean terminal connections & cables to prevent corrosion.

Keep the top of the batteries clean to prevent them from getting dusty and grimy.

Clean terminal connections and cables to prevent corrosion.

### **Lithium-Ion Battery Maintenance**

Fortunately, Lithium batteries require little to no maintenance (one of the main appeals when comparing Lithium vs Lead-acid batteries. Once they are set up properly, they do not need any checks aside from the occasional state-of-charge reading to ensure they are holding a charge.

Lithium battery manufacturers sell a tool to gauge the battery's state of charge (SoC). The tool typically communicates with the built-in Battery Management System (BMS) to get an accurate SoC reading. Simply hook the monitoring tool up to the battery and read the SoC value from the display screen.

### **Other Routine Lithium-Ion Battery Maintenance**

Tighten the battery cable connections as needed. Wear gloves/eye protection and use insulated tools.

Clean terminal connections & cables to prevent corrosion. Mix baking soda and distilled water into a paste and apply with a wire brush. Rinse cleaning residue and dry with a cloth or paper towel.

Keep the top of the batteries clean to prevent them from getting dusty and grimy.

Clean terminal connections and cables to prevent corrosion.

### **Check Battery State of Charge (SoC):**

Most RV's today are fitted with some kind battery voltage meter, whether it is a manual gauge or something a little higher tech that is built into the Electrical Control Panel.

**Note:** Your Deep Cycle battery should not go lower than 12v.

Running your battery completely flat can cause long term damage.

If your RV does not have a built-in gauge you could use a multimeter to keep an eye on how charged your sealed lead-acid batteries are based on the voltage. A multimeter is equipped with positive and negative probes which allows the meter to get a DC voltage reading from the battery.

To get the most accurate reading, your batteries should be tested in a resting state. Let your batteries rest for at least 2 hours (no charging/discharging) before taking the voltage reading. Attempting to use the multimeter when batteries are being charged or discharged is going to result in a higher or lower voltage, depending on the load.

If your batteries fail to approach 100% SoC even after a full charge cycle, they are likely defective, damaged, or have reached the end of their lifespan.