# BATTERY MANAGEMENT

# GUIDE

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# Battery Management Equipment

GS Yuasa battery distributors should have the following pieces of equipment to support the management, maintenance and accurate warranty testing of batteries:

- **Battery Charger**

To enable re-charge of stock batteries that are below the required voltage and recharge batteries as instructed when carrying out a battery test, all distributors have a battery charger.

- **DMM (Digital Multi Meter) or Voltmeter**

To enable distributors to easily adopt the stock management processes required for batteries, all distributors have a DMM (Digital Multi Meter) or Voltmeter with minimum 2 digit resolution.

- **Battery Tester (MDX 617 or MDX 617(P)**

To enable distributors to easily adopt the warranty administration processes required for batteries, all distributors should have a conductance type battery tester.

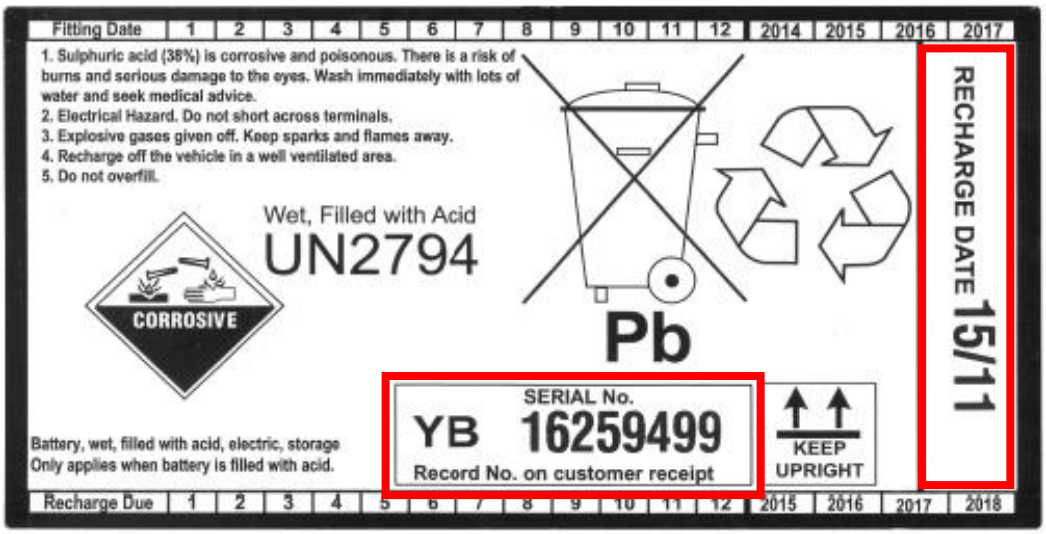
| **Battery Care & Testing Equipment** | |
|---|---|
| **Battery Charger (Example image)** | |
| **Digital Multimeter (Example image)** | |
| **Battery Tester (Example Yuasa MDX 617(P) conductance tester)** | |

# Battery Stock Management/Identification

## Delivery Checking

All deliveries must be checked in on a first in, first out basis. To assist with this, the date code label be visible on every battery.

All GS Yuasa batteries are supplied with a date code label, like the one shown below, which will enable distributors to effectively manage their battery stocks.




The label has some key data on it including the date and year of the first recommended recharge and unique battery serial number that should be recorded on the customer receipt at point of sale to the end user.

## Stock Review/Maintenance (Stock Battery Care Guidance Chart Supplied)

It is recommended that all stocks are reviewed and the Open Circuit Voltage (OCV) checked on a monthly basis to ensure that the battery has not reached the recommended recharge date or the OCV has dropped below 12.50 Volts.

**Monthly OCV Check**

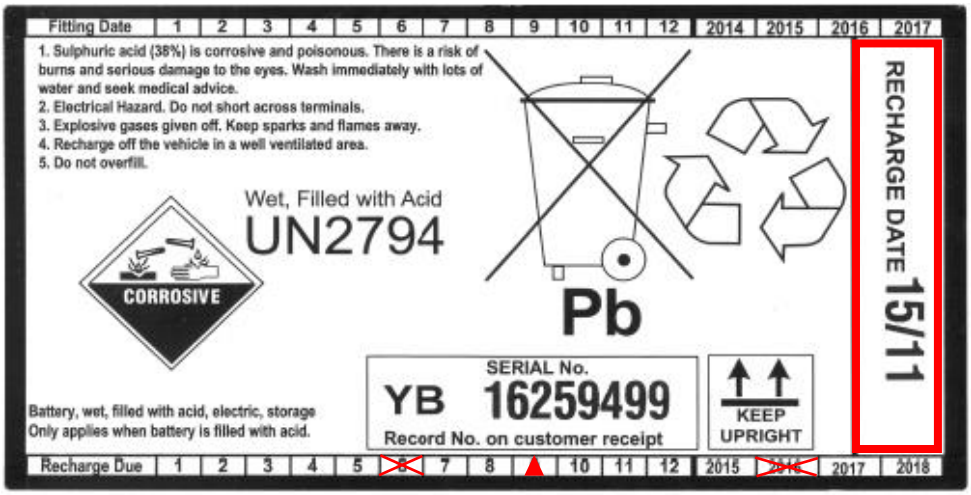
If during stock review/maintenance process any battery is found to have an OCV of 12.50 Volts or less it should be removed from stock and recharged immediately prior to sale.

**Scheduled Recharge Date**

Having reached its recommended recharge date the OCV should be checked and if less than 12.50 Volts charged. The recharge label should then be updated as follows:

- Once the **first** scheduled recharge has been carried out the battery recharge label should be updated by 6 months.

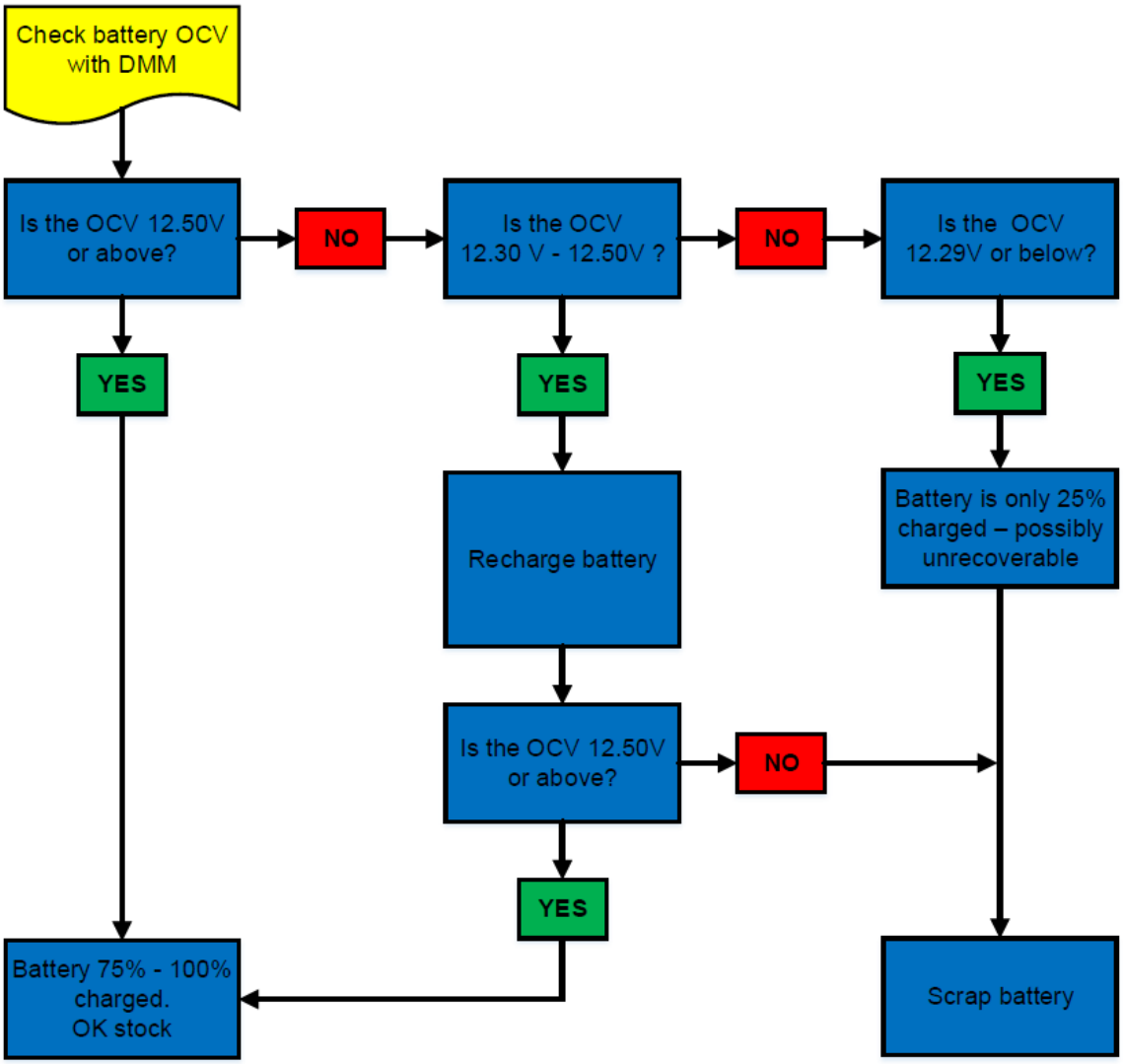
If the battery reaches its **second** recommended recharge date the OCV should be checked and if less than 12.50 Volts charged.The recharge label should then be updated as follows:




- After a **second** recharge of the battery, the recharge label should be updated by 3 months and physically notched to identify that the maximum number of battery recharges (prior to sale) has been reached.

**NOTE: Batteries should NOT be sold a maximum of 9 months after the first recommended recharge date.**

## Monthly Stock Check & Recharge Process




It is important that all stocks are checked on a monthly basis to ensure the customer is receiving a top quality product and therefore the process should be followed when checking the status of any battery.

## Battery Stock OCV Guide

| Battery Voltage Range | Battery Status & Action Required |
|---|---|
| 12.70 Volts and above | 100% charged battery, perfect for dispatch |
| 12.69 Volts to 12.50 Volts | 75% charged battery, acceptable for dispatch |
| 12.49 Volts to 12.40 Volts | 50% charged battery, unacceptable for dispatch. Recharge as soon as possible |
| 12.39 Volts to 12.30 Volts | 25% charged battery, unacceptable for dispatch. Recharge very urgently |
| 12.29 Volts and below | Over discharged battery, unacceptable for dispatch. Recharging may not recover the battery |

**NOTE:** At an OCV of 12.29v or below sulphation of the battery's lead plates occurs which slowly destroys them. Recharging **may** recover the battery but it is not guaranteed.

If recovery does not occur then irreversible internal damage has been done and the battery will need to be scrapped.