

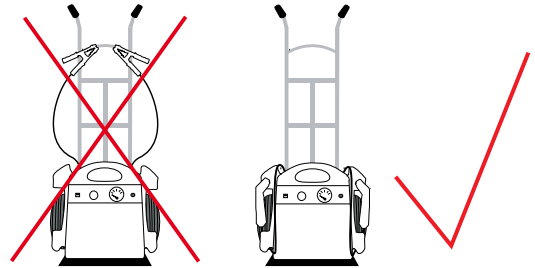
## Read Carefully Before Use to Protect Your 12V BOOSTER BATTERY



**Correctly recharging the Booster battery increases its efficiency and extends its lifetime!**

### RECHARGING YOUR BOOSTER

1. **The BOOSTER must be put on continuous charge between uses**
  - ⇒ Below 12.4V, the BOOSTER'S battery starts to sulphate and irreversibly loses its power. The lower the voltage and the longer the time spent at that voltage, the deeper the sulphation. When not in use, the BOOSTER'S battery must never drop below 12.4V (well charged = 13V).
2. **Never recharge the BOOSTER on a non-automatic garage charger or on an automatic charger set on "fast charge" or "booster" position.**
3. **Never recharge your BOOSTER on board of a vehicle with a 24V recharging (cigarette lighter) plug.**
4. **Never completely discharge the BOOSTER battery**
  - ⇒ The batteries do not have a memory effect.
5. **It is essential to check the cigarette lighter plug in the car**
  - ⇒ Please check that the vehicle's cigarette lighter plug gives 14 or 14.4V at 2000 rpm. If not, check the earth and the connections to the socket. A voltage of 13V at the cigarette lighter plug is not sufficient to recharge the BOOSTER.
6. **The clamps must be stored on their supports and you must ensure that they never touch any metallic surface.**



### STARTING A VEHICLE

1. **Important:** On vehicles that are difficult to start, **wait 3 minutes between each starting attempt of maximum 10 seconds.**

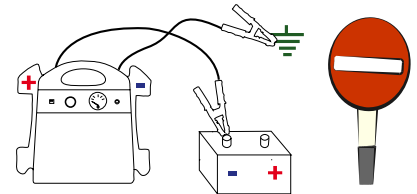
**Three reasons:**

- a. To allow the voltage of the BOOSTER battery to build up again.
- b. To allow the internal components of the battery to cool down.
- c. To allow the renewal of the gases inside the battery.

2. **Never put the BOOSTER in short-circuit, for example:**

By connecting the red clamp (+) to the negative terminal of the battery and the blue clamp (-) to the engine earth.

⇒ The fuse of the battery can melt **in less than one second!**



3. **Never connect the BOOSTER to a battery or starter which is in short-circuit.**
4. **Never connect the BOOSTER to a 24V vehicle!**

### STORAGE OF THE BOOSTER

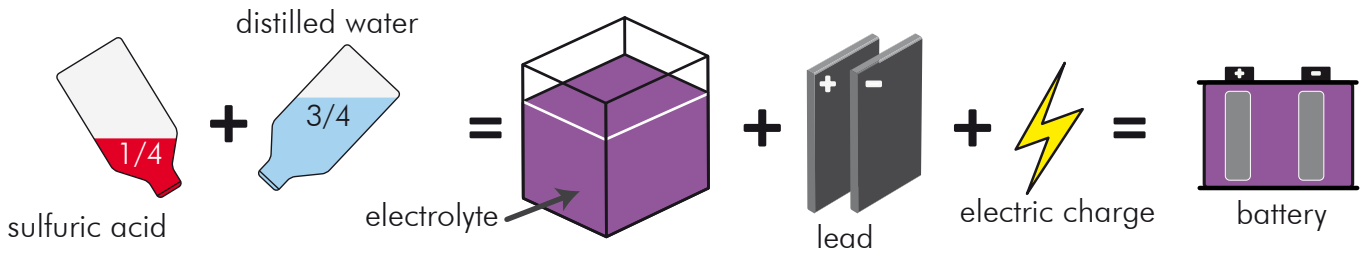
If the BOOSTER is left unused in storage for an extended period of time, it must be recharged for **at least 48 hours every 3 months.**



**LEAVE THE BOOSTER ON CONTINUOUS CHARGE WITH THE ORIGINAL CHARGER, TO ENSURE LONG LIFE AND OPTIMISE THE USE OF THE BOOSTER BATTERY**

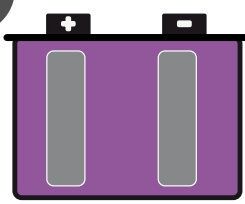
# WHY PUT YOUR BOOSTER ON CHARGE AS OFTEN AS POSSIBLE?

## Composition of a lead-acid Battery:



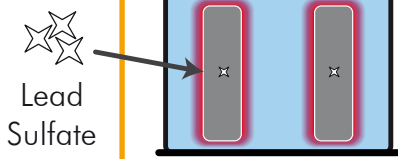
## How does a lead-acid battery work ?

1



Charged Battery  
≈ 13V

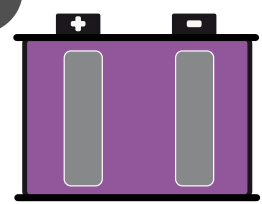
2



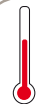
Lead Sulfate

With use the battery will start to Discharge. The acid is attracted to the lead and starts forming lead sulfate.

3



Charging the battery will cause the acid to return into the water and eliminate the lead sulfate.



Frost temperature of the electrolyte  
Charged Battery : - 40°C  
Discharged Battery : - 6°C



Density of the electrolyte  
Charged Battery : 1.28 kg/dm<sup>3</sup>  
Discharged Battery : 1.15 kg/dm<sup>3</sup>



In a vehicle

Immediate charging of the battery through the alternator  
= Maximum Life Span

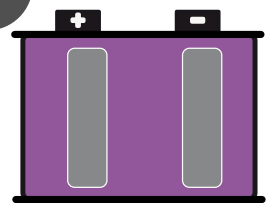


With a Jump Starter PROPULSTATION®

Immediate charging of the battery through the PROPULSTATION® Dock  
= Maximum Life Span

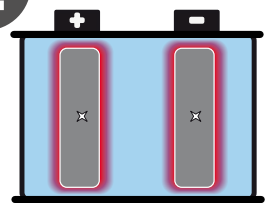
## Consequences of several successive Jump Starts before charging, or heavy discharge\* :

1



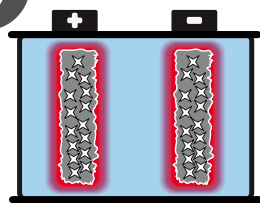
Charged Battery  
≈ 13V

2



With use the battery will start to Discharge. The acid is attracted to the lead and starts forming lead sulfate.

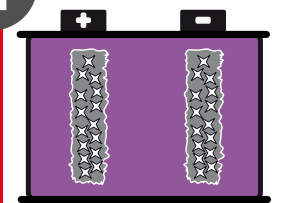
3



Heavily Discharged Battery ≈ 11V

- Acid erodes the lead
- Accumulation of sulfate

4



Recharged Battery

- Return of acid into the water
- Traces of acid and sulfate on the lead plates

Irreversible Damage  
= Loss of Power

\* Possible Situations which can cause damage: Too many Jump Starts without recharging by consumer, Faulty Alternator, Bad connections, Oxidation, Not charging over long periods... The heavier the discharge and the longer the time before recharge, the more severe the irreversible damage, preventing the current from entering or leaving the lead = Premature death of the battery. Irreversible sulfating begins below 12.4V.

More technical information at [www.ceteor.com](http://www.ceteor.com) and [www.propulstation.com](http://www.propulstation.com)



**LEAVE THE BOOSTER ON CONTINUOUS CHARGE WITH THE ORIGINAL CHARGER, TO ENSURE LONG LIFE AND OPTIMISE THE USE OF THE BOOSTER BATTERY**