

Lead Acid Aircraft Batteries Installation & Maintenance

What a battery must do!

A good cranking battery is not necessarily a battery that has adequate essential power.

Essential power requirements are the heart of your system. If the charging system fails the battery must take over the power requirements to assist the pilot in a safe landing.



Battery Life is determined by a combination of things including flight hours, duty cycles, time between flights and general battery usage.

When to recharge a battery:

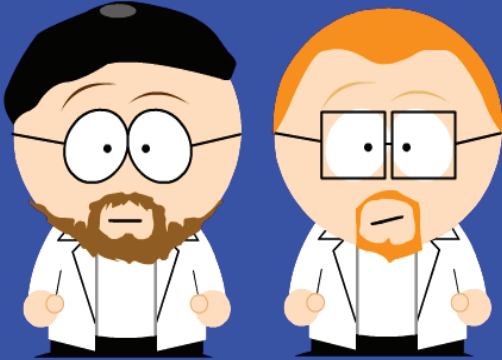
24 volt batteries need to be charged with the open circuit voltage is 25 volts or less.

12 volt batteries need to be charged when the open circuit voltage is 12.5 volts or less.



Check out www.iarenewal.com

A Blue Tuna Company



NEVER put a battery on the ground.

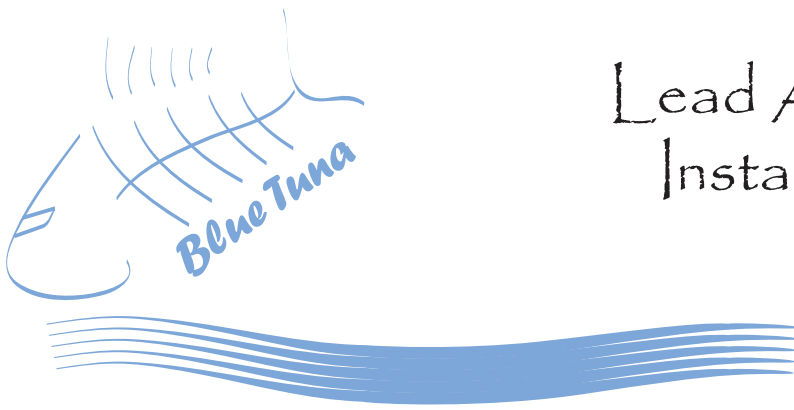
That's **false!** Years ago batteries were constructed of different materials. These materials often cracked weeping battery acid, causing terminals to short out and discharge. Not true with today's batteries.

When charging a battery remove the vent caps so the battery can vent. That's **false!**

A battery does have vent caps that provides all the ventilation needed during the charging of the battery. In fact charging systems in aircraft charge at a much higher rate than a bench charger. Also vent caps function as a flame arrestor in case there is a fire!



Don't jump start aircraft. It takes up to 3 hours for an aircraft charging system to recharge a dead battery. It is not safe to jump start an airplane because there is not sufficient time to charge a battery prior to takeoff. This is dangerous because in this state the battery does not have essential power to support the aircraft in case of emergency.



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Recombinant Gas Batteries (RG)

Factory tested to assure airworthiness
Shipped fully charged & ready to install
Constructed with non-removable vent valves
No addition of water or electrolyte required
Non spillable at attitude or altitude
Shipped as Hazmat Exempt
Sometimes installed without vent tubes as long as the battery compartment is vented
Vent valves normally remain closed (sealed) but will open to prevent the battery case from rupturing if overcharged.

RG batteries require very little maintenance other than capacity checks.

Safety and Precautions

Electric Shock Hazard Electric Burn Hazard

Do not touch uninsulated portion of the connector or the battery terminals. A possibility of serious electrical shock exists. The insulators should be installed on the terminals when moving the battery.

Do not lay tools or other metal objects on the battery as arcing or explosion could occur. Removed conductive jewelry before working around battery, charger or test equipment.

Use insulators on terminals to prevent short circuits when carrying or installing the battery.



Sulfuric Acid Handling,

When mixing sulfuric acid and water for electrolyte always pour acid into the water.



- Know the location and use of emergency eyewash and shower nearest the battery charging area
- **Sulfuric Acid First Aid: Seek Medical Attention!**
 - Eyes: Flush with cool, clean water for at least 15 minutes
 - Internally: Drink large quantities of water or milk. Do not induce vomiting
 - Inhaled: Fresh air or administer oxygen
 - Flesh: Flush with cool, clean water for at least 15 minutes
 - Clothing: Remove immediately
 - Surfaces: Neutralize with 2% solution of baking soda and water. Rinse surface with lots of cool clean water
 - Receive medical attention immediately following contact with acid

– **POISON CONTROL, USA NATIONWIDE 800-222-1222**