AGM batteries *– NEVER USE CONVENTIONAL CHARGERS!*

*Submitted by Charlie Ayers, CEO CCAR*

Way back in the early 80s I was hired by Gould battery to be one of their mobile technicians, where I was dispatched across the Chicagoland area with a van stocked with a carousel of lead acid batteries and some basic charging system diagnostic equipment and tools. As a result, I still have a soft spot in my heart for the battery industry and in particular for the technicians who install them.

Thankfully my employer was very safety-focused, and I was taught right from the very beginning the importance of wearing safety glasses, synthetic clothing (battery acid loves to eat cotton), as well as how to connect the equipment (and jumper cables) to lessen the likelihood of creating any sparks. During my tenure I never had a battery blow-up on me -- but I was called to the scene of more than one vehicle that had already experienced an exploded battery.

Earlier this week while attending an AMRA/MAP technical committee meeting, I sat in on a presentation on Absorbed Glass Mat (AGM) batteries. What I learned is that AGM batteries are being installed by many OEMs as original equipment and – while they offer many benefits (to the vehicle owner in particular) they also present some inherent dangers for technicians.

AGM batteries are sealed and are non-spillable, meaning that they can be mounted in non-traditional locations (i.e. somewhere other than under the hood) and in non-traditional angles (i.e. not always completely horizontal). They are vibration-resistant, so in addition to finding them in vehicles they are also found in some motorcycles, ATV’s, and in many marine applications (note; *do not* confuse AGM’s with gel-cell batteries, which are different). So if AGM’s don’t have the leak hazard that traditional lead-acid batteries do, what are the dangers?

Because they are sealed units, AGM’s are inherently vulnerable to being overcharged. Conventional lead-acid battery chargers oftentimes have outputs of 16 to 18 volts – well above the 14.4 volt maximum stipulated for the AGM design. So what’s the worst-case scenario here?

Using a conventional battery charger on an AGM battery could cause severe damage to the electrolytes and premature failure to the battery. Conventional chargers also have the potential to cause an AGM battery to literally explode – a hazard that we never (ever) want to expose to our technicians.

Traditional lead-acid batteries and these new AGM batteries are similar in their outward appearance. Before connecting a conventional charger to a battery in a vehicle (in particular if it is located away from the engine compartment) – see if it is labeled “non-spillable”. If so, only use chargers that are designed for AGM (and/or gel-cell) batteries.

More information on this topic can be obtained at; <http://batteryuniversity.com/learn/article/absorbent_glass_mat_agm>

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