



Choosing the “right” car battery

The battery ‘playing field’ is constantly changing with an overwhelming number of options to navigate when it comes time to replace your car battery. From everyday passenger vehicles to high performance machines...we have options depending on your application, your budget and your lifestyle needs.

Automotive or ‘starting’ batteries still predominately use lead-acid technology and typically fall within 3 main categories:

- (1) **Flooded (these are good),**
- (2) **Enhanced Flooded or EFB (these are better), and**
- (3) **Absorbed Glass Mat or AGM (these are the best).**

Flooded batteries are still the most common and cost effective option, although chemical make-up has evolved somewhat in order to suit growing consumer demands. These days, most flooded batteries have small amounts of calcium added to both the positive and negative grids to improve durability and prohibit water evaporation. It is for this very reason that calcium batteries can be maintenance free...the water in the electrolyte does not evaporate and therefore the battery does not require topping up.

Enhanced flooded batteries (EFBs) provide consumers with a better option. These batteries were initially developed to cater to the demands of the modern Idle Stop Start (ISS) vehicle and are therefore relatively new to the market. They are based on the calcium battery design, however they have higher cranking capacities and an improved ability to sustain a partial state of charge. However, although EFBs are a step up from standard flooded batteries they are still considered an entry level option for vehicles that use ISS technology.

AGM batteries are the best, and are the premium choice of technology for manufacturers of high end and advanced ISS vehicles with regenerative braking. Whilst the chemical reaction inside the battery is ultimately the same, AGM batteries differ to flooded and enhanced flooded batteries in a number of ways:

AGM batteries are constructed with the addition of an ultra-thin glass mat separator that absorbs the electrolyte making the battery ‘dry’ and ‘non-spillable’. As a result, AGM batteries recharge easier and to a lower end-voltage when compared to the flooded types. AGM batteries are the most expensive of the three, but offer up to 3 times the cycle life of a standard flooded battery, making them better suited to the rigorous demands of high-spec vehicles.

When it comes time to replace your battery, it’s ok to upgrade to a superior construction - however we don’t recommend downgrading! A vehicle originally fitted with a flooded battery can successfully run on an EFB or AGM battery provided that the case size is correct. However if a vehicle is originally fitted with an EFB battery as standard, be warned that downgrading to