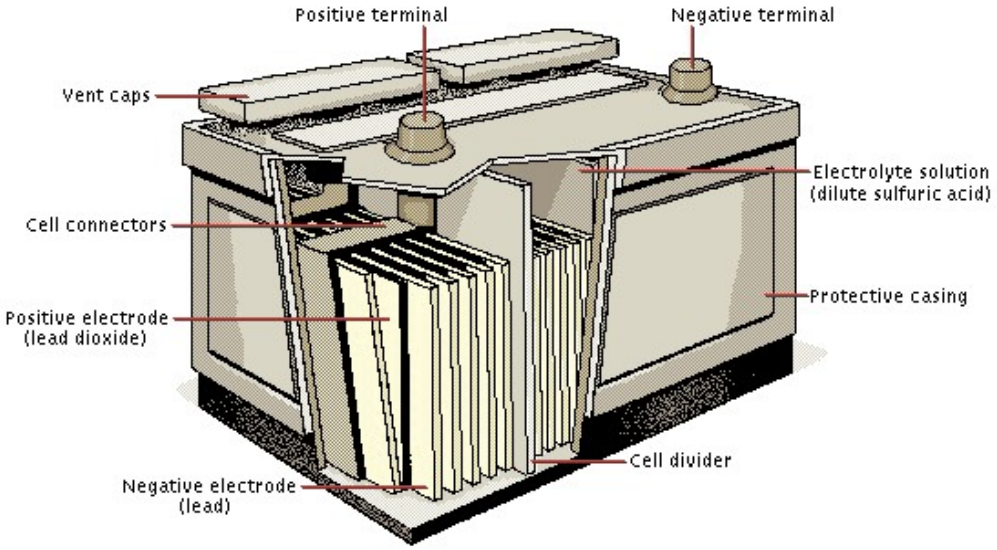
The automotive battery

The role of the automotive battery is changing rapidly. The traditional role of starting a car has changed as we have added more and more equipment and gadgets.

Today's battery must act as a storage facility to supply the power to operate all of the vehicles electrical system when the alternator is unable to, as in idling or stop start traffic conditions and when the engine is switched off.

Batteries are also required to operate the vehicle itself. For example the Toyota Prius and Honda Civic hybrid vehicles, where they are used to operate the engine that powers the charging system for the specialised batteries that drive the vehicles electric motors.

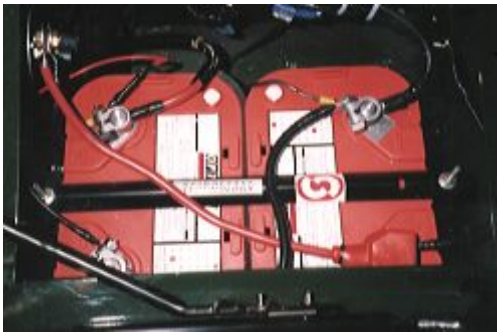


Automotive designers have for a long time talked about introducing 42 volt systems to solve the problem of supplying enough power for vehicles accessory requirements and for hybrid vehicles. But as technology has developed their mood has changed and 12 volt systems using high output alternators and intelligent energy management are still able to cope with present day requirements.

Dual battery systems are usually found only in 4wd vehicles but their use may soon expand given the demands of modern vehicles. The advantage of a dual battery

system is that the functions of cranking the engine and cycling for accessory loads can be split, with the appropriate specialised battery used, a “Shallow cycle” standard automotive battery for starting the vehicle and the “Deep cycle” battery for accessories.

Shallow cycle batteries are designed to be lightly discharged and recharged many thousands of times and deep cycle batteries are able to be discharged down to 50-70% of their capacity then recharged to full capacity.



DUAL BATTERY SYSTEM

Battery monitoring systems will be incorporated into the electrical systems of cars in the future and will be able to monitor both the charge level of the battery and the overall condition of the batteries internal components.