

**AGM
TECHNOLOGY!
VALVE REGULATED!**

SOLAR ONLINE
A U S T R A L I A

**RECOMBINANT
GAS BATTERIES!**

NON SPILLABLE!

LIFELINE®

**PREMIUM
SEALED!**

...the heart of your system

Marine and Recreational Vehicle Batteries

The technology used in the Lifeline Battery was originally developed in 1985 by Concord Battery Corporation for military aircraft where power, weight, safety and reliability were paramount considerations. This technology (AGM valve regulated recombinant gas) is incorporated in the Lifeline series of maintenance free deep cycle batteries for your electronics, housekeeping and engine starting requirements.

AGM Technology – The Difference

Some of the main differences between the old vented lead acid batteries and the LIFELINE AGM valve regulated sealed lead batteries are:

- The electrolyte is absorbed in a glass mat (AGM) separator in the LIFELINE and it is spillable in the flooded or vented type.
- The cells have pressure relief valves in the LIFELINE that are designed to keep positive pressure in each cell. The older vented or flooded type battery cells are open to atmosphere through the vent cap holes (should the vented battery be tilted or inverted, the result can be electrolyte (sulfuric acid/water mixture) spilled all over your equipment, a highly corrosive and potentially dangerous condition).
- The cell groups in the old vented type batteries are loosely packed and thus have high plate separation. In contrast the LIFELINE AGM marine battery has every square inch of positive and negative plate material tightly packed and compressed with the AGM and supported by the walls of each cell.

With this type of construction, LIFELINEs offer much lower internal resistance... greater starting power (particularly in cold temperatures)... and a much higher degree of protection against shock and vibration than the old flooded type.

How They Work

For the past 15 years Concorde Battery Corporation has been a leader in the research, development and production of Sealed Lead Acid Batteries.

The older flooded electrolyte storage batteries had numerous faults, some hazardous and some merely an inconvenience. They leaked acid and produced abundant quantities of hydrogen and oxygen gases during charge. They required frequent additions of water to replenish that lost by electrolysis and by evaporation.

The LIFELINE Series Battery was designed to correct many of the defects of the earlier batteries. The cells are sealed with pressure relief valves that confine any gases produced during cell operation. These gases are then recombined back into water, substantially eliminating the loss of water from the cells and need for water replenishment.

Lifeline Is Not A Gelled Electrolyte Battery

The electrolyte in the LIFELINE AGM Series Battery is absorbed and held in place by means of a microfibrinous silica glass mat which is sandwiched between the plates. The electrolyte is still liquid and remains so for the entire battery life. Since the glass mat is only about 90% saturated with acid electrolyte, the oxygen produced during charge can readily migrate to the negative plate and recombine into water. This recombination mechanism, and along with charge voltage control, substantially eliminates water loss, making the LIFELINE AGM Series a truly non-spillable, maintenance free battery.

And with LIFELINE you get:

- Aircraft class cell construction:
 - Lowers internal resistance for high repeated engine start current.
 - Withstands shock and vibration much better than standard flooded or gelled electrolyte designs.
- Faster recharge, no current limitations with voltage regulated recharging.
- Much better charge retention than low cost, flooded cell types, even at high ambient temperature.
- Full recharge after 30 days storage in a full discharge condition (77°F rating).
- Less than 3% per month self discharge at 77°F (25°C); less at lower temperatures.
- Sealed construction with absorbed electrolyte - no shipment restrictions, submersible without damage; install in any position; no need for watering.
- Cell safety vent valves - pressure regulated, non-removable.
- Rugged, non-marring polypropylene (copolymer) case/cover.
- Safety - even during severe overcharge the LIFELINE AGM battery produces less than 2% hydrogen gas (4.1% is required for flammability in air)
- Long cycle life

