

...The heart of your aircraft®

CONCORDE

RECOMBINANT GAS 'RG SERIES' BATTERIES



Since their introduction in 1986 the Concorde Battery Corporation has developed several styles of Recombinant Gas batteries, likewise known as VRSLAB (Valve Regulated Sealed Lead Acid Batteries).

Formed in 1977, their factory was dedicated to manufacturing dry charged (vented or flooded electrolyte) batteries. But now, with the proven reliability of Concorde's VRSLAB and great acceptance in both military and commercial applications, over 80% of their manufacturing has been changed over from dry charged to VRSLAB production.

VENTED VERSUS VRSLAB – THE DIFFERENCE

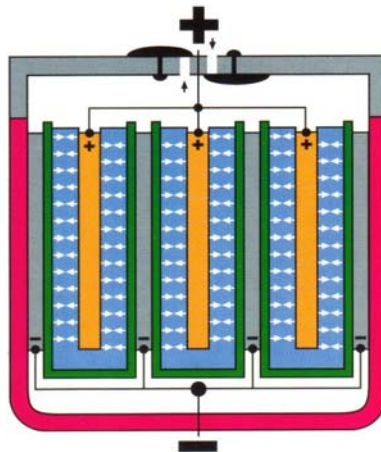
Some of the main differences between the old vented lead acid batteries and the new valve regulated sealed lead acid batteries are:

- The electrolyte is absorbed in a glass mat (AGM) separator in the VRSLAB and it is spillable in the flooded or vented type.
- The cells have pressure relief valves in the VRSLAB 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 VRSLAB 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.

Because of this type of construction the VRSLAB's have much lower internal resistance and obviously greater starting power, particularly at cold temperatures. Additionally, this support provides a much higher degree of shock and vibration than the old flooded type.

VRSLAB performance is comparable to nickel cadmium aircraft batteries without their expensive temperature monitoring or maintenance requirements.

HOW THEY WORK



This drawing represents the recombination of the gases on charge with the absorbed glass mat (ATM) design.

The newer Concorde VRSLAB is a recombinant gas absorbed electrolyte battery. The cells are sealed with pressure relief valves that provide a positive pressure within the battery. The plates are sandwiched with a micro fibrous silica glass mat consisting of a blend of glass fibers of varying length and diameter that have good wicking characteristics and promote retention of the electrolyte. Electrolyte is absorbed and held in place by the capillary action between the fluid and the glass mat fibers. The mat is over 90% saturated with electrolyte. By design it is not totally saturated with electrolyte...a portion is filled with gas. The void space provides the channels by which oxygen travels in it's path from positive to negative plate during charging. The void spaces allow the freshly generated gases, which are in their atomic state and very reactive, to recombine rapidly and safely. This recombination passivates the negative slightly, reducing electrolysis and ultimately eliminates the need to add water, making the battery truly maintenance free.

CHARGE WITHOUT FADING ON A CONSTANT POTENTIAL (VOLTAGE) BUSS

Concorde RG series Aircraft Batteries simply work better than nickel cadmium batteries do in aircraft that are not equipped with dedicated nickel cadmium battery chargers.

CHARGE RETENTION

Three times better than the old vented type.

RELIABLE

Ask the US Navy and Air Force, the F/A-18 and the F-117A were reported to have had trouble-free batteries during Desert Storm (both types equipped with Concorde VRSLAB).

FAA & MILITARY APPROVAL

Concorde VRSLAB Batteries have been approved by the FAA and US Government. Concorde is a MIL-I-45208 qualified facility and are also PMA'd, 14 CFR Part 21, Section 303, Federal Aviation Regulations. They meet or exceed the requirements of MIL-SPEC B-8565 and FAR 23.1353, 25.1353(c), 27.1353, 29.1353 (3), 25.853(a), 25.1353 Appendix F, Part 1 paragraph (a) (1) (ii). Concorde RG Series have been approved in One-Fifties to Falcon Nine Hundreds.

D.O.T. – SHIPPING...AOG!

Concorde VRSLAB Batteries have been tested by an independent laboratory and passed D.O.T. shipping requirements for hazardous materials, 49 CFR Section 173-159. Therefore no "UN" labels are required (the "UN" label marks a product as hazardous material). Concorde VRSLAB Batteries are not restricted for shipment by air or any other means of transportation. They are classified as non-dangerous, are shipped fully charged, and are not required to have corrosive labels on their shipping carton.

APPLICABILITY

Concorde "RG" Series Batteries are available for a wide range of G.A., Airline and Military applications either with an STC or as an FAA/PMA replacement for OEM.