Advanced Lead Acid Battery Consortium

Improving Performance, Reducing Environmental Impact

The LC Super Hybrid undergoes testing

The lead industry continues to pioneer research into low-emission, fuel-efficient technologies for enhanced product performance and reduced environmental impact, as well as the promotion of a sustainable future. In the last 20 years, many of the industry's initiatives in research and development have come to fruition thanks to the efforts of the Advanced Lead Acid Battery Consortium (ALABC).

Founded in 1992, the ALABC is an international research organisation composed of lead producers, battery manufacturers, equipment suppliers and research institutions dedicated to enhancing the performance of lead-acid batteries for a variety of markets.

Managed, under the International Lead Association umbrella, by the International Lead Zinc Research Organization, based in North Carolina, USA, the Consortium has an international membership of 70 companies and organisations. It pools the resources of its membership to facilitate and manage specific research and development programmes for advanced lead-acid batteries that would otherwise not be possible

ALABC research has:

- Driven the evolution of advanced lead-acid and lead carbon technology in the area of hybrid electric vehicles (HEV), start/stop systems for cars and grid-scale energy storage applications
- Successfully demonstrated this technology in real-world applications;
- Helped expand existing market applications and create new market applications for lead-acid and lead carbon batteries.
- Helped to resolve many of the problems that have limited lead-acid battery performance (corrosion, sulfation, capacity loss);
- Stimulated production of additives, grids and materials to enhance lead-acid battery performance;
- Assisted in establishing the best regimes for charging lead-acid batteries;
- Helped create improved testing standards profiles to assess battery performance; and
- Supported developments in secondary lead materials and life cycle analysis;

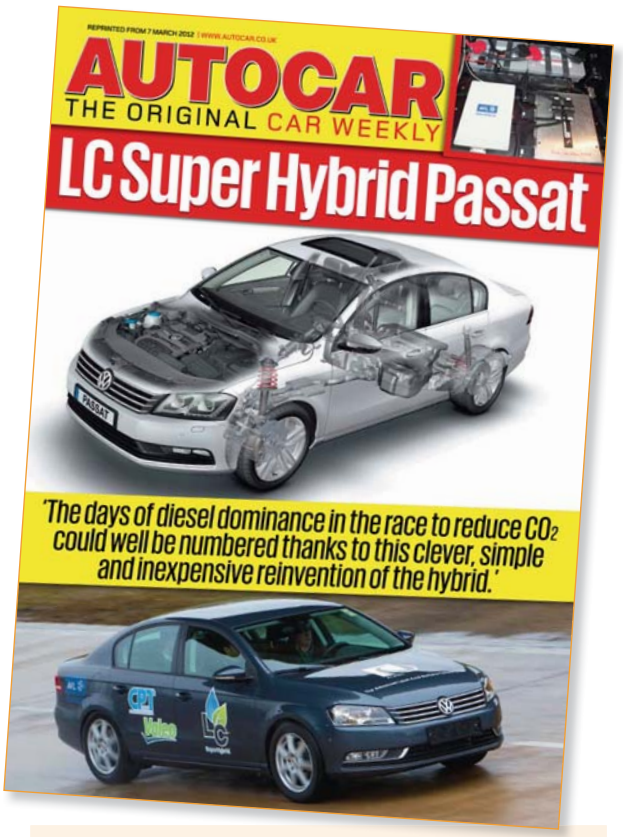
Demonstration Hybrid Electric Vehicles

In recent years, the ALABC has launched a demonstration phase of its research programme in an effort to show the modifications that can be made to lead-acid batteries to improve their performance in HEVs.

Among the most-recent demonstration vehicles are:

- A Honda Insight HEV retrofitted with lead carbon UltraBatteries driven for more than 100,000 miles at the Millbrook (UK) testing grounds
- A Honda Civic HEV retrofitted with UltraBatteries that is undergoing 100,000 miles of fleet duty under the guidance of Ecotality North America in downtown, Phoenix, Arizona, USA
- A Ford Focus retrofitted with a lead-acid battery-powered 1.0 liter hybrid engine and powertrain that could perform at the same level of (or better than) a conventional 2.0 litre system
- A Volkswagen Passat micro-hybrid (LC Super Hybrid) that includes a 12V lead carbon battery system that achieves lower CO_2 emissions and improved fuel economy without sacrificing drivability or affordability. See also the LC Hybrid vehicle case study on the ILA website.

These vehicles stand as proof that advanced lead-acid and lead carbon batteries can be utilized in a hybrid system that not only features off-the-shelf components easily, but is also cost-effective enough to justify consideration for early adoption in the next generation of vehicles on the market.



Interest is growing in Hybrid Electric Vehicles

For more information, about the ALABC and its accomplishments, visit www.alabc.org.