

## SA-made battery tops innovation award honours at Automechanika SA

First National Battery's Raylite Ultimate, the only locally manufactured, Valve Regulated Lead Acid (VRLA) battery with Absorbent Glass Matt (AGM) technology, has been awarded the gold certificate for product innovation at the recent Automechanika SA's Innovation Awards. Bosch's Parallel Full Hybrid Technology system was awarded a silver certificate, while MAHA's MET 6 Emissions Tester took the bronze award.



**Seven other products received certificates of commendation for their pioneering qualities:** Authentix's LFD diesel testing device;

- Champion's Easyvision wiper technology;
- Electrolog's electronic catalogue;
- Fortron's Injector Max EA600;
- Goodyear's EfficientGrip tyre technology;
- RAM's Spare Wheel Ready;
- Spanjaard's Aerosol Chain Wax.

The products were assessed by a jury that included international judge Prof Axel Schumacher of the Hochschule für Angewandte Wissenschaften in Hamburg, Germany. He joined South African counterparts Richard Beän of Unido; Twala Boco, John Ellmore and Jeff Osborne of the RMI; David Furlonger of the *Financial Mail*; Corrie Kotze of Automotive Investment Holdings; Norman Lamprecht of Naamsa; and Rog Pitot of Naacam on the judging panel.

"The quality of entries was outstanding," said convener Wynter Murdoch, editor of *Automobil*, official journal of the RMI, which organised the competition on behalf of Automechanika SA.

### **What they were looking for was...**

The judges were looking for innovative qualities in products available either to OEMs or South Africa's automotive aftermarket, taking into consideration a variety of criteria.

The Raylite Ultimate, which is suitable for a number of applications including use in vehicles that incorporate start-stop systems, was perceived as marking a significant step forward in deep cycle, spill-proof battery technology.

Similarly, the Bosch Parallel Full Hybrid system - used in Porsche and Volkswagen products - was seen to represent a major advance in powertrain technology, while the MAHA MET 6 Emissions Tester was lauded for its compact size, ease of use and accuracy in measuring gas particles.

"Out of the dozens of entries, the products assessed as finalists were found to all contribute in one way or another to advancing automotive progress, either by pioneering aspects of safety, environmental friendliness, or ease of use, or by making significant breakthroughs in terms of development standards," said Murdoch.

## **The products:**

### *Gold Award*

#### *Raylite Ultimate Battery*

Raylite Ultimate is a Valve Regulated Lead Acid (VRLA) battery that utilises Absorbent Glass Matt (AGM) technology. It is the only AGM battery produced in South Africa and also the first of its design to be produced in the southern hemisphere.

AGM batteries are based on recombination technology, whereby gases generated during charging are not vented to the atmosphere, meaning no water loss and no maintenance required. The battery is completely sealed and spill proof.

### *Silver Award*

#### *Bosch Parallel Full Hybrid Technology*

The hybrid variants of the Volkswagen Touareg and Porsche Cayenne S, which recently went into production, feature hybrid technology supplied by Bosch.

This is the first time that either of these models has been available as a parallel full hybrid. As well as key components such as the power electronics and electric motor, Bosch is also providing the "brain" of the vehicles in the form of the Motronic control unit for hybrid vehicles, which governs when the electric motor, internal-combustion engine, or a combination of the two kick into action.

Volkswagen and Porsche both chose to equip their hybrid vehicles with a 3,0-litre V6 supercharged direct injection engine and an eight-speed automatic transmission. The six-cylinder V-engine delivers 245kW and 440Nm.

The vehicle also features an Integrated Motor Generator (IMG) developed by Bosch. The water-cooled electric motor includes a separate clutch. The hybrid module is positioned between the internal-combustion engine and the transmission, taking up impressively little space thanks to a diameter of 30cm and a length just 145mm.

The IMG delivers 34kW and a maximum torque of 300Nm. That means the Volkswagen and the Porsche can cruise at a maximum of 50 to 60km/h running on electric power alone, as long as the nickel metal hydride (NiMH) battery has enough charge.

The battery has an energy capacity of 1,7 kilowatt-hours with a peak of 288 volts. During braking, the electric motor - now operating as a generator - recovers kinetic energy, which is then stored in the high-voltage battery. Compared to the first-generation V8 vehicles, these hybrid vehicles cut fuel consumption by up to 40 percent.

### *Bronze Award*

#### *Maha Met 6 Emission Tester*

Innovative and handy, the MAHA MET 6 can be used for petrol or diesel engines, measuring reliably and quickly the concentration of CO, CO<sub>2</sub>, HC, O<sub>2</sub> and NO<sub>x</sub> as well as turbidity coefficient and particulate ma

Particles which are larger than 70nm are identified and determined using a laser beam in the emission flow

Small and lightweight, the unit uses only one emission probe with quick clamping for all motor types. Intelligent energy management means low energy consumption.

### *Highly Commended*

#### *Authentix Lfd Diesel Testing Kit*

In November 2010, Authentix introduced the LFD diesel testing kit to South Africa. Marketed by FAS Petroleum Services, the device relies on proprietary immuno-assay, binding-pair technology to allow motorists to check for the presence of illicit paraffin in their commercially purchased diesel fuel. The kit is wholly contained and uses just 10ml of fuel to perform the test.

### *Highly Commended*

#### *Champion Easyvision Wiper Technology*

Champion's new wiper blade range is designed to improve wipe quality and reduce noise. The range features a heightened dynamic profile and utilises new materials and techniques. Blades vary in length from 330mm to 650mm in increments of 25mm, and have a symmetrical structure that better conforms to modern, curved windscreens. They are manufactured with composite links with a riveted articulation, and a main metal bridge that is galvanised, epoxy painted and polyester powder coated to protect it from rust and fade.

The structure-free wipers can be retrofitted onto older vehicles with hook arm wiper systems and have a profiled steel flexor and polymeric spoiler, designed to ensure excellent windscreen contact and the even application of force at every point on the screen.

Variable Geometry Spoiler (VGS) technology allows the spoiler to adjust according to the wind flow over the wiper, reducing lift and further enhancing the wipe quality.

Facilitating quick and easy attachment, the patented bayonet double-lock safety connection system ensures there is no lateral movement or possibility of blade loss. The wiper blades are available in a compact range of 14 part numbers covering popular applications.

### *Highly Commended*

#### *Electrolog Electronic Catalogue*

Electrolog is a South African developed electronic referencing catalogue that services the needs of the automotive electrical aftermarket.

The catalogue houses over 26 000 items with over 58 000 images, offering over 6 000 links to alternative items, over 1,7 million reference numbers and over 2,3 million cross references in a 1,5 Gig database.

In Southern Africa generally, when trying to identify a replacement item, we don't always have the part number to use as reference. This is where the Electrolog, with its multiple search engines, makes it easy to find the right part - whether it be a search by measurements, category, pictures, numbers or keywords.

The latest version of the catalogue offers added functionality and features, as well as a much bigger database capacity for the ever growing number of items being added, bringing it in line with world class custom cataloguing services and solutions.

### *Highly Commended*

#### *Fortron Injector Max Ec900A*

Devised to be used as an on-car injector cleaning machine, the Fortron Injector Max EC900A is said to be robust and reliable. Air operated, it is easy to use and is supplied with a universal fitting kit, along with pre-mixed petrol and diesel cleaning fluids.

Suitable for high pressure and common rail diesel engines, the machine is designed to clean fuel injectors combustion chambers and throttle body systems, helping to improve fuel economy and engine performance while reducing exhaust emissions.

### *Highly Commended*

#### *Goodyear Efficientgrip Tyre Technology*

Goodyear's latest addition to its product lineup - EfficientGrip with FuelSaving Technology - is said to be the world's first ultra-high performance tyre engineered specifically to improve the fuel consumption of cars.

EfficientGrip also crusades Goodyear's maxim of Safety Together, the tyre offering excellent handling and braking performance, according to independent tests.

Europe's TÜV SÜD Automotive found that EfficientGrip performed better than four leading competitors in the market, offering 13% better rolling resistance; 2% shorter braking distance on wet and dry roads; 1,9% better fuel consumption; 8% better mileage on the driven axle and 49% better mileage on the free axle. The tyres have recently been introduced to South Africa.

### *Highly Commended*

#### *Ram Spare Wheel Ready*

Spare Wheel Ready enables the air pressure in a vehicle's spare tyre to be checked quickly and easily.

One end of a one metre long rubber hose is connected to the valve on the spare wheel, while the other end which incorporates a standard valve, is attached to an easily accessible point on the bodywork or bumper of the vehicle, allowing the spare wheel to be checked without having to be removed from its fixture.

Spanjaard Chain Wax is manufactured in South Africa, aimed at the motorcycle segment of the market.

The manufacturer claims that the product is made up of a superior blend of waxes and extreme-pressure additives designed to prolong chain life by penetrating deep into linkages, eliminating fling off as well as protecting against wear, water and corrosion.

Due to its specialised formula, the wax is said not to attract dirt and can be used for both on- and off-road motorcycles.