

# INNOVATION & TECHNOLOGY

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## Nanotechnology drives fuel efficient engine oil

### AUTOMOTIVE

■ New lubricant seen as 'holy grail' of development

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A high-tech lubricant hailed the 'holy grail of vehicle oil' has been launched at an industry event at the National Exhibition Centre, Birmingham.

The London firm behind the venture - NanoBoron UK - says the oil has been scientifically proven to improve fuel consumption more than 10 per cent, reduce engine wear and corrosion and help the environment.

“In the average year, a fleet of ten 18 tonne vehicles developing 230 hp operating at 50,000 miles each could save £20,538

Dr Mounir Adjrad

tion (MIRA) research facility it produced fuel consumption savings of over 10 per cent.

“In other words the cost of a litre of diesel for BORPower users would be reduced from £1.14 to £1.03 or the trip from London to Edinburgh will be reduced from 330 to 297 miles.

“In the average year, a fleet of ten 18-tonne vehicles developing 230 hp operating at 50,000 miles each could save £20,538 based on a 12.6 mpg per vehicle. From owner-operators to fleet managers, achieving reduction of costs especially with the current volatile fuel prices, is a major headache and many will have heard of so-called 'additives.' However, BORPower is different.”

Dr Adjrad said the oil was the only product “with publicly declared tests and certificates from around the world, performed by independent organisations showing a reduction in fuel consumption based scientific formula, approved by vehicle bodies and governments.”

The firm's technical manager Dr Mounir Adjrad said: “BORPower is an oil additive scientifically proven in Europe, the US and now the UK to improve consumption.

“Launched at the Bus Expo show at the NEC after UK trials by vehicle engineering test specialists at the Motor Industry Research Association



The new lubricant has produced fuel consumption savings of more than 10 per cent

He said: “It is based on a physical process, not involving any chemical reaction with the engine oil, making BORPower non-toxic, non-acidic, and environmentally-friendly. Other products last from 1,000 to 25,000 miles whereas BORPower lasts up to 40,000 miles.

“The quality and effectiveness of BORPower has been validated several times by accredited industrial and scientific research and testing facilities in the USA and Europe and the UK.

“Each facility, including Southwest Research Institute San Antonio Texas, USA and TÜV NORD Germany (Technical Inspection Agency), Hanover, found BORPower improved fuel efficiency up to 15 per cent.”

He said BORPower was the combination of the use of the chemical element Boron and nanotechnology.

“Nanotechnology is the relatively unknown but growing field dealing with the tiny world of atoms and molecules. One nanometer (nm) is one billionth, or 10<sup>-9</sup> of a metre. The comparative size of a nanometer to a metre is the same as that of a marble to the size of the earth. Checking over the periodic table Boron has the symbol B, atomic number 5, has a small density, and is very heat resistant. The raw boron goes through the nanotechnology process and becomes boron diamond powder, frequently called the 'brother of diamond' due to its hardness of 9.3 Mohs, just below the

diamond (10 Mohs) the hardest substance known to man.”

He said BORPower worked by building boron metal films in the engine's inner parts which prevents direct contact between the frictional surfaces responsible for abrasion, friction and heat.

“BORPower helps by cooling down these frictional surfaces and sealing them.” Announcing the launch of BORPower in the UK, NanoBoron UK Director Ismail Cikci said: “In today's volatile financial markets businesses need to save every penny. After comprehensive trials across the globe we are the only company to publicly declare independent test results which confirm BORPower works to save money.”

## New safety passport scheme for Britvic

Soft drinks business Britvic will pioneer an ultra-secure high-tech safety passport scheme at its factory in Rugby.

Britvic will undertake a training programme to ensure its 140 employees hold safety passports for the food and drinks industry developed by Safety Pass Alliance (SPA) of Southam.

New employees will undergo training as part of their induction.

Martin Berry, quality health safety and environment specialist at Britvic, said: “We have been looking at ways of improving our induction process and in talking to SPA we recognised their two-day safety passport course covers all the health and safety issues in our industry.”

He said three Britvic staff were qualifying as trainers. “It will be invaluable to existing operators. Some of them have been here for 15 years and times have changed. The fact everyone has to renew their passport every three years means everyone is kept up to date with the latest health and safety legislation.”

Ray Gibbs, managing director of SPA, said the safety passport had been developed specifically at the request of the food and drinks sector which involved companies such as Nestle UK, Northern Foods, Geest, Cadbury Trebor Bassett and Bass Brewers.

He said SPA had introduced safety passports in other sectors where leading companies reported a dramatic reduction in accidents.

Britvic says the passport is a “robust and secure” card - similar to a UK driving licence - that displays a tamper-proof photograph of the successful trainee.

## Remote back-up storage service

A remote backup data storage service for organisations without their own server has been launched by a West Midlands self storage company.

Rugeley Self Storage says its standard service allows automatic back-up, through its own software, of up to two gb daily, with further capacity available in one gb packages.

Smaller businesses, such as solicitors and accountants, can have automatic back-up of their data into a remote and secure location without having to finance their own server. Data is stored on Rugeley Self Storage's secure servers in its state-of-the-art facility on Towers Business Park in Rugeley.

Tim Morley, a director of the company, said companies were still not backing up their data, or using external hard drives attached to PCs in the same office - with the accompanying risk of losses.