



Sakor's Michigan facilities have been upgraded

## Sakor upgrades testing facilities

Dynamometer company Sakor Technologies is updating its manufacturing facilities so it can build and test much larger systems and provide more testing services.

The first project slated is a large dual dynamometer system – 420kW each – for testing transmissions and transfer cases for small or

medium-sized lorries for a major auto components supplier.

The 1900 square metre facility in Michigan has the layout and capacity for building and testing dynamometer systems, but previously lacked the electrical power to test larger systems that require high current capacity. By increasing the

building's power capacity, Sakor can now test systems up to and exceeding 10MW at full power on its own floor.

This will let the company add testing services for hybrid-electrical vehicles, renewable energy and military markets.

Other facility improvements include upgrading of all the lighting in the

production, testing and office areas with energy-efficient LED fixtures, reducing monthly electric bills by approximately 60 per cent.

"We are excited about the improvements to our facility and look forward to enhancing and expanding our testing capabilities," said Randal Beattie, president of Sakor.

## Ricardo software could stop car sickness

Ricardo is developing technology to avoid motion sickness in autonomous vehicles. It can also benefit conventionally driven vehicles.

Autonomous vehicles promise a travelling experience in which passengers will be able to work, read from a screen, watch a movie or hold a conversation while in motion. This can trigger kinetosis, or motion sickness.

Kinetosis is believed to be caused by a disconnect between the motion as experienced by the inner ear

and what the eyes are perceiving. This can be compounded by peripheral vision flicker from the vehicle's motion.

Children and teenagers suffer the most from kinetosis since development of the central nervous system tends to lag behind physical growth, giving a larger vestibular-visual mismatch.

Ricardo has been investigating the causes and exacerbating factors for kinetosis and using this to develop algorithms that can be used to improve

ride comfort and avoid motion sickness. For all vehicles, the software would be advantageous in informing the optimal specification of suspension to provide the most desirable ride and handling characteristics.

For autonomous vehicles, the algorithms could be used with the real-time adaptation of multiple sensory aspects of the cabin environment – control of temperature, lighting and scent – as well as influencing the discretionary path taken in ma-

noeuvres such as cornering, stopping, starting and overtaking.

Testing has been carried out using adults to help calibrate the kinetosis algorithms, but further data are needed for four to 18 year-olds. Ricardo is thus working with UK universities in a larger-scale research programme involving the participation of local schoolchildren.

The project, the results of which are due for algorithm validation later this year, will be tied to the science curriculum.