AUTOMOTIVE DESIGN™ and PRODUCTION

NOTABLE

Lumbar Underground

If you've had occasion to ride the London Underground's Victoria Line that spans 13 miles from northeast to southcentral London, and you found its seats extraordinarily supportive, you have a sensor to thank. Sensor Products Inc.'s (www.sensorprod.com; Madison, New Jersey) Tactlus Bodyfitter pad, which quantifies and visualizes surface pressure experienced by the human body as it happens, was the measurement tool to test the new seat cushions recently added to the London train. Geared toward designers of mattresses, seats and gripping instruments, the Bodyfitter sensors and software measure body surface pressures at levels as low as 4 pounds per square inch (PSI), and up to 2,000 PSI in industrial applications. In the case of the London Underground seats, Sensor Product ran the pressure mapping for cushion maker MTI Specialty Silicones (www.mtiglobalinc.com; Toronto, Canada), testing three different versions of cushions on various seat foundations. The tests confirmed the model that had initially been chosen for the London Underground, showing it evenly distributed pressure to seated occupants.

When a person sits on a seat or mattress covered with the Bodyfitter pad, its more than 1,000 sensing points measure pressure in real time and display it as 2D or 3D color-coded pressure maps.