

Customer

An automotive systems manufacturer

Customer Requirement

Verify that vehicle seating systems operate at the full range of their intended movement

Banner Solution

L-GAGE[®] LE550 laser gauging sensors

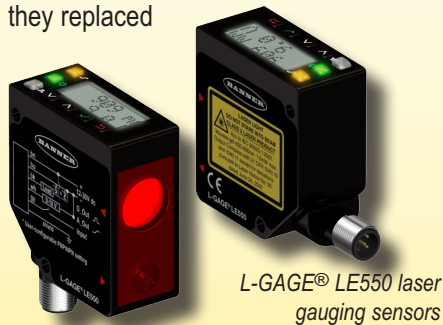
Why Banner?

Range & Resolution – Sensor is accurate to 0.5 mm from up to 600 mm from target and < 1 mm up to 1000 mm from the target

Performance & Price – LE550 sensors outperform similarly priced triangulation sensors and cost less than sensors with comparable features and capabilities

Customer Benefit

Total Savings – The company was able to deploy LE550s throughout their facility at nearly half the cost of the sensors they replaced



L-GAGE LE550 Features

- Scales output across its entire 100 mm - 1000 mm operating range out of the box
- Independent digital and analog outputs
- Advanced imager technology senses a wide range of materials and surfaces
- Two-line, eight-character LCD display

Learn More

Visit www.bannerengineering.com for product information and to locate a distributor

- [L-GAGE[®] LE550 overview](#)

Company Saves Money by Switching to LE550 Sensors to Measure Movement Range



A pair of L-GAGE[®] LE550 laser triangulation sensors measure the forward and rearward movement of a vehicle seating system as part of a series of inspections verifying range of movement

Background

A company supplying the auto industry makes power seating systems for a popular line of sport utility vehicles. The vehicle manufacturer requires that these systems be fully functioning and ready for installation before they are shipped.

Challenges

During assembly, inspections are conducted to measure seat height adjustment, forward and rearward movement, and upright and recline motion. Two sensors are used for each inspection. The sensors are deployed off the conveyor line to ensure easy access to and the free movement of the seats. At its maximum range during inspection, a seat may be as far as a meter away from the sensors.

The sensors the company had been using cost \$1000 each. The outlay for updating the sensors in a single inspection station was \$6000. With multiple inspection stations located throughout their facility, the company wanted to find more cost-effective sensors capable of making precise measurements at a distance.

Solution

After comparing performance and cost, the company chose L-GAGE[®] LE550 laser sensors. LE550 sensors can detect changes as slight as 1 mm at a meter away, but at nearly half the price of the sensors they replaced. Utilizing linear array technology and laser triangulation, the LE550s provide exceptional linearity, repeatability and resolution across their entire 100 mm - 1000 mm operating range.

LE550 sensors feature a small spot size and visible beam for easy alignment. The two-line, eight-character LCD display simplifies setup, provides real-time measurement and output information and makes altering the application easy.

During each inspection, seats are adjusted from their minimum to their maximum range. The LE550s measure the change in distance. If a measurement falls outside of the acceptable range, the output is triggered, the operator is alerted and the line is briefly stopped to allow the operator to inspect the seat and correct the problem.