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Stoneridge's MirrorEye Enhances Truckers' View Of Surrounding Traffic

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Stoneridge's MirrorEye uses cameras to capture more of the road surrounding Class 8 commercial trucks than conventional side-mounted mirrors. Images are displayed on three interior monitors.

Cameras play a major role in the evolution of autonomous transportation, but we often overlook their primary benefit: safety.

A major automotive supplier is betting on camera-based mirror systems on large Class 8 tractor-trailers.

Stoneridge, a Novi, Michigan-based supplier to both the light-vehicle and commercial truck markets, is beginning to gain traction with its MirrorEye camera monitor system for large trucks.

Not only does it give drivers a clearer view of surrounding traffic, but by using three monitors – one on each A-pillar and one in the middle of the instrument panel – it enhances the truck's aerodynamics by eliminating tall side-view mirrors that span each side of the cab.

There are five cameras, two on each side, mounted outside the cab, and a third that looks down at the front of the rig on the passenger's side to monitor pedestrians and other small objects when the truck stops at intersections, said Mario Gafencu, Stoneridge manager of fleet operations, testing and validation.

The driver's side screen is 12.3 inches tall. The one on the passenger's side is 15 inches tall. The middle screen, which captures what the downward-looking front camera sees, is 7 inches diagonally.

Together, they eliminate all possible blind spots, and feature night-vision technology that reduces eye strain in the dark.

Here's why MirrorEye will matter.

Data from the National Highway Traffic Safety Administration shows the number of people killed in crashes involving large trucks rose 46% from 3,380 in 2009 to 4,951 in 2018, the last year for which data is available.

Injuries more than doubled from 74,000 in 2009 to 151,000 in 2018.

Stoneridge has competition. According to the trucking and freight news website Transport Topics, Bosch and Continental Automotive have developed camera monitoring systems. But Stoneridge is the first to attain an exemption from the Federal Motor Carrier Safety Administration to allow test fleets to remove the door-mounted side mirrors while using the interior-mounted screens.

Gafencu said Stoneridge has active trials with 24 Class 8 fleets. Earlier this year, Montgomery Transportation, a fleet operator based in Birmingham, Ala., said it will make MirrorEye standard equipment on all new trucks it purchases.

In addition, Maverick Transportation, an operator of about 1,600 trucks based on North Little Rock, Ark., made a similar commitment.

MirrorEye has benefitted from Stoneridge's 2017 acquisition of Orlaco, a Netherlands-based company that also makes camera monitor systems. The technology has been adopted in Europe, primarily on buses, coaches, lift trucks and construction equipment.

Brad Corrodi, Stoneridge vice president of fleet solutions, says safety is MirrorEye's strongest selling point.

He said one test fleet of 55 trucks used the system for six months during which the trucks covered about 3 million miles.

Before MirrorEye, the fleet recorded about 1.94 safety incidents per million miles. During the six months of deploying the camera-based system, that fell to 1.34 incidents per million miles.

The other selling point is helping fleets retain drivers.

According to smart-trucking.com, there is a shortage of about 60,000 heavy commercial truck drivers in the United States and about 25,000 in Canada.

One contributing factor is that drivers are getting older. The Bureau of Labor Statistics estimates that the average commercial truck driver is 55 years old, and mostly male. Only about 6% of drivers are women, according to the American Truck Associations.

“Camera monitoring systems are a huge help,” Corrodi said. “There is a hypothesis that newer, less experienced drivers get more benefit from this technology. It’s more enjoyable to drive and less stressful.”

The other payback is fuel economy. Gafencu, who logged 2.5 million miles as a Class 8 driver before Stoneridge hired him, estimates MirrorEye’s aerodynamics will save between 2% and 3% on fuel over a year, depending on the driver’s experience and average payloads.

<https://www.forbes.com/sites/greggardner/2021/06/25/stoneridges-mirror-eye-enhances-truckers-view-of-surrounding-traffic/?sh=20a5b0627440>