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Municipalities Save Lives with Truck Side Guards

Lightweight safety barriers retrofit onto trucks to help prevent rear wheel crush hazard to cyclists and pedestrians.

■ By Del Williams

In crowded city streets, one of the deadliest accidents to occur is a side impact collision between cyclists or pedestrians and municipal work trucks, including sanitation vehicles. “During a crash with a truck that has high ground clearance, vulnerable road users can fall into the exposed space between the front and rear wheels and suffer fatal crushing injuries,” states the U.S. Department of Transportation’s Volpe Center. “Nearly half of bicyclists and more than one-quarter of pedestrians killed by a large truck first impact the side of a truck.”

Safety Barriers

Fortunately, there is a solution that is already saving lives. By installing truck side guards that physically block pedestrians and cyclists from being swept underneath the vehicle’s rear wheels, municipalities and even private fleets are protecting citizens, reducing liability and even potentially reducing insurance costs.

Already mandated in certain metro areas in the U.S., these safety barriers made from aluminum or steel can be retrofitted onto existing trucks or incorporated into new vehicle fleets easily.

This approach has already proven to be surprisingly effective in reducing fatalities. According to Volpe, following a national side guard mandate in the United Kingdom, cyclist fatalities fell 61 percent and pedestrian fatalities by 20 percent in side impact collisions with trucks. Side guards have been required since the 1980s in the European Union and Japan, and more recently in China, Brazil and Peru.

“Side guards protect bicyclists and pedestrians against falling under a moving truck and being run over,” says David Biderman, Executive Director and CEO of Solid Waste Association of North America (SWANA), the largest member-based solid waste association in North America. “Hauling companies and municipal sanitation departments that operate in congested cities should seriously consider adding them.”

Although there is no federal mandate in the U.S. yet, Volpe has set national standards as a growing number of proactive municipalities such as Boston, Orlando, Seattle, San Francisco, New York City and Washington, D.C. use truck side guards.

Volpe’s recommended truck side guard standard (DOT-VNTSC-OSTR-16-05) states that Class 3 or above vehicles with a gross vehicle weight rating of 10,000 pounds or more should have

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Photos courtesy of Dur-A-Guard.



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underride protection. The standard includes dimensional and strength specifications for the side guards, including the ability to withstand 440 pounds of force.

Reducing Risk

Large trucks and buses have more difficulty making turns and seeing blind spots than smaller vehicles, due to their size, length and driver elevation above street level. This can increase the risk of collision in populated urban areas, which can have not only cyclists sharing the road, but also heavy foot traffic at corners and intersections.

“Commercial trucks of all kinds need more room to turn right because right rear wheels often turn tighter than the front wheels, which is an added risk,” says Biderman. “Side guards can offer important protection against tight right turns if a cyclist or pedestrian is in the mirror’s blind spot on the truck’s right side.”

Biderman added that another danger occurs as pedestrians become increasingly distracted, often texting, using smartphones or listening to music via earbuds. This can make them less aware of their surroundings and more prone to have an accident. “Adding side guards can also be an effective way of preventing distracted pedestrians from getting seriously injured or worse if they step into the path of a moving truck,” says Biderman.

One of the nation’s highest profile uses of truck side guards so far occurs in New York City, which is requiring the safety barrier on 10,000 vehicles by 2024 as part of its Vision Zero Action Plan for ending traffic deaths and injuries.

To comply with New York City’s Vision Zero program and Volpe, Action Carting Environmental Services, a provider of non-hazardous waste management services for New York City and New Jersey, chose to retrofit its fleet of trucks with side guards.

“We have retrofitted about 60 trucks with side guards from Dur-A-Guard, which is Vision Zero and Volpe compliant,” says Ken Levine, former Corporate Safety Director at Action Carting. “Using side guards is one of the most cost-effective ways of reducing crash severity with cyclists, motorcyclists and pedestrians on busy city streets. It is an inexpensive way to avoid a potentially catastrophic situation.”

According to Levine, Dur-A-Guard, a Union, NJ-based manufacturer of truck side guards, worked with him to accommodate the various makes, models and configurations of his fleet. “They custom fit the side guards with all of our trucks, even those with tanks, toolboxes, sidewalls and bodywork,” says Levine.

Such side guards do not need to be permanently welded onto trucks. To ease installation and maintenance, some companies like Dur-A-Guard offer side guards that lift up or swing down on hinges to offer access beneath the truck. Another high-density, aluminum design is lightweight enough to be removed by one person.

“We looked into the swing up, swing down type side guards, which could help provide access under the truck, but liked the removable ones better,” says Levine. “One person can easily pull off the removable guards for maintenance and then put them back on.”

According to SWANA’s Biderman, while it makes sense to have some uniformity to the side guards, the problem is there are many truck chassis used in the solid waste industry. “Even one company with 10 trucks will have very different makes and models, so it becomes challenging to provide a single sized side guard that works across an entire company’s fleet,” says Biderman.

Since Dur-A-Guard has adapted the safety barriers to a full range of vehicle variations, however, the company created a universal design that accommodates most trucks, which can be shipped nationally.

“Anyone involved with truck safety should look into side guards,” says Levine. “Those with a universal design would be helpful to cities or municipalities, which could get them drop-shipped and have their maintenance department install them.”

Levine sums up the key point for municipalities. “Truck side guards save lives,” concludes Levine. “If you can save a life, what price tag can you put on that?” | **WA**

Del Williams is a technical writer based in Torrance, CA, writing about health, business, technology, and educational issues. For more information about Dur-A-Guard, call (908) 688-0800 x202 or x223, e-mail jberwick@durexinc.com or sgersasi@durexinc.com, or visit www.dur-a-guard.com.