

Preventing Underride Deaths At 40 mph Is Possible

MAKE TRUCK CRASHES

SURVIVABLE

Annual Fatalities From Underride By Type and Kind of Victim

	Front	Rear	Side	Total
Passenger Vehicles	164	287	179	468
Pedestrians	457	15	221	693
Bicyclists	57	1	100	158
Motorcyclists	83	79	279	441
TOTAL	761	382	779	1,760

Figures from the 2024 ACUP Report based on FARS data & NTSB 2014 Study based on Trucks in Fatal Accidents

"1 dead in 4-vehicle crash on I-290 West in Schaumburg"



"Scenes from a tragedy: Fatal accident in Mississippi claims 8"



The van driver one month later

"Bicyclist Hit by Big Rig on San Vicente at Santa Monica This Morning"



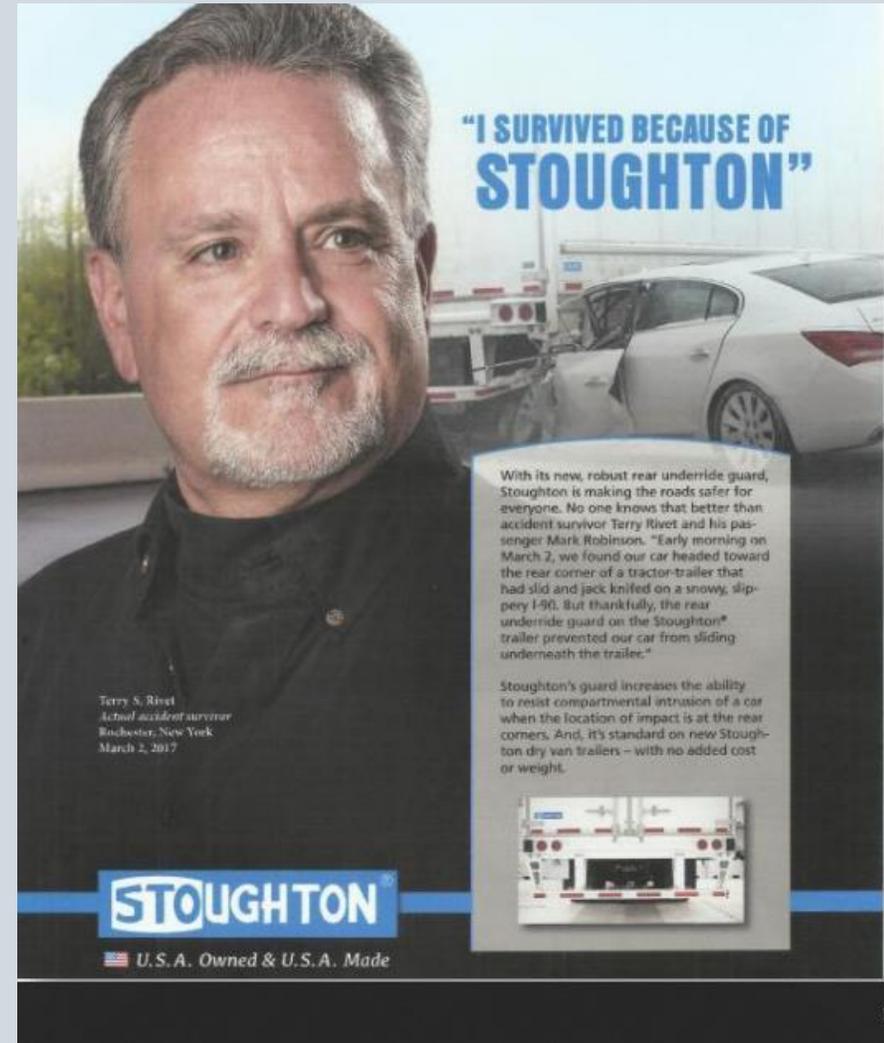
The 2022 Rear Impact Guard Rule Was OBSOLETE

The Day It Was Published:

- The top RIG meets the TOUGHGUARD standard.
- The bottom RIG meets the 2022 Rule.



30% Offset Protection Without Increased Cost or Weight



**"I SURVIVED BECAUSE OF
STOUGHTON"**

Terry S. Rivet
Actual accident survivor
Rochester, New York
March 2, 2017

With its new, robust rear underride guard, Stoughton is making the roads safer for everyone. No one knows that better than accident survivor Terry Rivet and his passenger Mark Robinson. "Early morning on March 2, we found our car headed toward the rear corner of a tractor-trailer that had slid and jack knifed on a snowy, slippery I-90. But thankfully, the rear underride guard on the Stoughton® trailer prevented our car from sliding underneath the trailer."

Stoughton's guard increases the ability to resist compartmental intrusion of a car when the location of impact is at the rear corners. And, it's standard on new Stoughton dry van trailers - with no added cost or weight.



U.S.A. Owned & U.S.A. Made



STOUGHTON®

It's in the details

NEW REAR UNDERRIDE GUARD Now standard on our dry vans. No additional cost. No additional weight.



PROTECTS THE DRIVING PUBLIC

The new rear underride guard resists compartmental intrusion of an automobile when the location of impact is at 30% to 100% overlap of the width of the car to the underride guard, meeting the testing protocol established by the IIHS and complying with all applicable U.S. and Canadian regulations.



TESTED AND PROVEN DESIGN

Stoughton trailers equipped with the new patent-pending rear underride guard underwent extensive tests both internally and through multiple independent testing agencies, including crash testing performed at the Insurance Institute for Highway Safety (IIHS) facility.

The leading-edge enhancements of the rear underride guard are engineered to smoothly integrate into the trailer, creating a robust and sleek rear appearance, without adding weight to the trailer.

NEW REAR UNDERRIDE GUARD

NEW REAR UNDERRIDE GUARD



"We place such a high value on the safety of both our customers and the driving public that we now provide a higher level of safety and performance as standard on our dry vans, at no additional cost."

—Bob Wahlin, President & CEO

- Designed with two additional bolt-on vertical supports on the outer ends of the horizontal bar to increase strength and prevent vehicle intrusion
- All four supports are integrated into the bar and fastened to a robust under carriage to strengthen the guard
- Standard on all dry van trailer models
- No added weight
- No negative impact on aerodynamics
- No additional costs
- Available in:
 - Painted carbon steel
 - Galvanized steel
 - Stainless steel



For more information and videos, visit StoughtonTrailers.com/RearGuard

STOUGHTON®



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Rear Impact Guard Successful In 30% Offset Crash



Safer Drivers. Safer Trucks. Safer Roads.

Advisory Committee on Underride Protection

February 8th, 2024



Hydro Concept Rear Impact Guard (RIG)

Malcolm Deighton of *Hydro Aluminum Extrusions*

Sapa/Hydro RIG 2017 Testing At 40 mph



Before

After



Modified version of the IIHS TOUGHGUARD 30% Overlap Semi-Trailer Underride Evaluation Crash Test Protocol

NHTSA Testing 3530

Karco Engineering 3/15/18

- NHSTA purchases both designs for testing
- Karco eventually completes 3530 RIG testing in all standard configurations
- First test 3530 bends steel fixture pusher plate on 1st test



No PCI



NHTSA Testing 4030

Karco Engineering 3/15/18

- One test was made on 4030 before irreparably damaging the entire testing fixture
- Canadian overlap 60" centered load
- 665kN (125mm) displacement
- Bent loading plate severely (1.5" each end)
- Bend steel fixture mount .5" down and sideways
- Further testing was not possible with damage to the fixture, pusher, and press floor



TrailerGuards offers a generic Rear Impact Guard (RIG) Retrofit out of aluminum which can be installed on most any model of trailer. See it crash tested here at 38 mph.



Table 7. PCI observations – Strengthened guards

Overlap	Strengthened Guard	40 mph	45 mph
		PCI//No-PCI	PCI//No-PCI
30 Percent Overlap	Wabash	PCI	PCI
	Manac	No PCI	PCI
	Great Dane	PCI	PCI
50 Percent Overlap	Wabash	No PCI	No PCI
	Manac	No PCI	No PCI
	Great Dane	No PCI	PCI
Full Width	Wabash	No PCI	No PCI
	Manac	No PCI	No PCI
	Great Dane	No PCI	No PCI

NHTSA-contracted Elemance Research Report, July 2025

A 2025 federal study demonstrated that a 30% offset crash at 40 mph is survivable.

Side Impact Guard Prevents Underride In 40 mph Crash Test



Side Impact Guard Prevents Underride at 43 mph



Side Impact Guards Protect Vulnerable Road Users, Too

