

VISION ZERO

ZERO CRASH DEATHS AND SERIOUS INJURIES

*The Case for a
Practical Application of
Vision Zero
to
Side Underride Protection
on Large Trucks*



Part 1

February 2017

AnnaLeah & Mary for Truck Safety

*This book is lovingly compiled
in memory of*

AnnaLeah Karth (forever 17)

Mary Lydia Karth (forever 13)

Jessica Holman-Price (forever 21)

and

Roya Sadigh (forever 26)

Along with countless other loved ones

***Precious ones,
your lives were cut far too short***



Side Guard Petition Book

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***Side Guard
Petition Letter***

February 2017

Side Guard Petition Letter

President Trump, Secretary Chao, Senator Thune, and Leaders in the Trucking Industry,
The tragic Tesla fatal crash on May 7, 2016, highlights a real and present highway danger -- cars sliding underneath large trucks when vehicles collide. No matter what caused the Tesla crash, the driver might have lived if the truck had had side guards.

U.S. & Canadian safety advocates are calling for an end to preventable truck underride tragedies. Hundreds of people die every year when pedestrians, cyclists, motorcyclists, and passenger vehicles go underneath trucks.

It can happen to anyone -- even if their car has a 5-Star Crash Rating. It can happen anywhere. It happened to AnnaLeah (17) & Mary Karth (13), when their car went under the rear of a semi-trailer on May 4, 2013, in Georgia. And it happened to Jessica Holman-Price (21) when she went under the side of a truck as a pedestrian on December 19, 2005, in Canada.

U.S. regulators have debated for decades about how to stop the tragedy of underride deaths -- including, since 1969, the possibility of requiring underride protection to be added to the sides of large trucks. But they have not done so, even though engineers have already found ways to solve this problem.

It's time for NHTSA to mandate side guards and for the trucking industry to start installing them.

Therefore, in light of the tragic and unnecessary countless loss of lives which delays in underride prevention have already cost, as well as the continued tragic and preventable loss of life sure to occur if decisive action is not taken now, the signers of this petition:

1. Call on President Trump to immediately sign a Vision Zero Executive Order to authorize Vision Zero rulemaking policies which will impact all DOT safety regulations and save more lives;
2. Call on DOT to act immediately and apply Vision Zero rulemaking principles by crafting a truck underride final rule -- with crash test-based performance standards rather than force-based design standards along with success at higher speeds -- to include rear (both centered and offset) and side guards for both Single Unit Trucks and trailers;
3. Call on Congress to support a comprehensive and effective truck underride standard; and
4. Call on leaders in the trucking industry to act immediately and support efforts to equip all trucks with effective underride protection.

We can do this. Together, we can save lives. Someone is counting on us. . .

Sincerely,

Jerry & Marianne Karth, along with all signers of this petition

End Deadly Truck Side Underride Crashes: Mandate Side Guards

The tragic Tesla fatal crash on May 7, 2016, highlights a real and present highway danger -- cars sliding underneath large trucks when vehicles collide. No matter what caused the Tesla crash, the driver might have lived if the truck had had side guards.

U.S. & Canadian safety advocates are calling for an end to preventable truck underride tragedies. Hundreds of people die every year when pedestrians, cyclists, motorcyclists, and passenger vehicles go underneath trucks.

See The Today Show's report on this issue: <http://tinyurl.com/jknunw4>

It can happen to anyone -- even if their car has a 5-Star Crash Rating. It can happen anywhere. It happened to AnnaLeah (17) & Mary Karth (13), when their car went under the rear of a semi-trailer on May 4, 2013, in Georgia. And it happened to Jessica Holman-Price (21) when she went under the side of a truck as a pedestrian on December 19, 2005, in Canada.

U.S. regulators have debated for decades about how to stop the tragedy of underride deaths -- including, since 1969, the possibility of requiring underride protection to be added to the sides of large trucks. But they have not done so, even though engineers have already found ways to solve this problem.

It's time for NHTSA to mandate side guards and for the trucking industry to start installing them.

NBC News on Deadly Side Underride: <http://tinyurl.com/hhk5kpf>

Speak up for victims like Jessica, Mary, and AnnaLeah. Let our government & trucking industry leaders know that you want them to act NOW to SAVE LIVES.

Side Guards: What You Need to Know & Do: https://www.youtube.com/watch?v=ga_Sb0qnkH0

In light of the tragic and unnecessary countless loss of lives which delays in underride prevention have already cost, as well as the continued tragic and preventable loss of life sure to occur if decisive action is not taken now, we are hereby petitioning:

1. President Trump to immediately sign a Vision Zero Executive Order to authorize Vision Zero rulemaking policies which will impact all DOT safety regulations and save more lives;
2. DOT to act immediately and apply Vision Zero rulemaking principles by crafting a truck underride final rule to include rear (both centered and offset) and side guards for both Single Unit Trucks and trailers;
3. Congress to support a comprehensive and effective truck underride standard; and
4. Leaders in the trucking industry to act immediately and support efforts to equip all trucks with effective underride protection.

We can do this. Together, we can save lives. Someone is counting on us. . .

Successful Side Guard Crash Tests in the U.S.:

- From Aaron Kiefer's Collision Safety Consulting: TrailerGuard System side crash test
- From Perry Ponder's: AngelWing Side Underride Protection Device/Airflow Deflector

For more information: <http://annaleahmary.com/>

Jerry & Marianne tell the story of their loss: <https://www.youtube.com/watch?>

Comments from Signers of the Side Guard Petition

February 2017

**Side Guard Petition Signatures &
Comments:**

<http://tinyurl.com/zorjun2>

Truck
Underride
Fatality
Statistics

NHTSA, 1994-2014

**OCCUPANT FATALITIES IN PASSENGER VEHICLES IN CRASHES INVOLVING A LARGE TRUCK(S)
WHERE THE PASSENGER VEHICLE EXPERIENCED AN UNDERRIDE
BY CRASH YEAR AND COMPARTMENT INTRUSION
FATALITY ANALYSIS REPORTING SYSTEM (FARS) 1994-2013 FINAL AND 2014 ARF**

| Crash Year | Underriding a Motor Vehicle In-Transport | | | | Underriding a Motor Vehicle Not In-Transport | | | | Total |
|------------|--|--------------------------|-------------------------------|-------|--|--------------------------|-------------------------------|-------|-------|
| | Compartment Intrusion | No Compartment Intrusion | Compartment Intrusion Unknown | Total | Compartment Intrusion | No Compartment Intrusion | Compartment Intrusion Unknown | Total | |
| 1994 | 127 | 19 | 63 | 209 | 11 | 0 | 7 | 18 | 227 |
| 1995 | 121 | 18 | 86 | 225 | 6 | 1 | 12 | 19 | 244 |
| 1996 | 119 | 20 | 76 | 215 | 6 | 1 | 8 | 15 | 230 |
| 1997 | 121 | 14 | 79 | 214 | 1 | 1 | 1 | 3 | 217 |
| 1998 | 143 | 27 | 98 | 268 | 2 | - | 5 | 7 | 275 |
| 1999 | 132 | 22 | 92 | 246 | 3 | 1 | 3 | 7 | 253 |
| 2000 | 135 | 12 | 81 | 228 | 6 | 1 | - | 7 | 235 |
| 2001 | 123 | 21 | 53 | 197 | - | - | 1 | 1 | 198 |
| 2002 | 185 | 37 | 74 | 296 | 2 | - | 1 | 3 | 299 |
| 2003 | 135 | 25 | 69 | 229 | 2 | - | 1 | 3 | 232 |
| 2004 | 167 | 21 | 82 | 270 | 3 | 1 | 2 | 6 | 276 |
| 2005 | 147 | 30 | 84 | 261 | 12 | 2 | 5 | 19 | 280 |
| 2006 | 118 | 38 | 68 | 224 | 17 | - | 4 | 21 | 245 |
| 2007 | 148 | 38 | 60 | 246 | 20 | 1 | 3 | 24 | 270 |
| 2008 | 112 | 20 | 63 | 195 | 13 | 3 | 4 | 20 | 215 |
| 2009 | 121 | 34 | 50 | 205 | 12 | - | 6 | 18 | 223 |
| 2010 | 148 | 25 | 46 | 219 | 11 | 0 | 6 | 17 | 236 |
| 2011 | 111 | 27 | 53 | 191 | 14 | 4 | 2 | 20 | 211 |
| 2012 | 146 | 26 | 73 | 245 | 11 | 1 | 6 | 18 | 263 |
| 2013 | 117 | 26 | 64 | 207 | 12 | 1 | 4 | 17 | 224 |
| 2014 | 129 | 11 | 72 | 212 | 14 | 2 | - | 16 | 228 |
| 1994-2014 | 2,805 | 511 | 1,486 | 4,802 | 178 | 20 | 81 | 279 | 5,081 |

**PASSENGER VEHICLE OCCUPANT FATALITIES IN TWO-VEHICLE CRASHES INVOLVING
A PASSENGER VEHICLE AND A LARGE TRUCK, WHICH WERE BOTH IN TRANSPORT
WHERE THE FIRST HARMFUL EVENT IN THE CRASH WAS COLLISION WITH A MOTOR VEHICLE IN TRANSPORT AND
THE PASSENGER VEHICLE EXPERIENCED AN UNDERRIDE**

**BY CRASH YEAR, INITIAL IMPACT POINT ON THE LARGE TRUCK, AND PASSENGER VEHICLE COMPARTMENT INTRUSION
FATALITY ANALYSIS REPORTING SYSTEM (FARS) 1994-2013 FINAL AND 2014 ARF**

| Crash Year by Initial Impact Point on the Large Truck | | Passenger Vehicle Compartment Intrusion? | | | Total |
|---|---------------|--|--------------------------|-------------------------------|------------|
| | | Compartment Intrusion | No Compartment Intrusion | Compartment Intrusion Unknown | |
| 1994 | Front | 14 | - | 8 | 22 |
| | Left Side | 30 | 5 | 10 | 45 |
| | Right Side | 24 | 4 | 10 | 38 |
| | Rear | 47 | 6 | 25 | 78 |
| | Other/Unknown | 4 | 2 | 8 | 14 |
| | Total | 119 | 17 | 61 | 197 |
| 1995 | Front | 5 | 2 | 9 | 16 |
| | Left Side | 30 | - | 21 | 51 |
| | Right Side | 14 | 2 | 8 | 24 |
| | Rear | 52 | 11 | 32 | 95 |
| | Other/Unknown | 10 | 1 | 12 | 23 |
| | Total | 111 | 16 | 82 | 209 |
| 1996 | Front | 5 | - | 6 | 11 |
| | Left Side | 30 | 2 | 15 | 47 |
| | Right Side | 19 | 1 | 10 | 30 |
| | Rear | 38 | 13 | 28 | 79 |
| | Other/Unknown | 11 | 2 | 6 | 19 |
| | Total | 103 | 18 | 65 | 186 |
| 1997 | Front | 4 | 1 | 3 | 8 |
| | Left Side | 25 | 5 | 20 | 50 |
| | Right Side | 15 | 2 | 10 | 27 |
| | Rear | 48 | 6 | 27 | 81 |
| | Other/Unknown | 7 | 1 | 9 | 17 |
| | Total | 99 | 15 | 69 | 183 |
| 1998 | Front | 3 | 1 | 3 | 7 |
| | Left Side | 44 | 9 | 22 | 75 |
| | Right Side | 25 | 4 | 11 | 40 |
| | Rear | 44 | 6 | 31 | 81 |
| | Other/Unknown | 7 | - | 10 | 17 |
| | Total | 123 | 20 | 77 | 220 |
| 1999 | Front | 8 | 1 | 3 | 12 |
| | Left Side | 23 | 2 | 27 | 52 |
| | Right Side | 16 | - | 11 | 27 |
| | Rear | 62 | 11 | 41 | 114 |
| | Other/Unknown | 10 | 2 | 2 | 14 |
| | Total | 119 | 16 | 84 | 219 |

(Continued)

**PASSENGER VEHICLE OCCUPANT FATALITIES IN TWO-VEHICLE CRASHES INVOLVING
A PASSENGER VEHICLE AND A LARGE TRUCK, WHICH WERE BOTH IN TRANSPORT
WHERE THE FIRST HARMFUL EVENT IN THE CRASH WAS COLLISION WITH A MOTOR VEHICLE IN TRANSPORT AND
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**BY CRASH YEAR, INITIAL IMPACT POINT ON THE LARGE TRUCK, AND PASSENGER VEHICLE COMPARTMENT INTRUSION
FATALITY ANALYSIS REPORTING SYSTEM (FARS) 1994-2013 FINAL AND 2014 ARF**

| Crash Year by Initial Impact Point on the Large Truck | Passenger Vehicle Compartment Intrusion? | | | Total | |
|---|--|--------------------------|-------------------------------|-----------|------------|
| | Compartment Intrusion | No Compartment Intrusion | Compartment Intrusion Unknown | | |
| 2000 | | | | | |
| | Front | 3 | 1 | 1 | 5 |
| | Left Side | 33 | 2 | 12 | 47 |
| | Right Side | 29 | 5 | 10 | 44 |
| | Rear | 51 | 5 | 42 | 98 |
| | Other/Unknown | 3 | - | 3 | 6 |
| | Total | 119 | 13 | 68 | 200 |
| 2001 | | | | | |
| | Front | 6 | - | 2 | 8 |
| | Left Side | 37 | 2 | 13 | 52 |
| | Right Side | 9 | 4 | 11 | 24 |
| | Rear | 33 | 10 | 17 | 60 |
| | Other/Unknown | 4 | - | 2 | 6 |
| | Total | 89 | 16 | 45 | 150 |
| 2002 | | | | | |
| | Front | 26 | 10 | 8 | 44 |
| | Left Side | 40 | 6 | 16 | 62 |
| | Right Side | 23 | 3 | 9 | 35 |
| | Rear | 64 | 11 | 26 | 101 |
| | Total | 153 | 30 | 59 | 242 |
| 2003 | | | | | |
| | Front | 20 | 5 | 6 | 31 |
| | Left Side | 28 | 2 | 14 | 44 |
| | Right Side | 20 | 1 | 15 | 36 |
| | Rear | 37 | 12 | 24 | 73 |
| | Other/Unknown | 1 | - | 1 | 2 |
| | Total | 106 | 20 | 60 | 186 |
| 2004 | | | | | |
| | Front | 41 | 9 | 9 | 59 |
| | Left Side | 25 | 2 | 14 | 41 |
| | Right Side | 23 | 5 | 14 | 42 |
| | Rear | 47 | 4 | 35 | 86 |
| | Other/Unknown | 3 | - | 1 | 4 |
| | Total | 139 | 20 | 73 | 232 |
| 2005 | | | | | |
| | Front | 22 | 5 | 9 | 36 |
| | Left Side | 29 | 8 | 17 | 54 |
| | Right Side | 19 | 1 | 6 | 26 |
| | Rear | 44 | 8 | 33 | 85 |
| | Other/Unknown | 2 | - | 1 | 3 |
| | Total | 116 | 22 | 66 | 204 |

(Continued)

**PASSENGER VEHICLE OCCUPANT FATALITIES IN TWO-VEHICLE CRASHES INVOLVING
A PASSENGER VEHICLE AND A LARGE TRUCK, WHICH WERE BOTH IN TRANSPORT
WHERE THE FIRST HARMFUL EVENT IN THE CRASH WAS COLLISION WITH A MOTOR VEHICLE IN TRANSPORT AND
THE PASSENGER VEHICLE EXPERIENCED AN UNDERRIDE
BY CRASH YEAR, INITIAL IMPACT POINT ON THE LARGE TRUCK, AND PASSENGER VEHICLE COMPARTMENT INTRUSION
FATALITY ANALYSIS REPORTING SYSTEM (FARS) 1994-2013 FINAL AND 2014 ARF**

| Crash Year by Initial Impact Point on the Large Truck | | Passenger Vehicle Compartment Intrusion? | | | Total |
|---|---------------|--|--------------------------|-------------------------------|-------|
| | | Compartment Intrusion | No Compartment Intrusion | Compartment Intrusion Unknown | |
| 2006 | | | | | |
| | Front | 21 | 7 | 7 | 35 |
| | Left Side | 21 | 4 | 11 | 36 |
| | Right Side | 24 | 4 | 14 | 42 |
| | Rear | 35 | 18 | 25 | 78 |
| | Other/Unknown | - | - | 1 | 1 |
| | Total | 101 | 33 | 58 | 192 |
| 2007 | | | | | |
| | Front | 29 | 6 | 7 | 42 |
| | Left Side | 31 | 5 | 9 | 45 |
| | Right Side | 12 | 6 | 12 | 30 |
| | Rear | 47 | 17 | 20 | 84 |
| | Other/Unknown | 1 | - | - | 1 |
| | Total | 120 | 34 | 48 | 202 |
| 2008 | | | | | |
| | Front | 13 | 1 | 11 | 25 |
| | Left Side | 27 | 2 | 14 | 43 |
| | Right Side | 8 | 1 | 12 | 21 |
| | Rear | 37 | 11 | 17 | 65 |
| | Other/Unknown | - | - | 1 | 1 |
| | Total | 85 | 15 | 55 | 155 |
| 2009 | | | | | |
| | Front | 24 | 12 | 8 | 44 |
| | Left Side | 17 | 5 | 4 | 26 |
| | Right Side | 17 | 2 | 7 | 26 |
| | Rear | 46 | 9 | 19 | 74 |
| | Other/Unknown | - | - | 2 | 2 |
| | Total | 104 | 28 | 40 | 172 |
| 2010 | | | | | |
| | Front | 41 | 3 | 9 | 53 |
| | Left Side | 22 | 3 | 6 | 31 |
| | Right Side | 7 | 2 | 6 | 15 |
| | Rear | 42 | 11 | 18 | 71 |
| | Total | 112 | 19 | 39 | 170 |
| | 2011 | | | | |
| Front | | 33 | 14 | 6 | 53 |
| Left Side | | 12 | 3 | 9 | 24 |
| Right Side | | 9 | 2 | 7 | 18 |
| Rear | | 39 | 7 | 17 | 63 |
| Total | | 93 | 26 | 39 | 158 |

(Continued)

**PASSENGER VEHICLE OCCUPANT FATALITIES IN TWO-VEHICLE CRASHES INVOLVING
A PASSENGER VEHICLE AND A LARGE TRUCK, WHICH WERE BOTH IN TRANSPORT
WHERE THE FIRST HARMFUL EVENT IN THE CRASH WAS COLLISION WITH A MOTOR VEHICLE IN TRANSPORT AND
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FATALITY ANALYSIS REPORTING SYSTEM (FARS) 1994-2013 FINAL AND 2014 ARF**

| Crash Year by Initial Impact Point on the Large Truck | | Passenger Vehicle Compartment Intrusion? | | | Total |
|---|---------------|--|--------------------------|-------------------------------|-------|
| | | Compartment Intrusion | No Compartment Intrusion | Compartment Intrusion Unknown | |
| 2012 | | | | | |
| | Front | 39 | 9 | 8 | 56 |
| | Left Side | 14 | 6 | 11 | 31 |
| | Right Side | 10 | - | 8 | 18 |
| | Rear | 51 | 6 | 32 | 89 |
| | Total | 114 | 21 | 59 | 194 |
| 2013 | | | | | |
| | Front | 25 | 6 | 6 | 37 |
| | Left Side | 23 | 3 | 13 | 39 |
| | Right Side | 5 | 5 | 7 | 17 |
| | Rear | 41 | 8 | 22 | 71 |
| | Other/Unknown | - | - | 1 | 1 |
| | Total | 94 | 22 | 49 | 165 |
| 2014 | | | | | |
| | Front | 14 | - | 7 | 21 |
| | Left Side | 20 | 2 | 12 | 34 |
| | Right Side | 14 | - | 11 | 25 |
| | Rear | 51 | 8 | 30 | 89 |
| | Other/Unknown | - | - | 1 | 1 |
| Total | 99 | 10 | 61 | 170 | |
| 1994-2014 | | | | | |
| | Front | 396 | 93 | 136 | 625 |
| | Left Side | 561 | 78 | 290 | 929 |
| | Right Side | 342 | 54 | 209 | 605 |
| | Rear | 956 | 198 | 561 | 1,715 |
| | Other/Unknown | 63 | 8 | 61 | 132 |
| Total | 2,318 | 431 | 1,257 | 4,006 | |

1969

DOT Document
in the Federal Register
Proposed Underride
Rulemaking
with mention of
Extension of
Underride Protection
to Sides of Large Vehicles

March 19, 1969

Act of 1937, as amended (7 U.S.C. 601-674), notice is hereby given that the Department is giving consideration to the grade, size, quality, and maturity requirements that, beginning April 7, 1969, are to govern the importation of Temple oranges into the United States. Orange Regulation 8 (7 CFR 944.307, 33 F.R. 14171, 18088) currently sets forth the import restrictions applicable to oranges other than Temple oranges.

The proposed import requirements for Temple oranges, as hereinafter set forth, would be the same as those contained in Orange Regulation 62, as amended (7 CFR 905.512, 33 F.R. 18227, 34 F.R. 246, 925) applicable to Florida grown Temple oranges under the marketing order regulating the handling of oranges, grapefruit, tangerines, and tangelos grown in Florida (7 CFR Part 905).

The provisions of said Orange Regulation 8 specify requirements for imports of Navel and Early and Midseason varieties of oranges and Valencia and similar late type varieties of oranges. Such requirements are based upon the regulation applicable to these varieties of oranges under the marketing order regulating the handling of oranges and grapefruit grown in Texas (7 CFR Part 906). Such marketing order does not cover Temple oranges grown in Texas.

All persons who desire to submit written data, views, or arguments in connection with the proposal should file the same with the Hearing Clerk, Room 112-A, U.S. Department of Agriculture, Washington, D.C. 20250, not later than the 26th day of March. All written submissions made pursuant to the notice will be made available for public inspection at the office of the Hearing Clerk during regular business hours (7 CFR 1.27(b)).

The proposals are to amend paragraph (a) by adding a new subparagraph (4) and amend paragraphs (g) and (j) of Orange Regulation 8 (7 CFR 944.307, 33 F.R. 14171, 18088) to read as follows: § 944.307 Orange Regulation 8.

(a) * * *
 (4) As to Temple oranges, beginning April 7, 1969, through September 14, 1969, Temple oranges shall (i) grade at least U.S. No. 2: *Provided*, That any such oranges shall be free from damage caused by dryness or mushy condition, and (ii) be of a size not smaller than 2 5/16 inches in diameter, except that a tolerance of 10 percent, by count, of Temple oranges smaller than such minimum diameter shall be permitted, which tolerance shall be applied in accordance with the provisions for the application of tolerances specified in U.S. Standards for Florida Oranges and Tangelos (§§ 51.1140-51.1178 of this title).

(g) It is hereby determined that imports of oranges (other than Temple oranges) during the effective time of this regulation, are in most direct competition with oranges (other than Temple oranges) grown in the State of Texas. The requirements set forth in this section

for oranges (other than Temple oranges) are the same as those applicable to oranges grown in Texas. The requirements in this section applicable to imports of Temple oranges during the period April 7 through September 14, 1969, are the same as those applicable to the handling of Temple oranges grown in Florida.

(j) The terms "U.S. No. 2," "U.S. No. 1," "U.S. Combination," and "diameter" shall have the same meaning as when used in the U.S. Standards for Oranges (Texas and States other than Florida, California, and Arizona) (§§ 51.680-51.712 of this title. When used in connection with Temple oranges, the terms "U.S. No. 2" and "diameter" shall have the same meaning as when used in the U.S. Standards for Florida Oranges and Tangelos (§§ 51.1140-51.1178 of this title).

Dated: March 14, 1969.

PAUL A. NICHOLSON,
 Deputy Director, Fruit and Vegetable Division, Consumer and Marketing Service.

[F.R. Doc. 69-3296; Filed, Mar. 18, 1969; 8:49 a.m.]

[7 CFR Part 1133]

MILK IN INLAND EMPIRE
 MARKETING AREA

Notice of Proposed Suspension of
 Certain Provisions of Order

Notice is hereby given that, pursuant to the provisions of the Agricultural Marketing Agreement Act of 1937, as amended (7 U.S.C. 601 et seq.), the suspension of certain provisions of the order regulating the handling of milk in the Inland Empire marketing area is being considered for the period through November 1969.

The provisions proposed to be suspended are:

1. In § 1133.71(f) the provision "except for the months specified below,"; and
2. In § 1133.71, paragraphs (g), (h), (i), (j), and (k) in their entirety.

The provisions being considered for suspension are those which would reduce by 30 cents per hundredweight the uniform price to be paid producers for milk delivered in each of the months of April through June to provide a fund to be used in increasing the uniform price to be paid producers in each of the months of September through November. These provisions do not affect the cost of milk to handlers and the suspension will not affect the annual level of returns to producers.

Suspension of the seasonal incentive payment plan provisions for the year 1969 was requested by the cooperative associations representing a substantial majority of the milk supply for the market.

The associations request that the seasonal incentive payment plan be inop-

erative for the remainder of 1969 to preclude it from overlapping with a Class I Base Plan for the market should such a plan be adopted during the year. A hearing to consider such a plan has been requested by the associations and other interested persons.

All persons who desire to submit written data, views, or arguments in connection with the proposed suspension should file the same with the Hearing Clerk, Room 112-A, Administration Building, U.S. Department of Agriculture, Washington, D.C. 20250, not later than 7 days from the date of publication of this notice in the FEDERAL REGISTER. All documents filed should be in quadruplicate.

All written submissions made pursuant to this notice will be made available for public inspection at the office of the Hearing Clerk during regular business hours (7 CFR 1.27(b)).

Signed at Washington, D.C., on March 14, 1969.

JOHN C. BLUM,
 Deputy Administrator,
 Regulatory Programs.

[F.R. Doc. 69-3295; Filed, Mar. 18, 1969; 8:49 a.m.]

DEPARTMENT OF
 TRANSPORTATION

Federal Highway Administration

[49 CFR Part 371]

[Docket No. 1-11; Notice 2]

MOTOR VEHICLE SAFETY
 STANDARDS

Rear Underride Protection; Trailers
 and Trucks With Gross Vehicle
 Weight Rating Over 10,000 Pounds

The Administrator of the Federal Highway Administration is considering rule making that would result in amending 49 CFR Part 371, Federal Motor Vehicle Safety Standards, by adding a new Standard: Rear Underride Protection—Trailers and Trucks With Gross Vehicle Weight Rating Over 10,000 Pounds. An advance notice of proposed rulemaking was published in the FEDERAL REGISTER of October 14, 1967 (32 F.R. 14279). Comments received in response to that advance notice have been carefully considered.

Responses to the advance notice and other information have confirmed that the underriding of rear ends of trucks and trailers by passenger vehicles in the course of a rear end collision constitutes a major hazard to life and limb of the occupants of the striking vehicle. The great majority of comments in response to the advance notice supported the need for rear underride protection. Accident reports indicate that rear end collisions in which underride occurs are much more likely to cause fatalities than collisions generally.

The proposed Standard requires that underride protection be provided but it

PROPOSED RULE MAKING

not be accomplished by means of identifiable member (an "Underride guard"), if the vehicle otherwise meets the configuration and strength requirements. The requirement of a specific member would raise difficulties of definition and application, such as the problem of describing the class of vehicles that by their inherent configuration do not need such a member. Instead, the proposed Standard requires that, at a height of no more than 18 inches from the road surface, the vehicle have a continuous structure that is capable of withstanding a large static load when tested at any one of three specified points. Vehicles such as heavy cargo trailers whose beds normally are above that level would be expected to meet the requirement by having a guard, while those vehicles such as moving vans whose rear ends are within 18 inches of the ground may meet the requirement by ascertaining that the structure at the lower edge of the rear end is capable of withstanding the specified test load.

It is recognized that the proposed Standard does not deal with possible safety hazards that may be caused by sharp protrusions at the rear of vehicles. It is furthermore, possible that since no minimum height or vertical configuration is specified for the guard line, a conforming guard may be attached that is so close to the ground that it is ineffective, since another vehicle could override it while underriding a higher rear structure. If these problems are found to be significant, they may be countered either with further elaboration of the Standard proposed herein or with a separate Standard in the area of bumper height and effectiveness (Dockets Nos. 1-9 and 1-10, 32 F.R. 14279). Comments are specifically invited in regard to these questions.

Several comments expressed concern that the installation of a guard would interfere with the freedom of operation of some large vehicles during off-road operations. The interests of safety dictate, however, that this protection should be present on public highways where there is extensive mingling of passenger cars with large vehicles. If necessary, the required structure may be made movable or removable for off-road operations.

It is anticipated that the proposed Standard will be amended, after technical studies have been completed, to extend the requirement for underride protection to the sides of large vehicles. It is also anticipated that mobile homes will not be included in the Standard. The Administrator is presently considering rule making that could declare them not to be "motor vehicles" within the coverage of the Act, or could put them into a separate category (Docket No. 26, 33 F.R. 11604).

Interested persons are invited to participate in the making of the proposed regulation by submitting written data, views, or arguments. Specific information and comments are particularly invited in regard to the cost of compliance. Comments should refer to the docket and notice number, and be submitted in 10

copies to: Docket Section, Federal Highway Administration, Room 513, 400 Sixth Street SW., Washington, D.C. 20591. All comments received before the close of business on June 2, 1969, will be considered by the Administrator. The proposal contained in this notice may be changed in light of comments received. All comments will be available in the docket at the above address for examination both before and after the closing date.

In consideration of the foregoing it is proposed to add to 49 CFR Part 371, Federal Motor Vehicle Safety Standards, a new Standard as set forth below. Because of the design and development work that may be necessary to provide economical compliance with this Standard, it is proposed to make it effective January 1, 1971.

This notice is issued under the authority of sections 103 and 119 of the National Traffic and Motor Vehicle Safety Act of 1966 (15 U.S.C. 1392, 1407), and the delegation of authority by the Secretary to the Federal Highway Administrator, 49 CFR Part 1, § 1.4(c).

Issued in Washington, D.C., on March 13, 1969.

JOHN R. JAMESON,
Deputy Federal
Highway Administrator.

REAR UNDERRIDE PROTECTION—TRAILERS AND TRUCKS WITH GROSS VEHICLE WEIGHT RATING OVER 10,000 POUNDS

S1. Purpose and scope. This standard establishes the requirement that the rear end of heavy vehicles be constructed so as to reduce the probability of underride in rear-end collisions.

S2. Applicability. This standard applies to trailers and to trucks. It does not, however, apply to pole trailers, truck tractors, or any vehicles with gross vehicle weight rating of 10,000 pounds or less.

S3. Definitions. "Rearmost part of the vehicle" means that point, on the portion of the vehicle that is not more than 66 inches above the road surface, that is farthest to the rear when the cargo doors, tailgates, or other closing devices are in the normal closed and locked position.

"Rear surface of the vehicle" means that portion of the exterior surface of the vehicle that would first be intersected by rays parallel to the direction of travel of the vehicle emanating from a source behind the vehicle.

"Guard line" means the lowest intersection of a horizontal plane with the rear surface of the vehicle that forms a continuous line that (1) extends to within 6 inches of each side of the vehicle and (2) has no portion more than 15 inches forward of the rearmost part of the vehicle.

S4. Requirements.

S4.1 Each vehicle shall have a guard line that is no more than 18 inches from the road surface when the vehicle is unloaded.

S4.2 Each vehicle shall be capable of meeting the displacement test of S5.

S5. Displacement test.

S5.1 Position the vehicle on a level surface, restrained to prevent forward, upward, or lateral motion.

S5.2 Prepare a test block of rigid material with a plane surface in the form of a square 4 inches on a side ("the surface").

S5.3 Position the test block so that—

(a) The surface is vertical and facing forward in the direction of travel of the vehicle,

(b) The lower edge of the surface is in the same horizontal plane as the guard line,

(c) The center of the surface is at any one of three points: 15 inches inboard from either side of the guard line, or at the center of the guard line, and

(d) The surface is in contact with the rear surface of the vehicle.

S5.4 Apply a static force of 75,000 pounds in the forward direction to the test block, parallel to the direction of travel of the vehicle, with the block restrained from lateral or vertical movement.

S5.6 Required result: The test block shall not move more than 15 inches forward of the rearmost part of the vehicle. Each vehicle must be capable of meeting the test at the three contact points (center and each side) specified in S5.3(c), but a given vehicle need not meet the requirements of this standard after being tested at one of those points.

[F.R. Doc. 69-3254; Filed, Mar. 18, 1969; 8:46 a.m.]

FEDERAL COMMUNICATIONS COMMISSION

[47 CFR Part 1]

[Docket No. 18479; FCC 69-220]

CONSOLIDATION OR MERGER OF DOMESTIC TELEGRAPH-CARRIERS

Certain Proceedings Categorized as Adjudication or Rule Making

1. Notice is hereby given that the Commission proposes to amend §§ 1.1203 and 1.1207 of the rules and regulations, which categorize certain proceedings either as adjudication or rule making. Under the proposed rules, set forth below, proceedings conducted under section 222 (b)-(d) of the Communications Act would be listed in § 1.1207 as rule making proceedings. Proceedings conducted under section 222 (b)-(d) concern the consolidation or merger of domestic telegraph carriers. These proceedings involve the approval or prescription of corporate or financial structures, facilities and services; they are prospective in effect; they turn primarily on questions of law and policy; and they can fairly and most effectively be considered under procedures governing the conduct of rule making proceedings.

2. Authority for adoption of the proposed rules is contained in sections 4 (i) and (j) and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. 154 (i) and (j) and 303(r), and in section 2(c) of the Administrative Procedure Act, 5 U.S.C. 551(c).

Truck Trailers
Manufacturers Association
Letter to NHTSA
Reminding Them
That Side Guards
Are Not
Cost-Effective

May 13, 2016

See the letter here: [https://www.regulations.gov/document?
D=NHTSA-2015-0118-0041](https://www.regulations.gov/document?D=NHTSA-2015-0118-0041)

Comprehensive
Underride
Consensus
Petition

September 2016

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Rocky Mount, North Carolina 27803
(432) 556-1567
mariannekarth@gmail.com
jkarth1@yahoo.com

September 23, 2016

Secretary Anthony Foxx, Administrator Mark Rosekind, Administrator Scott Darling
Department of Transportation
1200 New Jersey Ave. S.E.
Washington, DC 20590

Dear Secretary Foxx, Administrator Rosekind, and Administrator Darling:

On May 5, 2016, almost 100 people participated in an Underride Roundtable hosted by the Insurance Institute for Highway Safety at their Vehicle Research Center in Ruckersville, Virginia, with cosponsors Truck Safety Coalition and AnnaLeah & Mary for Truck Safety. Participants included researchers, safety advocacy groups, the trucking industry, truck trailer manufactures and government officials, including members of NHTSA staff.

Discussions during the meeting ranged from descriptions of the nature and magnitude of the underride problem to potential solutions including better conspicuity, new rear underride guard designs and the potential for side guards to prevent runovers of pedestrians and cyclists in urban environments, as well as prevention of side underride by passenger vehicles. Information shared during our meeting clearly illustrated the need to do more to address underride crashes as well as the possibility of doing so.

In light of the [tragic](#) and [unnecessary](#) countless [loss](#) of lives which [delays](#) in underride prevention have already cost, as well as the continued tragic and preventable loss of life sure to occur if decisive action is not taken now, we are hereby petitioning the DOT to take the following steps to mandate comprehensive underride protection:

1. NHTSA should immediately craft a final rule for **rear underride guards on semi-trailers** which will prevent underride and compartment intrusion when struck by a typical passenger vehicle (1500 kg/3307 lbs) and a typical SUV (2000 kg/4409 lbs) at initially at least 35 mph -- 30% offset and center impacts.
1. NHTSA should immediately issue a Notice of Proposed Rulemaking (NPRM) for **rear underride guards of Single Unit Trucks (SUTs)**, with the intent of aligning SUT and semi-trailer requirements.
2. NHTSA should immediately issue a Notice of Proposed Rulemaking (NPRM) for **semi-trailer and SUT side underride protection.**
3. NHTSA should immediately issue a Notice of Proposed Rulemaking (NPRM) for **heavy truck front underrun protection.**
4. In order to ensure that underride equipment is strong enough to allow the inherent crashworthiness of modern passenger vehicles to be realized, as well as to significantly

increase the survivable impact speeds through the energy absorption capability of the underride equipment itself, NHTSA should immediately issue a RFP to investigate, develop, and test such technology and update the standards accordingly.

5. NHTSA should thereafter conduct a **periodic review of underride standards every five years** in order to assess the need for changes in conjunction with advancements in technology and update the standards accordingly. This would include issuing additional RFPs to conduct research as needed.
6. FMCSA should take the necessary steps to enforce the requirement of **proper maintenance of underride guards** through annual safety inspection.

This petition has been carefully crafted with contributions from many concerned citizens and experts in this issue. The signatures below represent the support already gained for this petition. We will continue to gather signatures from others in the field, as well as launching an online petition to garner widespread support for the advancement of underride protection.

With gratitude for the efforts of your Department and entreaties for you to go further,

Stephen A. Batzer
Batzer Engineering, Inc.

Byron Bloch
Institute for Car Crash Justice

Jared Bryson
Virginia Tech Transportation Institute

Roy Crawford
R R Crawford Engineering, Inc.

Bruce Enz
Injury & Crash Analysis, LLC

Jeannette Holman-Price
The Jessica Campaign

Isaac Karth
AnnaLeah & Mary for Truck Safety

Jerry Karth
AnnaLeah & Mary for Truck Safety

Marianne Karth
AnnaLeah & Mary for Truck Safety

Aaron Kiefer
Accident Research Specialists

Lou Lombardo
Care for Crash Victims

Perry Ponder
Seven Hills Engineering

George Rechnitzer
George Rechnitzer & Associates Pty Ltd,

Andrew Young
Nuremberg, Paris, Heller & McCarthy

Clarification of the Requests in the Comprehensive Underride Consensus Petition

Rear Underride Protection on Semi-Trailers:

- The revised FMVSS 223 should require guards that are strong enough to allow the inherent crashworthiness of modern passenger vehicles to be realized. Specifically, guards should prevent underride and occupant compartment intrusion when struck by a typical passenger vehicle with an impact of at least 35 mph with overlaps ranging from 30 percent of the passenger vehicle's width to full overlap between passenger vehicle and truck trailer. Tests of trailers from Manac, Stoughton, Vanguard, and Wabash illustrate the practicability of providing the level of underride protection described above.

- The underride guard and trailer structure are a system. As such, compliance testing of rear impact guard strength should be conducted with the guard attached to the trailers and/or a portion of it that includes all structures to which the guard attaches.

- It was hoped that it would be possible to prescribe a regulatory test procedure based on quasi-static loading and minimum force levels that would lead to guards capable of providing the same or better level of underride protection as demonstrated by guards on Manac, Stoughton, Vanguard and Wabash trailers. However, study of this issue has shown that such a process is: a) not easily done; and b) would not definitively provide a valid comparison.

- Therefore, the revised FMVSS 223 should require dynamic crash testing of any new guard design to verify that it meets upgraded requirements.

- In order to create a standard which is attainable by every trailer manufacturer – both the large ones, who would have the option of designing their own guard, as well as the small manufacturers, who might find it financially difficult to design their own guard, NHTSA should issue a Request for Proposals (RFP) by means of which they would fund the development of a [generic](#) rear underride guard (as was done by the Canadian Transportation Equipment Association [CTEA] in 2000. This process could be completed prior to an implementation for the updated rear guard rule.

- It should be noted that many entities would be qualified to respond to such an RFP. [Virginia Tech](#) is a prime example of an engineering school which was able to work on such a project, as well as numerous other engineering schools or engineers – many of whom have already done such research or would be eager and qualified to do so. (In fact, there is international interest in this issue as the First International Road Safety Conference has approved an abstract related to underride research for presentation in San Francisco in June 2017.)

- Because the research undertaken by the IIHS has shown that improved guards are both possible and more effective, this rulemaking should be moved forward as quickly as possible to save lives.

Underride Protection on Single Unit Trucks:

- 10.** People die every year from preventable underride crashes with Single Unit Trucks.

11. No meaningful regulatory change has occurred since 1953 to address this problem.
12. NHTSA's [cost/benefit analysis](#), as outlined in the ANPRM, is flawed. If the best possible underride protection is required, the cost will not be [prohibitive](#), and the benefits of saved lives will be beyond measure.
13. Move the rulemaking process for underride protection on **Single Unit Trucks** to the next step immediately and issue a Notice of Proposed Rule Making (NPRM).
14. NHTSA should require SUTs to have the same underride protection which is required of semi-trailers.
15. If a company manufactures a type of SUT which they can show does not allow underride (under the required conditions) – even without an underride guard per se, then they may ask NHTSA to review their circumstances for a potential exemption.

Underride Protection on the Sides of Large Trucks:

1. Since [1969](#), DOT has been aware of the problem of side underride fatalities and has intended to extend underride protection to the sides of large trucks.
2. NHTSA's own FARS data [documents](#) the problem of 1534 side underride fatalities between 1994 and 2014 (1715 rear underride fatalities).
3. Crash reconstructionists are well aware of the side underride [problem](#) based on their own crash investigations.
4. Engineers have designed “side guards” and proven their effectiveness in crash tests. Plans are underway for Airflow Deflector (who currently installs “side guards” on city trucks in Boston and New York) to produce and market a new side guard, [Angel Wing](#). The Angel Wing has already been successfully crash tested by its inventor, Perry Ponder, an engineer/crash reconstructionist, who plans to have it tested by the IIHS as soon as possible.
5. Thus, there will soon be a viable “side guard” option on the market. It is anticipated that other market-driven alternatives would quickly become available and a rulemaking on “side guards” would obviously hasten that process and contribute to preventing tragic deaths which would otherwise occur due to delays in the implementation of needed underride protection.
6. Therefore, NHTSA should immediately issue a Notice of Proposed Rulemaking (NPRM) in order to [extend](#) underride protection to the [sides](#) of semi-trailers and SUTs.
7. NHTSA should also immediately issue a Request for Proposals (RFP) to establish the appropriateness of the following recommended “side guard” specifications:
 - Guard Size, Shape, and Position Requirements:
 1. Must cover and protect from pedestrian, cyclist, and passenger vehicle intrusion,

at minimum, the area between a semitrailer's landing gear and the forward edge of the rear tires when the semitrailer axle(s) are positioned in their furthest forward position.

2. Must cover and protect from pedestrian, cyclist, and passenger vehicle intrusion, at minimum, the area between a single unit truck's forward edge of the cargo carrying portion rearward to the forward edge of the rear wheels.
 3. Must be constructed to direct a vulnerable road user (VRU), such as a cyclist or pedestrian, out and away from the underside of the vehicle in order to prevent contact with the rear tires.
 4. Must be composed of a smooth, flat exterior surface that cannot snag, catch, or entangle a vulnerable road user such as a cyclist or pedestrian.
 5. Must be positioned vertically from the lower edge of the trailer/truck box to within 1.25 feet of the roadway surface.
 6. Must not extend the length or width of a vehicle beyond the current 3" safety equipment tolerance.
- Guard Strength Requirements:

Must be sufficiently strong to prevent a mid-sized passenger sedan (3,000 lb nominal weight) traveling at 35 mph from intruding beneath the truck/trailer structure sufficiently to create measurable passenger compartment intrusion (PCI).
 - Guard Certification:
 1. VRU performance should be certified by snag/drag tests to simulate cyclist and pedestrian encounters in an urban setting.
 2. Vehicle performance should be certified via 35 mph crash tests at 90 degree and 45 degree approach angles with respect to the trailer body.

Underride/Override Protection on the Front of Large Trucks:

Initiate rulemaking on **front override protection** by immediately issuing a Notice of Proposed Rule Making (NPRM).

1. *An EU requirement was introduced in 2000 based on ECE Regulation 93 requiring mandatory rigid front underrun protection defining a rigid front underrun protection system for trucks with a gross weight over 3.5 tonnes Directive 2000/40/EEC. Studies performed by EEVC WG 14 have shown that passenger cars can 'survive' a frontal truck collision with a relative speed of 75 km/h if the truck is equipped with an energy absorbing underrun protection system. Furthermore, these systems could reduce about 1,176 deaths and 23,660 seriously injured car occupants in Europe per year. Research shows that the benefits of a mandatory specification for energy absorbing front underrun protection would exceed the costs, even if the safety effect of these measures was as low as 5%. European Commission: Front Underrun Protection Systems [Note: 75 kmh = 46.6028 mph]*

2. Front guards must have 3 levels of resistance; soft front for pedestrians and cyclists, middle area must be softer than the partner vehicle in crashes and able to absorb energy such as through crush, and rear area must be strong and stiff enough to resist underride and rotate high-speed vehicles away from the truck. Extend the front guard from the truck 600 mm (2 feet) to give room for a 500 mm (1.6 feet) radius curve to deflect crash partners including VRU and cars. The extra 600 mm should give 102 km/h or (63 mph) of protection which would exceed a general goal of 60 mph (100 km/h) -- an average speed for highway crashes in the real world.
3. NHTSA should immediately issue an RFP to identify the appropriate requirements for a [front underrun protection](#) standard.

Periodic Review of Underride Standards:

1. In light of the long-term awareness of underride deaths as well as the advancement of technology along with research for viable solutions, NHTSA should immediately issue a Request for Proposals (RFP) and fund the research and design of a high capacity rear underride barrier prototype for the development of a generic guard which would demonstrate successful prevention of underride and protection against severe passenger injury at high impact capacity (62 mph) in two categories:
 - a. with energy absorption, including solutions which have been proposed [internationally](#) —both in Germany (Energy absorbing underrun protection [crash structures](#) on commercial vehicles have to become standard, as they are on passenger cars for decades). and Australia (through the use of [inflatable large airbags](#) on the front and rear of trucks), and in the United States (one example of this is a [proposal](#) which has been submitted for the development of an energy absorption solution) to significantly increase the survivable impact speeds.
 - b. without energy absorption.
2. The results of this research should then be evaluated and the underride standards should be upgraded as appropriate to provide the best probable underride protection.
3. Thereafter, conduct a periodic review of underride standards every five years in order to assess the need for changes in conjunction with advancements in technology and update the standards accordingly.
4. Additionally, this periodic review should include appropriate [cross-border](#) collaboration with Transport of Canada.
5. *AnnaLeah & Mary for Truck Safety* intends to organize additional Underride Roundtables and to advocate for an International Underride Task Force to convene and [cooperate](#) with the Department of Transportation.

September 23, 2016

Enforcement of Proper Maintenance of Truck Underride Guards

After finding out that the American Trucking Associations (ATA) was hosting a Technicians' Conference in Raleigh, September 18-21, I looked into the possibility of attending because I live nearby. In particular, I was intrigued by the Task Force on Rear Underride Guard Repair to be held on September 19 from 10 to 10:30 a.m. Hosted by Gary Fenton (Stoughton Trailers).

I found out that the registration fee was \$775 (which meant that I was **not** going). But I contacted Gary Fenton (with whom I had had previous conversations), and he sent me the documents which were going to be discussed: [Recommended Practice](#) (RP) 732, Trailer Rear Impact Guard Repair Guidelines, and proposed modifications of the [Guidelines](#). (See attachments.)

I printed off the documents, stuck them in a binder, and took off on a road trip with my husband Jerry. As we were traveling, we, of course, noticed the condition of the RIGs (Rear Impact Guards) which we saw on the multitude of trailers on the road.

The first thing which we talked about was our Comprehensive Underride Consensus Petition which we are refining and for which we are getting ready to seek support before submitting it to NHTSA to request major improvement in underride protection.

After we satisfactorily brainstormed some options to share with NHTSA, we turned our attention to identifying the areas of need for which we could petition the Federal Motor Safety Carrier Administration (FMCSA) related to underride protection, including:

- improved parking options for trucks; and
- enforcement of the requirements for [proper maintenance](#) of the rear underride guards.

We discussed the apparent lack of RIG maintenance that we could easily detect by simple observation with our untrained eyes. Of course, we had additional motivations due to concerns about the maintenance of the guard which failed to prevent our daughters' deaths due to truck underride. On top of that (as if that were not enough), we had witnessed a crash test earlier in the year in which a poorly-maintained RIG flew off upon impact.

We are well-aware that, although there are specific requirements for RIG maintenance, FMCSA reportedly does not have the funds and personnel to oversee the enforcement of this essential mandate adequately. We determined to come up with a way to solve this problem. After all, if nothing is done to change this situation, then nothing will change in the number of people who die due to poorly-maintained RIGs. And that is just not acceptable!

To back up a minute, we considered what might be the cause of damaged guards: namely regular contact with loading docks and collisions with other vehicles. One would assume that if a trailer were in a reported crash, it would be inspected for needed repairs. But, if a trailer suffered damage from bumping into a loading dock, who would notice it or do anything about it?

The first solution which we came up with was a plan to have FMCSA develop maintenance inspection training protocol with which every shipper would be required to train their employees. So every time a truck is loaded, an employee would be required to inspect the RIG for needed repairs. They would complete and submit a form to FMCSA for a violation and/or they would refuse to load the truck until necessary repairs were made. In other words, the truck would not go back on the road to make a

delivery until it was safe to do so.

Then we drove a little further and came up with a second option. The FMCSA would provide training and certification to private sector motor vehicle safety inspectors in the proper inspection of commercial motor vehicle underride equipment. These trucks would have to pass an annual underride equipment safety inspection.

In fact, the ATA's Technology & Maintenance Council (TMC) Recommended Practice (RP) 732, VMRS 077, Trailer Rear Impact Guard Repair Guidelines, “serves as a guide for the proper inspection and repair of trailer impact guards.”

Furthermore, this RP notes that,

Rear impact guards should be regularly inspected for cracked welds, cracked or fractured vertical members. Cuts and tears in any member for dimensional integrity. Trailer manufacturers may add bracing such as diagonal struts running from the center of the horizontal member to the vertical supports.

NOTE: FMCSR 393.86, which became effective on October 1, 1999 [the very day that Mary Lydia Karth was baptized in Grand Rapids, Michigan, 13 years before her underride death], requires that equipment users maintain the underride guard in a close-to-like new condition. This, in part, means that it should not deviate improperly from the dimensions given in Figure 1.

If underride guards had to pass this kind of inspection every year – just like the annual auto safety inspection – and get a tag to prove it, then we could ensure that trailers with guards in disrepair are pulled off the road until they are repaired or replaced.

We later found out from a truck driver acquaintance that, although he is required to have an annual safety inspection of his trailer by a certified safety inspection facility and prove it with a tag, the only thing that is made note of regarding the rear underride guard is that there is one installed. This verified our observation, from the Annual Vehicle Inspection Form which I bought from a truck stop, that because “Underride Guard” is not even listed on the inspection form, its condition is not thoroughly evaluated on a regular basis.

In a perfect world, no one would have to force trucking companies to take care of this; they would voluntarily ensure that their equipment was kept in the proper condition so as to not endanger others.

Therefore, we are petitioning FMCSA to enforce their requirement for the [proper maintenance](#) of rear underride guards, [FMCSR 393.86](#) by,

- 16.** The provision of procedures for training and certification of both public and private sector safety inspectors in **thorough inspection** of underride equipment.
- 17.** The utilization of truck underride guard inspection forms and annual tags for verification of underride equipment safety inspection—based on updated RP 732.
- 18.** The administration of a system for reporting violations of this requirement (along with a fee), including a digital photo taken of the guard at the time of inspection, and a mandate/provision to take the truck/trailer off the road (Out of Service) until the guard is properly repaired.

1st International Roadside Safety Conference (IRSC) Abstract Acceptance

September 2, 2016

Dear Marianne Karth,

Submission Reference Number: 0824-000101

Submission Title: Promising Research for Improved Heavy Vehicle Underride Prevention Structures and Data to Demonstrate Boundaries of Occupant Survivability in Collisions Between Large Trucks and Passenger Vehicles

Congratulations!

The Planning Group for TRB's First International Roadside Safety Conference appreciates your submission of the abstract entitled Promising Research for Improved Heavy Vehicle Underride Prevention Structures and Data to Demonstrate Boundaries of Occupant Survivability in Collisions Between Large Trucks and Passenger Vehicles. We are pleased to inform you that we have selected your abstract for Presentation and Publication.

If for presentation only, please upload a revised/annotated abstract (one page maximum) for inclusion in the conference electronic circular, using any comments received from the reviewers, as noted below. If for presentation and publication, please upload your paper, including a revised abstract, based on any comments provided by the reviewers, as noted below.

To accept your invitation for presentation and publication of "Promising Research for Improved Heavy Vehicle Underride Prevention Structures and Data to Demonstrate Boundaries of Occupant Survivability in Collisions Between Large Trucks and Passenger Vehicles", please use the following link:

If you have any questions about TRB's First International Roadside Safety Conference, please feel free to contact Stephen Maher smaher@nas.edu or Mr. Ron Faller faller1@unl.edu by email.

Thank you,

Stephen F. Maher, M.S.E., P.E.
Associate Division Director – Design Engineer
Technical Activities Division
Transportation Research Board

Promising Research for Improved Heavy Vehicle Underride Prevention Structures And Data to Demonstrate Boundaries of Occupant Survivability in Collisions between Large Trucks with Passenger Vehicles and other Vulnerable Road Users (VRUs)

Current truck underride (front, back and sideguard) regulations too often do not prevent underride crashes – which led to 228 recorded crash fatalities in the U.S. in 2014. The same year, 310 pedestrians and 39 bicyclists were fatally injured in motor vehicle collisions in Canada. Of these collisions, heavy trucks were involved in 35 pedestrian fatalities and seven cyclist fatalities.

After losing our two youngest daughters, AnnaLeah (17) and Mary (13), due to a truck underride crash on May 4, 2013, our family has taken on the goal of improving the regulatory and voluntary standards for currently weak, ineffective and sometimes absent front, back and sideguards. On May 5, 2016, we were co-sponsors, with IIHS and Truck Safety Coalition, of an Underride Roundtable.

One of the presenting groups was a Virginia Tech Engineering Senior Underride Design Team. Their students were enthusiastic about a goal which engaged them in a life-saving pursuit. Together with students and professionals, we have taken on the challenge to surpass the current U.S. and Canadian standards. While front, back and sideguards have existed for decades outside of North America, research and development into these lifesaving features is in its infancy in the U.S., Canada and Mexico.

It is anticipated that global harmonization of underride protection standards would be furthered by this invaluable research.

**See Part 2
of Side Guard Petition Book
for more information
on this issue.**