

AMERICAN  
TRUCKING  
ASSOCIATIONS, INC.

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PRESIDENT  
Bennett C. Whitlock, Jr.  
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June 30, 1982

Mr. Charles J. Calvin  
President  
Truck Trailer Manufacturers Association  
1020 Princess Street  
Alexandria, VA 22314

Dear Charlie:

ATA is concerned about TTMA's consideration of an underride guard recommended practice (RP) patterned after NHTSA's proposal for such equipment. The financial impact of this type of guideline on our industry, particularly when life cycle costs are considered, would be very great. Further, we fear that such an action will breed many more legal problems than it may solve. We urge you to reconsider such plans.

Action of this type contradicts the sound and logical response TTMA made to NHTSA docket 1-11, Notice 8. There you echoed virtually the entire motor vehicle transportation industry by opposing an underride regulation. As we understand it, the change in thinking among trailer builders stems from concern about product liability. We are cognizant of, and sympathetic to, the plight of manufacturers who must confront such issues. In spite of that, however, underride accident data shows there is such a small number of these type of events that the entire motor carrier industry should not be heavily penalized because of them. Truck operators also confront liability issues and, in addition, they must consider the certainty of increased costs if either the government's proposed rule or a TTMA RP similar to it is made final. This expense could reach over \$300 million for trailers alone, and there would be more cost for equipping and maintaining straight trucks (see attached). In addition the government, despite industry pleas to the contrary, views conspicuity as complementary to an underride rule, not a substitute for it. Here carriers could be facing another \$600 million in costs if the government acts to change vehicle illumination.

ATA objected to the proposed underride guard rule on the ground that its costs outweighed the benefits to society. In 1977 DOT terminated rulemaking for such equipment when they determined that it would cost \$500 million to save 50-100 lives per year. Yet in 1981 a rule was again proposed which would allegedly save 29-58 lives at the high costs we have estimated. Society cannot afford to pay such a heavy price for minimal socioeconomic gains. Nor should we, as an industry, be expected to continually pass on the cost of ill-conceived, expensive and ineffectual rules to an increasingly economically beset consumer.

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WP- 16338  
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Along with higher purchase and maintenance costs, we fear that an industry originated standard will create many more legal problems in the future for all of us. Such an RP, especially if it is similar to the government's proposed rule, does not merely develop standardized test procedures or ensure equipment compatibility. Rather, it establishes a design through specifying strength, size, and location, which will be designated as the best industry practice available.

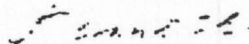
While adoption of such an RP may make it easy to show, through compliance testing, that any particular guard does perform in an approved way, it also creates several questions both practical and legal in nature such as: 1) retroactivity--will fleets have to upgrade their old trailers to avoid liability when struck in the rear through the fault of others?; 2) Can fleets fix tandems to the rear and use no underride guards at all, as the government would allow?; 3) If a fleet or truck body manufacturer installs a field fabricated guard, who will certify it meets the RP?; 4) Will fleets be able to spec "no guard" or "current BMCS" guard?; and 5) Will the door be open to competitive underride prevention devices; and if not, does a TTMA RP in effect constitute an attempt to monopolize the market thereby having serious anti-trust implications?

Such questions may not be of immediate concern, but they will surely arise as a result of TTMA establishing an "industry standard." Here the carrier's concern over his liability involves being able to show his equipment meets the best the industry can do as indicated by the RP.

Because of the staggering costs involved with purchase and maintenance of underride equipment which would meet the current government proposals and in light of the many legal questions involved, we urge TTMA to defer action on this RP until such time as the government acts on their proposed rule.

ATA's position on underride guards has been developed by our Technical Advisory Group. If you have any questions on this position, please contact ATA Director of Engineering, Larry Strawhorn, at 797-5331.

Sincerely,



Bennett C. Whitlock, Jr.

Attachment

WP-16339  
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## DESCRIPTION & COST ESTIMATE

### Part I - Those Proposals With A, Good Chance Of Becoming Final Rules

#### Improved Underride Guard

Proposed rulemaking, Docket: NHTSA 1-11, Notice 8; and BMCS Docket MC-77. Would apply to newly manufactured trailers and trucks over 10,000 lbs. GVW. Many trailers would be exempt, but type and number not determined. Assuming a final rule is published in 1983 it would become effective in 1985. The proposed rule would lower guard to within 21" of the ground and extend it across rear of vehicle to within 4" of each side.

#### COST IMPACT SUMMARY

<u>Time Frame</u>	<u>New Guard</u>	<u>Existing Guard</u>	<u>Difference</u>
1st year costs	178.6 million	8.9 million	169.7 million
8 years to equip trailers	325 million	33.8 million	291.2 million
14 1/2 years to equip trucks	2.0 billion	68.6 million	1.93 billion
TOTAL COST over years required to equip all affected vehicles	2.3 billion	102.4 million	2.2 billion

#### CALCULATIONS:

Comparison of improved guard with current guard is shown below:

<u>Characteristic</u>	<u>Improved Guard</u>	<u>Current<sup>3</sup> Guard</u>	<u>Increment over Existing Guard</u>
Cost in 1980 \$:			
Trailers	\$150 <sup>1</sup>	23.00	127.00
Trucks	\$600 <sup>2</sup>	23.00	577.00
Weight, lbs.	120 <sup>1</sup>	41.5	78.5

The total cost to the industry is made up of:

1. Initial cost and interest.

<sup>1</sup>Letter, Truck Trailer Manufacturers Association, subject: Estimated Cost of Rear Underride Guard and Supporting Structure, February 22, 1982.

<sup>2</sup>Comment 01-11-NPRM-08-077, Truck Body and Equipment Association.

<sup>3</sup>"Alternate Approaches for Truck Underride Guard Protection," Pioneer Engineering and Manufacturing Co., Corporate Tech. Planning, Inc., October 1980.

2. Increased fuel consumption due to added weight.
3. Loss of revenue due to cargo displaced by weight.
4. Cost of repairs.

r 1: Initial cost to equip trucks = 179,000 x \$600 =	\$107,400,000
Initial cost to equip trailers = 160,000 x \$150 =	24,000,000
(Number of affected vehicles taken from Appendix B)	
TOTAL	131,400,000
Plus interest @ 15%/year for first year	19,710,000
TOTAL INITIAL COST	<u>\$151,110,000</u>

For 2: Increased fuel consumption, based on Murphy<sup>4</sup>, and fuel at \$1.44/gal.  
(Appendix C).

$$\begin{aligned}
 \Delta \text{gpm} &= .00000145 \times \Delta \text{GCW} = .00000145 \times 78.5 \\
 &= .000113 \text{ gpm} \times \$1.44/\text{gal.} = \$0.00016/\text{mi.} \times 120,000 \text{ mi/yr per truck or} \\
 &\quad \text{trailer.} \\
 &= \$19.20 \text{ per truck/trailer per year} \times (179,000 + 160,000) \\
 &= \$6,508,800
 \end{aligned}$$

For 3: Loss of revenue is also based on Murphy.

$$\text{SS} = \frac{\text{CPM} \times \text{M} \times \text{T}/100 \times \text{L} \times \left(1 - \frac{\text{ROI}}{100} - \frac{\text{IR}}{100}\right) \text{P}}{\text{PL}}$$

PL

Where:

$$\begin{aligned}
 \text{SS} &= \text{Dollars saved per vehicle.} \\
 \text{CPM} &= \text{Cost to operate vehicle, \$/mile} = 1.12. \\
 \text{M} &= \text{Annual mileage.} \\
 \text{T} &= \text{Percent. of trips @ full gross weight (Murphy 8\%, Taylor \& Ludke,} \\
 &\quad \text{6\%. Use 6\% to be conservative).} \\
 \text{L} &= \text{Useful Life} = 5 \text{ years (conservative).} \\
 \text{ROI} &= \text{Return on investment} = 20\% \text{ after Murphy.} \\
 \text{IR} &= \text{Interest Rate} = 10\% \\
 \text{P} &= \text{Weight saved, lbs.} = 78.5 \text{ lbs.} \\
 \text{PL} &= \text{Payload (50,000 lbs., Murphy; 47,500 lbs. Taylor \& Ludke) (use 50,000} \\
 &\quad \text{lbs. to be conservative).} \\
 \text{SS} &= \frac{1.12 \times 120,000 \times .06 \times 5 \times (1 - .20 - .10) 78.5}{50,000} = 44.31
 \end{aligned}$$

$$\$44.31 \times 339,000 \text{ vehicles} = \$15,021,659$$

<sup>4</sup> Murphy, R.W., "Improvement in Fuel Economy and Productivity Through Use of Light-weight Components in Heavy Duty Highway Trucks," Proceedings of the First International Auto. Fuel Economy Research Con., Washington, D.C. 10/31-11/2, 1979.



For 4: The BNCS has estimated that there are 40,000 collisions annually in which an auto strikes the rear of a truck. A cost of \$300 is used for repair costs. Assume that in only 50% of the cases is a \$300 repair required. Then  $20,000 \times \$300 = \$6,000,000$ .

Subtotals:

1. Initial cost.	\$151,110,000
2. Cost of fuel used to carry additional weight.	6,508,800
3. Loss of revenue due to cargo displaced by weight of guard.	15,021,659
4. Cost of repairs.	<u>6,000,000</u>
TOTAL COST FIRST YEAR:	\$178,639,000

Cost over 8 years to equip total trailer population:

Initial Cost = \$24,000,000.  
Interest = \$3,600,000.  
Cost of fuel  $\$19.20 \times 160,000 = \$3,072,000$ .  
Loss of revenue =  $\$44.31 \times 160,000 = \$7,089,600$ .  
Cost of repairs =  $40,000 \times \frac{160,000}{160,000 + 179,000} \times .5 \times \$300 = \$2,832,000$ .

Total annual cost for trailers = \$40,593,000.

Cost for eight years is  $\$324,744,000 \approx \$325,000,000$ .

Annual cost for trucks is  $\$178,639,000 - \$40,593,000 = \$138,046,000$ .

For 14½ years the total cost to the industry would be \$2,001,667,000.

Total cost over all the years required to equip all affected trucks and trailers = \$2.3 billion.

In this same time frame, the cost of the existing guard would be, using same number of vehicles:

1st year -  $\$23 \times 160,000 = \$3,680,000$  for trailers  
 $\$23 \times 179,000 = \$4,117,000$  for trucks

Interest - trailers = \$552,000  
              trucks = \$617,550

Total annual cost - trailers = \$4,232,000  
                                  trucks = \$4,734,000

<sup>5</sup>Buch, Eugene, et. al., "Performance Upgrading of Commercial Vehicle Rear Underride Guards," Texas Transportation Institute, September 1980.

Informal Fruehauf estimate of repair cost to trailer frame rails and improved guard resulting from 30 mph impact by a VW Rabbit.

Cost of fuel consumed and cost of displaced freight is not calculated because the calculations for the improved guard were for the weight increment above the existing guard.

Cost over 8 years for trailer population =  $\$4,232,000 \times 8 = \$33,856,000$ . For  $14\frac{1}{2}$  years for trucks cost would be  $\$68,643,000$ . Total cost =  $\$102,499,000 \approx 3,000,000$ .

Cost to equip trailer and truck populations over the years required to effect this improvement is then  $\$2,140,000,000 - \$103,000,000 = \$2,037,000,000$ .

WP- 16343  
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