

In our attempt to show that there are no data presently available with which valid comparison can be made between all classes of trucks or between trucks and passenger cars, we attached to our statement a portion of a paper "Truck Accidents and Traffic Safety—An Overview" which was presented at the National Midyear meeting of the Society of Automotive Engineers in May, 1968 by Dr. Robert A. Wolf of Cornell Aeronautical Laboratory.

Our purpose in presenting Dr. Wolf's paper was to illustrate the point that there are not available today any figures which will permit a valid comparison between accident statistics of different classes of vehicles on a common basis. Dr. Wolf was pointing up the need for such a comparison and suggesting a method that might be helpful along these lines.

Congressman Edmondson in attempting to understand some of the comparisons contained in the Wolf paper, asked two specific questions. These were: (1) "What accounts in your mind for this (I.C.C. group) driver fatality rate being pretty close to the general fleet, while the accident involvement is only about one-fifth of the general fleet?" (2) "Would you comment on that, on why a truck's size would produce a greater severity of accidents and the 'other' people killed ratio, that is pretty close to three times as high as the general fleet record?"

The specific statement questioned by Congressman Edmondson in his first question can be confusing. Dr. Wolf says: "In comparing the general truck fleet with the special I.C.C. carrier group it is noted that the driver fatality rate of 2.25 per 100 MVM (Million Vehicle Miles) for the I.C.C. group corresponds very closely with the 2.6 rate for the general fleet by the MSS method." He then goes on to say: "The equality of the common carrier driver fatality rate with the industry average is an enigma to the author—it may be that the greater speeds and greater severity of accident patterns in intercity travel overshadow some of the other factors of urban accidents even though there is preponderance of trucking operations in intrastate and urban travel."

The I.C.C. truck driver fatality rate of 2.25 per 100 MVM was established from the I.C.C. data on intercity truck combinations and their mileage as reported by the involved motor carriers. Each driver involved in these reports operates 70 to 80 thousand miles annually compared to the average 11,000 miles annually operated by each driver in the total U.S. truck fleet. This means that the I.C.C. intercity driver has an exposure about 7 times greater than that of the driver in the total U.S. truck fleet. We believe that this exposure factor per driver, which is not taken into consideration in Dr. Wolf's Measure of Systems Safety, explains the comparability of the two rates and that the record of the I.C.C. intercity driver is 5 to 7 times better than that of the average driver in the total U.S. truck fleet.

Accidents generally, involving vehicles of all types, passenger cars, buses and trucks, tend to be more severe on rural roads than on urban streets. In 1966, for example, the number of fatalities resulting from motor vehicle accidents occurring in rural areas was more than twice the number occurring in urban areas. The respective figures were 36,800 rural accident deaths compared to 16,200 urban accident deaths. This despite the fact that urban drivers have the added hazard of many more pedestrians to contend with. Total miles run by all vehicles in urban and rural areas are about equal. Thus the ratio of deaths per 100 million vehicle miles is much greater in rural areas than it is in urban areas. One of the prime reasons for the higher fatality rate on rural highways is, of course, the higher sustained speeds of traffic for all vehicles on these highways as compared to city streets. I.C.C. carriers run a much higher percentage of their miles on rural roads than do trucks in general. This would tend to raise their fatality rate above the general average for all trucks. There are other factors too which tend in this direction. Night driving is relatively more hazardous than is day driving. More than half of all motor vehicle deaths in 1966, 28,200, occurred at night compared with 24,800 in daylight. Here again the I.C.C. driver has much greater exposure since he spends a higher percentage of his time on the road at night.

With regard to the statement on page 16 of Dr. Wolf's paper that the average number of "other" people killed per I.C.C. driver killed is 5.93 compared to the general truck fleet record of 2.19 we point out the following facts.

1. The intercity truck combination design is such that in most collisions with passenger cars the total impact is below the position of the truck driver as he sits in his cab. This results in very few truck driver fatalities in such collisions. This is illustrated by the Bureau of Motor Carrier Safety Report of 1966 I.C.C. truck accidents which shows that in 13,575 car-truck collisions only 25 truck drivers were injured fatally while 964 fatalities resulted to the car drivers and