

Public Works and  
Government Services Canada



Travaux publics et Services  
gouvernementaux Canada

**TRANSLATION BUREAU  
MULTILINGUAL TRANSLATION  
DIRECTORATE**

**BUREAU DE LA TRADUCTION  
DIRECTION DE LA TRADUCTION  
MULTILINGUE**

## **SWOV – Dutch Road Safety Research Institute<sup>1</sup>**

*SWOV Newsletter No. 69, December 1996*

### **Closed Sideguards on Trucks: Less Fuel Consumption for Trucks, Safer Feeling for Vulnerable Road Users**

#### **Introduction**

The installation of closed sideguards on trucks may generate fuel savings of 4 to 5%. The savings for trucks and trailers is 1 to 2%. This came out of a demonstration project whereby closed sideguards were installed on 28 trucks with closed platforms and on 14 trailer truck combinations of Van Gend & Loos, a transport company of. The test was evaluated by SWOV under the authority of the Transport Research Centre of the Ministry of Waterways and Public Works (R-96-24).

The results of the research can be used to stimulate the interest of companies for the voluntary acquisition of closed sideguards. As of 1 January 1995, only open closed sideguards for new trucks is compulsory. Because of the design and the larger surface being protected, it is assumed that closed sideguards are more efficient for road safety. What is at stake here actually is a reduction of the number of victims that end up under the wheels of trucks every year. In 1995, as a result of side collision with trucks, over 30 persons lost their lives and 80 were severely injured, among them motorbikers, cyclists and pedestrians.

#### **Practical Test**

The main point of the research was the finding that the presence of sideguards was helping to save fuel. To this end, fuel consumption was recorded over a period of six months by Van Gend & Loos for vehicles equipped with sideguards and for vehicles that were part of a control group. At the same time, the TNO<sup>2</sup> Institute for Road Transportation carried out separate measurement under conditioned circumstances on a truck and attached trailer and on a curtain slider truck.

---

<sup>1</sup> SWOV = Stichting Wetenschappelijk Onderzoek Verkeersveiligheid = Road Safety Research Institute ([http://www.swov.nl/index\\_uk.htm](http://www.swov.nl/index_uk.htm))

<sup>2</sup> TNO = Nederlandse Organisatie voor Toegepast Natuurwetenschappelijk Onderzoek = Netherlands Organization for Applied Scientific Research (<http://www.tno.nl/index.cfm?Taal=2>)

The test was aimed at gaining practical experience with the mounting, maintenance and possible damages and accidents with the vehicles in question. Furthermore, the project included a field test to determine the feeling of safety (subjective safety) of cyclists and pedestrians with regard to trucks equipped with sideguards.

### **Drivers Satisfied**

The drivers of curtain slider trucks were satisfied with the closed sideguards. Ninety percent of them found that such sideguards were beneficial to the safety of vulnerable traffic participants. They also stated that there appeared to be less spray mist on the side of their trucks in rainy weather and on a wet road surface; only one single driver mentioned an increase of the side wind sensitivity.

Companies where trucks were under maintenance stated that as their trucks were equipped with folding sideguards, they did not notice any cost increase for repairs and maintenance.

### **The Consequences for Slow Traffic**

The practical test aimed at determining the feeling of safety for cyclists and pedestrians showed that three-quarters of interviewed users found that the situation felt somewhat safer. It is striking indeed to see that one quarter of the interviewed cyclists and pedestrians had noticed the (closed) sideguards on the trailer.

### **Effect on Road Safety**

Based on the ricochet dynamics, one may expect that the efficiency of closed sideguards is greater than for the open one. However, there is a lack of hard figures. After a while, it will be possible to determine the efficiency of the open sideguards. This protection, which has been compulsory for new trucks since 1 January 1995, will be found on approximately half of the trucking fleet in the Netherlands by the year 2000. Then it will be possible to figure out how many victims this structure has permitted to save.

For the time being, the findings of the research can be used to interest companies in the voluntary acquisition of closed sideguards.

Source:

[http://www.swov.nl/nl/research/swovschrift/inhoud/069/gesloten zijfscherming op vrachtauto s m inder brandstofverbruik en een veiliger gevoel voor het langzaam verkeer.htm](http://www.swov.nl/nl/research/swovschrift/inhoud/069/gesloten_zijfscherming_op_vrachtauto_s_m_inder_brandstofverbruik_en_een_veiliger_gevoel_voor_het_langzaam_verkeer.htm)