

TO: Ministry of Transport and Communications
ATT: John-Arild Jenssen
FROM: Norwegian Hauliers Assosiation
DATE: 1st November 2005

SUBJECT: Norwegian driving conditions and lengths of Norwegian roadtrains

Referring to our meeting on Monday we would like to compare roadtrains, typical in Norway, with roadtrains typical to the EU. In addition, we refer to the powerpoint illustration (enclosed) that shows one typical problem going on and off ferries with the different roadtrains. As you are well aware of, there are many ferries used by heavy goods vehicles in Norway.

The illustration shows one of many examples of accidents that may occur when driving with a typical EU road train on certain roads in Norway. The accident in the example occurs as a result of the construction of the road train, but is not meant to illustrate the subject in full, as there can be other situations that may cause similar or other kinds of damage.

East is best

In general, the best driving conditions and roads with the best quality are located in the East, close to Norway's capital, Oslo. In the Eastern parts of Norway weatherconditions are more stable compared to Western and Northern parts of the country. In these parts, quick weather changes cause difficult road conditions almost the whole year.

Cause damage

For the last 5 years the Norwegian Haulier's Assosiation (NLF) have focused on the special problems that have arisen when using typical EU roadtrains on Norwegian roads. In situations where a typical Norwegian roadtrain has no problem, an EU roadtrain may be damaged in such a way that it is no longer safe in the traffic and needs serious repairs before continued driving.

Since 1997 our members have tried to use the typical EU roadtrain for the transport of EU loading length ($2 \times 7,82 = 15,65$ meter), and the message is clear:

The typical EU roadtrain with piggyback trailer is not suited for Norwegian road conditions. We need drawbar trailers.

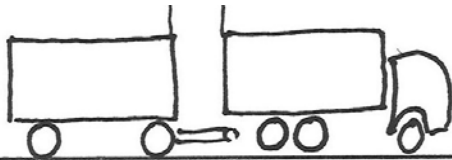
Experts agree that very compact roadtrains like the EU roadtrain with piggyback trailer are not the best solution on the roads of Norway. Earlier studies¹ done in Norway, show that increased total length of roadtrains has a positive influence on their directional stability and behavior on the road. This is also our experience. Roadtrains with longer drawbar trailers behave better, and have better directional stability compared to compact roadtrains with piggyback trailers.

¹ Karlsen, Per G. et al (1991): Vurdering av kjøreegenskaper og stabilitet til vogntog, Teknologisk institutt, Rapport nr: 52/1991

Drawbar trailer need more space

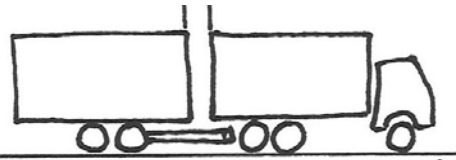
Using drawbar trailers would not be a problem, if the distance between the loading areas could be longer, compared to the roadtrain with a piggyback trailer. In fact it needs double the distance, in order to comply with the turning criterias. (Illustrated below)

Distance 1,5 meter



*The safe version in Norway:
Roadtrain of 19,5 meter
with drawbar trailer*

Distance 0,7 meter



*EU roadtrain of 18,75 meter
with piggyback trailer*

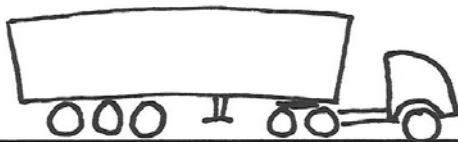
In Norway the max total length of roadtrains is often controlled in roadside checks. Our roadtrain with drawbar trailer would need to have shorter loading lengths than the fellow roadtrain with piggyback trailer in order to be within 18,75 meter total length. As you can see, this would be a problem in the fierce competition, and in our opinion this is not the intention of directive 96/53.

For traffic safety reasons we need roadtrains with more distance between the truck and trailer. For the transportation of EU loading lengths($2 \times 7,82 = 15,65$ meter), and for the intention of free competition, we need **19,5 meter** total length on roadtrains in Norway.

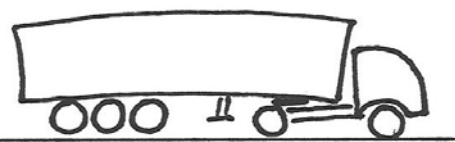
Roadtrains with semitrailers

Almost the the same arguments apply to the roadtrain with semitrailer, we need more space between the tractor and semitrailer. Most of the Norwegian tractors have a total of 3 axles; front-axle, driveaxle and a lifting axle in order to increase driveaxle pressure when necessary under slippery winter conditions. This is different from the shorter EU-tractor, that has only two axles. The semitrailer's loading length is 13,6 meter and the typical EU roadtrain with a two-axle tractor and a semitrailer has a total length of 16,5 meter.

In Norway we need a total length of **17,5 meter** because of the 3 axled tractor. (Illustrated below)



*The safe version in Norway:
Roadtrain of 17,5 meter
with semitrailer*



*EU roadtrain of 16,5 meter with
semitrailer*

Loading equipment

In remote parts of Norway, it is often necessary to bring along rearmounted cranes or loading trucks in order to be self-supported in a loading situation. In the Norwegian regulations this kind of extra equipment is included when measuring the total length.

Such equipment will, therefore, decrease the loading length. In our opinion this is not the intention of the directive 96/53. Such equipment should be excluded when measuring the total length of roadtrains. An informal questionnaire made to some of the EU countries, has shown that such equipment is not being included when measuring the total length of roadtrains. It is counted for as goods, and goods are allowed an overhang of up to 1,5 meter (Holland and Germany).

Conclusion

Directive 96/53 states the maximum loading lengths of the different roadtrains. It also states the turning criterias that apply to all vehicles in the directive. Norwegian regulations comply with these loading lengths and turning criterias. Practical experience on driving conditions in Norway have shown that it is difficult and sometimes hazardous to transport the EU loading lengths within the total lengths set by the directive. The period from 1997 has shown the need for somewhat longer roadtrains than in Europe, and the use of vehicles different from those found on European highways.