

European Commission

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European Commission

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Introduction

Mr. Chairman, I would like to thank you for inviting me to present the report on the activities of the European Commission in the field of automotive safety. Since the last ESV conference in Amsterdam two years ago, a number of important developments have occurred in the European Union.

Road Safety Policy

Like some other parts of the world the European Union has witnessed a substantial improvement in road safety with a reduction of the number of fatalities. Over the last ten years the number has been reduced with almost 30 % even though the vehicle fleet and mobility have increased. Many factors have contributed to this positive development, one very important set of factors being improved motor vehicle construction and passive safety measures.

Still the fatality rate, currently about 41 000 per year, is unacceptably high. In addition road traffic causes about 1.7 million injuries, a number that has not decreased if you compare with the situation ten years ago.

The European Commission's current road safety priorities stress the role that motor vehicle safety can play in reducing the risk of fatality and injury from an accident. A target has been suggested to reduce the fatalities with 50 % by 2010. Out from this target the Commission is now developing a new Road Safety Action Plan which will include a series of actions to improve road safety.

During 2001 and 2002 the Commission's work with new measures concerning motor vehicle and road safety has focussed on better indirect vision, speed limitation devices, seat belts, pedestrian protection and the introduction of information and communication technologies in vehicle construction.

Indirect vision

A proposed legislation concerning indirect vision aims at improving road user safety by upgrading the performance of rear view mirrors and accelerating the introduction of new technologies that increase the field of indirect vision for drivers of passenger cars, buses and trucks. Many severe road accidents at crossings, junctions and roundabouts are caused by vehicle drivers who are unaware of that other road users -

usually bikers, motorcyclists and pedestrians – are very close to or already beside their vehicles when they turn.

When larger vehicles such as trucks or buses are involved, these “blind spot” accidents frequently lead to serious injuries or even fatalities. The legislation would add specific blind spot reduction requirements to the existing rules. Concerning rear-view mirrors the key changes would entail:

- Mounting additional mirrors on certain vehicles (front mirrors on trucks, exterior rear view mirrors on the passenger's side of cars, aspherical mirrors on passenger cars and small commercial vehicles);
- Upgrading technical characteristics of mirrors in line with technical progress;
- Replacing certain mirrors with other indirect vision systems, such as camera and monitor systems.

The proposed legislation introduces for the first time mandatory harmonised requirements for the type-approval of mirrors and systems for indirect vision for larger motor vehicles within the EU.

Speed limitation devices

Since several years there are rules in the European Union concerning speed limitation devices for medium weight trucks as well as for buses and coaches with a maximum mass exceeding 10 tonnes and for heavy-duty trucks. The maximum speed is set at 90 km per hour for trucks and 100 km per hour for buses. Based on the positive experience and to further promote road safety and environmental protection additional rules concerning the use of speed limitation devices have recently been adopted by European Parliament and the Council. This decision extends the scope of the rules and introduces speed limitation devices and a speed limit for all vehicles with more than eight seats in addition to the driver's seat used for the carriage of passengers (100 km) and for all vehicles used for the carriage of goods and exceeding 3.5 tonnes maximum mass (90 km).

Seat belts in buses

Annually, an average of two hundred passengers travelling in coaches and minibuses are killed in the European Union. The vast majority of these fatalities occur because the passengers are violently thrown around within the confines of the vehicle or, even more seriously, ejected from the vehicle through broken windows in a rollover accident.

Many well-documented studies have shown that a lot of fatally injured passengers would otherwise have survived such accidents if they had been provided with and were wearing safety belts. It is reasonable to expect that the findings of such studies devoted to buses and coaches can be extrapolated to trucks.

In the mid-1990th, the Community adopted a legislation which contains all relevant technical provisions to make possible the installation of safety belts in commercial vehicles. However, not all Member States have implemented mandatory rules with respect to buses and coaches. A proposal has now been prepared to make installation of seat belts compulsory in all kinds of buses and coaches with the exception of "city buses". At the same time rules will be proposed concerning the wearing of seat belts.

Pedestrian protection

Based on scientific studies, the principal requirements to lower the risk of injury or death to pedestrians and bicyclists who are in collisions with cars have been developed for quite some time. It is estimated that 'pedestrian-friendly' car designs could avoid up to 2,000 of the annual 8,000 pedestrian and cyclist deaths that occur in the European Union. In addition, collisions with cars account for injuries to about 300,000 pedestrians each year. Other measures, such as enforcement of speed limits, improved separation between motor vehicle traffic and pedestrians, etc, could also lead to substantial reductions in these figures.

The possibility of a Community legislation aiming to ensure that car fronts are as "pedestrian friendly" as is practically possible has been actively discussed on the basis of a proposal developed by the European Enhanced Vehicle-Safety Committee (EEVC).

However, the European car industry association (ACEA) approached the Commission to explore the possibility of a voluntary agreement on pedestrian-friendly cars based on a commitment by industry to guarantee that new vehicles meet certain technical criteria to ensure pedestrian protection.

During 2001 the Commission successfully concluded negotiations with ACEA and also with the association of Japanese automobile manufacturers (JAMA) and the association of Korean automobile manufacturers (KAMA).

Following the results of a consultation with the European Parliament and the Council the Commission decided in June 2002 that a framework legislation should be proposed, which establishes the major aims

And the fundamental technical provisions to be fulfilled.

Consequently, a proposal has been adopted by the Commission which lays down the basic requirements to be fulfilled in the design of the frontal structures of motor vehicles with regard to pedestrian protection. They will apply to all new cars and light vans derived from car platforms, placed on the market within the Community

The proposal gives a formal framework to the relevant parts of the commitment undertaken by the industry, thereby ensuring legal certainty concerning the implementation of measures to increase the protection of pedestrians in case of accidents with cars. Furthermore, the proposed legislation will also mean that the requirements will be part of the EC type-approval system, hence involving Member States authorities in the application of the legal provisions. The proposed basic requirements will be tested according to detailed prescriptions which will be set out in a Commission decision. With this approach, the Directive will not have to be encumbered with elaborated technical details.

Passenger cars and light vans derived from cars will have to pass a number of tests and comply with the proposed limit values. In a first phase, starting in 2005, new types of vehicles must comply with two tests concerning protection against head injuries and leg injuries. In a second phase, starting in 2010, four tests of increased severity will be required for new types of vehicles, two tests concerning head injuries and two concerning leg injuries. Within five years from that date all new vehicles will have to comply with these test requirements.

Few, if any, current vehicle designs are capable of meeting all of the proposed technical provisions. Therefore, it is thought that an appropriate lead-time should be allowed before the proposed measures should be applied to new vehicle types and, later, to all new vehicles.

Clearly the maximum benefit from making vehicles pedestrian friendly would occur if all types of vehicles comply with these technical provisions but it is recognised that their application to heavier vehicles (trucks and buses) would be of limited value and may not be technically appropriate in their present form. For this reason the scope of application has been limited to passenger cars and car-derived vans up to 2.5 tonnes. Since these vehicle categories represent the vast majority of vehicles currently in use, the proposed measures will have the widest practicable effect in reducing pedestrian injuries.

Considering the speed of technological development in this area, the proposal foresees that alternative measures to the requirements laid down in the proposal might be developed. A feasibility assessment will therefore be carried out by 1 July 2004 concerning the proposed technical test provisions and in particular other measures which potentially may have at least equal protective effects to those proposed. Should the feasibility assessment show that these alternative measures have at least equal protective effects the Commission shall consider relevant proposals to amend this Directive.

In addition to the introduction of measures to improve the design of car fronts, the motor vehicle manufacturer associations have also undertaken in their commitments to introduce the following additional active and passive safety measures conducive to improved protection of pedestrian and other road users:

- to equip all new car and light vans derived from car platforms with anti-lock braking systems (ABS) from 1st July 2004;
- to gradually introduce information and communication technology (ICT) elements to improve active safety;
- to equip all new motor vehicles with Daytime Running Lights (DRL) as from 1 October 2003;
- not to install rigid bull-bars as original equipment on new motor vehicles, nor to sell them as spare parts.

Concerning the introduction of DRL, as a result of the consultation of the Council and the European Parliament, and in view of the differing national laws on the use of DRL at present, the Commission has decided not to oblige the industry to adhere to this part until a harmonised approach is reached at Community level with regard to its use.

Concerning rigid bull bars, following the views expressed by the Council and the European Parliament, suggesting that a legislative approach would cover not only the original equipment manufacturers but also the independent after-market, the Commission intends to propose a legislation containing a test procedure for all bull-bars and similar devices placed on the market and which are aimed at vehicles up to 3.5 tonnes.

e-Safety

New systems which use advanced information and communication technologies (ICT) in new solutions for improved road safety can reduce the number of fatalities and injuries on the roads, in particular when the accident can still be avoided or at least its severity significantly reduced. Almost 95% of all accidents are partly due to the human factor. In almost three-quarters of all the cases human errors are the only cause. Potentially ICT solutions could assist the driver and reduce the number of errors made in complex road traffic situations.

The development of appropriate sensors, actuators and processors, has already permitted wide spread implementation of ABS and stability systems, which help the driver to maintain control of the vehicle even when it has exceeded its « normal » limits of handling.

A new generation of active safety systems and Advanced Driver-Assistance Systems can now be foreseen. These systems will take into account not just the driver and the vehicle, but also the environment around the vehicle. Co-operative systems will enable essential safety information to be exchanged between the vehicle and other vehicles, and the infrastructure.

By receiving information from outside of the vehicle, the systems will be able to assess the risk of an accident happening. They can then warn the driver so that he can take appropriate action, or they can even initiate appropriate action. If an accident becomes unavoidable, the systems could use the same information to optimise the passive safety systems. Other safety systems can also automatically summon assistance following an accident.

In the transport sector, the Community has played a leading role in research in Road Transport Telematics and Intelligent Transport Systems (ITS) since 1988. Under the EC Fourth Framework Programme for Research, Technological Development and Demonstration (1994-1998), the Telematics Applications Programme has realised leading-edge systems and applications.

The current Information Society Technologies (IST) programme builds on the results of the Telematics programme, continuing research in technologies and applications systems aiming at safer, cleaner and more efficient transport, with research focused on intelligent safety.

The Sixth Framework Programme for research, technological development and demonstration activities 2002-2006 will offer new funding opportunities for research and development in Intelligent Integrated Safety including Advanced Driver Assistance Systems and support technologies.

The potential contribution of the introduction of intelligent road safety systems for enhancing road safety and security has partly already been demonstrated by the industry in a number of research and development projects. However, to realise the potential benefits, the new systems have to be widely deployed in the marketplace.

To promote development and deployment the Commission set up an eSafety Working Group with representatives of the automotive sector, service providers and other stakeholders. The group presented in autumn 2002 a report with 28 recommendations on how to improve road safety through the use of information and communications technologies.

The recommendations cover a wide range of issues such as prioritising future research and development efforts, developing a test methodology and validation framework, developing assessment and test methodology for complex Human-Machine Interfaces, promoting in-vehicle emergency calls (e-Call) and reviewing vehicle legislation.

The next steps of the eSafety initiative include the establishment of the eSafety Forum which will be an ad hoc forum to bring together a wider range of stakeholders to promote and facilitate the introduction of more ICT elements into motor vehicles on a broad scale.

In summary

On the legislative side the Commission has during the last two years brought forward proposals to strengthen certain safety requirements like indirect vision via mirrors, the installation of seat belt in buses and speed limiters for certain commercial vehicles. In addition work has continued with prescriptions concerning "pedestrian friendly" vehicles, which is a completely new field for motor vehicle construction.

Furthermore major steps have been taken to facilitate the introduction and wide spread deployment of information and communication technologies to improve vehicle safety and in particular to support the driver. It is expected that the introduction of such devices in many areas does not have to be accompanied with legal requirements.