## **VEHICLE SAFETY**

cepPolicyBrief No. 2018-34



## **KEY ISSUES**

**Objective of the Communication:** The safety of road vehicles as well as that of vehicle occupants, pedestrians and drivers of two-wheel vehicles is to be improved by way of technical requirements for motor vehicles as of 2024.

Affected parties: Road users, vehicle manufacturers, suppliers and transport companies.



**Pro:** (1) The obligation to equip new vehicles with assistance systems increases traffic safety.

(2) Compulsory turning-assistance systems for lorries and buses save lives and should be brought in earlier than 2024.

**Contra:** (1) It should also be possible to switch assistance systems off when driving so that the driver can control his vehicle in all circumstances.

(2) Empowering the Commission to adopt delegated acts on "driverless vehicles" involves essential issues to be regulated by the legislator and is therefore in breach of EU law.

The most important passages in the text are indicated by a line in the margin.

#### CONTENT

#### **Title**

**Proposal COM(2018) 286** of 17 Mai 2018 for a **Regulation** of the European Parliament and of the Council on **type-approval requirements for motor vehicles and their trailers**, and systems, components and separate technical units intended for such vehicles, **as regards their general safety and the protection of vehicle occupants and <b>vulnerable road users**, amending Regulation (EU) 2018/858 and repealing Regulations (EC) No 78/2009, (EC) No 79/2009 and (EC) No 661/2009

#### **Brief Summary**

## Context and objectives

- Between 1991 and 2013, the number of road fatalities in the EU has fallen steadily from 76,600 to 26,000 but has remained almost constant since 2013 [p. 1 and footnote 2].
- In view of the increasing volume of traffic, the current EU rules on road safety are inadequate [p. 1].
- The proposed Regulation contains tougher requirements on safety and assistance systems for road vehicles ("vehicle safety"). This will increase protection for
  - vehicle occupants,
  - "vulnerable road users"; i.e. pedestrians, cyclists and "two-wheel motor vehicles" such as motor bikes, mopeds and motor scooters.
- The tougher requirements aim to [p. 2]
  - avoid or at least lower the number of accidents,
  - lower the severity of accidents,
  - limit the number of fatalities and severe injuries.
- For this
  - the Type-approval Regulation [(EU) 2018/858], which regulates vehicle requirements allowing them to be traded or operated in the EU, will be amended,
  - the General Vehicle Safety Regulation [(EC) 661/2009], the Protection of Pedestrians Regulation [(EC) 78/2009] and the Hydrogen Safety Regulation [(EC) 79/2009], which currently regulate special technical requirements for the type approval of various types of vehicle, will be repealed.

## Scope and subject matter

- The Regulation applies to [Art. 2]
  - cars, light duty vehicles (LDVs), lorries and buses ("heavy duty vehicles", HDVs) and trailers;
  - vehicle components designed and constructed for such vehicles.
- The Regulation regulates type-approval requirements for [Art. 1]
  - vehicles and vehicle components for the improvement of their safety;
  - new tyres and tyre-pressure monitoring systems for improving safety and reducing the fuel consumption of vehicles.



#### ▶ General obligations of manufacturers and technical requirements

- Manufacturers must design vehicles so as to "minimise" the risk of injury to vehicle occupants and vulnerable road users [Art. 4 (4)];
- Manufacturers must prove that new vehicles and vehicle components have an EU type-approval which meets the technical requirements of this Regulation [Art. 4 (1)]. These include
  - technical requirements e.g. for brakes and seatbelts that have been developed by the UN Economic Commission for Europe (UNECE) with the participation of the EU [Art. 4 (2) in conjunction with Annex I];
  - technical requirements e.g. for child seats, airbags, crash testing that have been developed partly by the UNECE and partly by the EU [Art. 4 (5) in conjunction with Annex II];
  - technical requirements for assistance systems to be brought in from 2024 or 2026 (see below) –, which will be set out in detail by the Commission by way of delegated acts [Art. 4 (5) and 7 in conjunction with Annex II].
- The Commission can adopt delegated acts in order to bring these technical requirements into line with amendments to the UNECE regulations and with technical developments [Art. 4 (3), (6) and (7)].

### ▶ Assistance systems for all categories of new vehicle (cars, light and heavy duty vehicles)

- As of 2024, new vehicles must be equipped with the following assistance systems [Art. 6 (1) in conjunction with Annex II]:
  - "intelligent speed assistance" (e.g. "cruise control");
  - "driver drowsiness and attention monitoring";
  - rapid flashing emergency brake light to warn of heavily braking vehicles ahead;
  - obstacle detection when reversing;
  - "alcohol interlock installation facilitation".
- As of 2026, new vehicles must have "advanced distraction recognition" [Art. 6 (1) in conjunction with Annex II].

### Special requirements for new cars and light duty vehicles (LDVs)

- As of 2024, new cars and LDVs must provide an "enlarged head impact protection zone" to reduce potential injuries to vulnerable road users in case of accident [Art. 7 (6) in conjunction with Annex II].
- New cars and LDVs must be equipped in two phases with emergency braking systems [Art. 7 (2) in conjunction with Annex II].
  - As of 2024, moving vehicles and stationary obstacles ahead of the vehicle must be detected.
  - As of 2026, vulnerable road users ahead of the vehicle must also be detected.
- As of 2024, new cars and LDVs must be equipped with [Art. 7 (3) and 5 in conjunction with Annex II]
  - a lane-keeping system which brings them back into the lane if they cross the lane boundary;
  - an "accident data recorder" which records and stores data such as vehicle speed, state and rate of activation of safety systems before, during and after a collision.

## ► Special requirements for new heavy duty vehicles (HDVs)

- As of 2024, new buses and lorries must be equipped with
  - "turning-assistance systems" [Art. 9 (3) in conjunction with Annex II] which
  - detect vulnerable road users in close proximity to the front or nearside and
  - provide a warning or avoid collision with such road users;
  - "emergency braking systems" and "lane departure warning systems" [Art. 9 (2) in conjunction with Annex II];
- type-approvals will only be issued to buses and lorries where the "direct visibility" of vulnerable road users from the driver's seat has been "enhanced" to increase the field of vision [Art. 9 (5) in conjunction with Annex II].

# ► Requirements for emergency braking, turning and lane-keeping systems as well as lane departure warning systems

Emergency braking, turning and lane-keeping systems as well as lane departure warning systems [Art. 7 (4) and Art. 9 (4)]

- must be fully activated each time the vehicle is started up;
- can only be switched off "one at a time by a complex sequence of actions to be carried out by the driver" and only when the vehicle is at a standstill with the parking brake engaged;
- must allow for audible warnings to be easily suppressed but also ensure that this does not suppress any other functions.

#### ► Tyre-pressure monitoring systems

As of 2024, all new vehicles must be equipped with an accurate tyre-pressure monitoring system that notifies the driver of any loss in pressure. [Art. 5 (1) in conjunction with Annex II]

## Driverless vehicles

 In future, the Commission will be able to issue requirements, by way of delegated acts, for operating "driverless vehicles" on public roads in order to ensure safe operation [Art. 11].



- In future the Commission will be able to establish technical requirements for
  - systems which in place of the driver control steering, accelerating and braking;
  - systems providing real-time information on the state of the vehicle and surrounding area;
  - systems monitoring the driver's readiness;
- In future, the Commission will be able to lay down detailed rules on the specific test procedures and technical requirements for the type-approval of driverless vehicles.

# **Statement on Subsidiarity by the Commission**

According to the Commission, EU action is necessary in order to avoid a fragmentation of the internal market for road vehicles. [p. 4]

#### **Policy Context**

In the <u>"Valletta Declaration"</u> of March 2017, the Council called on the Council to tighten the safety requirements for road vehicles. This proposal for a Regulation forms part of the "Third Mobility Package" of May 2018 which also contains the proposal for a Directive [COM(2018) 274] on road infrastructure safety management.

## **Legislative Procedure**

17 May 2018 Adoption by the Commission

Open Adoption by the European Parliament and the Council, publication in the Official Journal of the

European Union, entry into force

## **Options for Influencing the Political Process**

Directorates General: DG Internal Market, Industry, Entrepreneurship and SMEs

Committees of the European Parliament: Internal Market and Consumer Protection (leading), Rapporteur: Roza

Gräfin von Thun und Hohenstein, (EVP, PL)

Federal Ministries: Transport and Digital Infrastructure (leading)

Committees of the German Bundestag: Committee for Transport and Digital Infrastructure (leading);

Decision-making mode in the Council: Qualified majority (acceptance by 55% of Member States which make up

65% of the EU population)

**Formalities** 

Competence: Art. 192 TFEU (Environment)

Form of legislative competence: Shared competence [Art. 4 (2) AEUV]

Procedure: Art. 294 TFEU (ordinary legislative procedure)

## **ASSESSMENT**

#### **Economic Impact Assessment**

The obligation to equip new vehicles with assistance systems increases traffic safety. However, establishing the actual level of the minimum requirements for vehicle safety is a political decision which always amounts to a compromise between the achievable level of effectiveness and the costs to which it gives rise. The obligation to install several assistance systems in fact results in higher car prices. It may also, however, contribute to lower insurance premiums by reducing the number and severity of accidents.

The assistance systems proposed as of 2024 which warn drivers of all new vehicles when they exceed the speed limit, of drowsiness or lack of attention, of heavily braking vehicles ahead and of obstacles when reversing or prevent them from driving while drunk by way of an "alcohol interlock", provide cost-effective improvements in road safety.

The enlarged head impact protection zone proposed for new cars and LDVs as of 2024 reduces potential injuries to vulnerable road users but is likely to involve costly solutions such as external airbags. When establishing the actual requirements for this by way of delegated acts, the Commission should therefore take account of the experience yet to be gathered regarding emergency braking systems that can recognise vulnerable road users.

As is currently the case, it should be possible to switch assistance systems right off when driving rather than - as the Commission proposes - only when the vehicle is at a standstill, or at least allow the driver to assume control himself at any time, so that the driver, in accordance with the Vienna Road Traffic Convention, can "control his vehicle in all circumstances" [Art. 13]. This ability to exercise control is important as e.g. in the case of road works on multi-lane roads, in wet conditions, lane-keeping systems are often unable to distinguish between the actual white lane markings and the provisional yellow ones. Emergency braking systems are also unreliable in ice and snow.

Frequent malfunctions and false warnings, as well as difficulty in operating the assistance systems, give rise to a lack of acceptance and may lead to drivers ignoring warnings. The proposed ability to "easily suppress" acoustic warning



signals is no solution because it may nullify the desired increase in safety. Instead, fully developed systems should be required and only these should be given approval. In addition, when developing the specific technical requirements in delegated acts, sufficient consideration should be given to user friendliness.

**Compulsory turning-assistance systems for lorries and buses** can warn drivers when turning of vulnerable road users in their "blind spot". They thus **save lives and** protect drivers from the trauma of an accident. Their introduction **should be required earlier than 2024** because this is already technically possible.

The duty for manufacturers of HDVs to improve the "direct visibility" of vulnerable road users from the driver's seat, by constructing cabs with a larger field of vision and a smaller "blind spot", is going in the same direction but requires a longer development period. The later implementation date – as of 2026 – is therefore justified. In the meantime, the experience gathered from the turning-assistance systems to be introduced earlier should be included in the concrete technical requirements for a larger field of vision –to be established in future by delegated acts.

Compulsory tyre-pressure monitoring systems are appropriate for cars, LDVs and buses, as here the benefit outweighs the cost. In the case of lorries, however, numerous combinations of tyres, vehicles and trailers have to be taken into consideration. Safety aspects do not justify the higher cost as only a relatively small number of lorry accidents are the result of a burst tyre [EU Commission (2017), Cost-Effectiveness Analysis of Measures for Vehicle Safety, p. 154 and 206].

# **Legal Assessment**

#### Legislative Competency

Unproblematic. The EU is permitted to adopt uniform EU-wide regulations in order to remove barriers to the free movement of road vehicles within the internal market [Art. 114 TFEU]. In addition, it can take measures to improve traffic safety in order to realise a "single transport policy" [Art. 91 TFEU].

#### Subsidiarity

Unproblematic. Uniform EU-wide safety requirements can only be established by the EU.

#### Compatibility with EU Law in other respects

According to the principle of democracy [Art. 2 and Art. 10 (2) TEU], important decisions have to be made by the EU legislative organs themselves – EU Parliament and Council. In view of the high risk potential, the complex technical challenges and the large number of fundamental legal and ethical issues thrown up by the – as yet embryonic – new technology of "driverless vehicles", requirements for their safe operation are not "non-essential provisions". Empowering the Commission to adopt delegated acts on "driverless vehicles" involves essential issues to be regulated by the legislator and is therefore in breach of EU law [Art. 290 (1) TFEU].

#### Conclusion

The obligation to equip new vehicles with assistance systems increases traffic safety. However, it results in higher car prices. It should also be possible to switch assistance systems off when driving so that the driver can control his vehicle in all circumstances. Compulsory turning-assistance systems for lorries and buses save lives and should be brought in earlier than 2024. Empowering the Commission to adopt delegated acts on "driverless vehicles" relates to essential issues to be regulated by the legislator and is in breach of EU law.