

EURO 7 EMISSION STANDARDS FOR MOTOR VEHICLES

Proposal COM(2022) 586 of 10 November 2022 for a **Regulation on type-approval of motor vehicles with respect to their emissions and battery durability (EURO 7)** and repealing Regulations (EC) No 715/2007 and (EC) No 595/2009

cepPolicyBrief No. 5/2023

SHORT VERSION [[Go to Long Version](#)]

Context | Objective | Interested Parties

Context: By 2030, the EU wants to reduce the number of "premature deaths" caused by pollutant emissions by 55% compared to 2005 – including in road transport, which in 2020 accounted for around 37% of nitrogen dioxide emissions and 9% of particulate matter emissions in the EU. Since the introduction of EURO 6d standards for cars and vans, and EURO VI standards for lorries and buses, pollutant emissions from road traffic have been falling strongly and steadily.

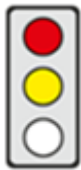
Aim: Public exposure to air pollution caused by road traffic is to be "drastically" reduced by a stricter emission standard (EURO-7) for new motor vehicles. Test conditions and emission limits are to be made stricter and emissions during driving are to be recorded in real time by on-board monitoring (OBM) systems.

Affected parties: Vehicle manufacturers, suppliers, users of motor vehicles and residents living on busy roads.

Brief Assessment

Pro

The new pollutant limits for cars will be set at the level of the strictest EURO 6 limits across all fuels. Under realistic test conditions, this would be cost-effective and leave manufacturers scope for a rapid transition to new propulsion methods.



Contra

- ▶ Even with stricter EURO 7 standards, the effect on improving air quality will be marginal; most notably, however, the impact will be smaller and less efficient than carrying out a rapid fleet renewal by replacing old high-pollution vehicles with EURO 6/VI vehicles.
- ▶ The introduction of EURO 7 standards requires a longer lead time.
- ▶ Dropping all testing parameters for trip composition indirectly results in the EURO 7 limits becoming drastically stricter. Under non-representative extreme conditions, manufacturers will not be able to guarantee, with any legal certainty, that they can comply with these limits for "any trip composition".
- ▶ Technically, the EURO 7 limits for lorries and buses are almost unachievable, even under realistic test conditions. In addition, they are not cost-effective as the reduction in pollutant emissions due to electrification will be greater than that mentioned in the impact assessment.

Testing parameters [Long Version A.3.1, C.1.3]

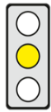
Commission proposal: The testing parameters for trip composition – such as minimum duration and distribution of city, country and motorway sections – have been dropped and "any trip composition" is permitted for emission testing. The extended driving divider is only applied once, even if several extended trip conditions – each leading to higher emissions – are combined, which the proposal text does not exclude.



cep-Assessment: Dropping all testing parameters for trip composition indirectly results in the EURO 7 limits becoming drastically stricter. Ultimately, since the limits must also be met in tests with "any" trip composition, in non-representative extreme situations, manufacturers will not be able to guarantee them with any legal certainty. This is not technology-neutral but amounts to an unnecessary early phase-out of the combustion engine through the back door.

Cars and vans: Pollutant limits on exhaust gases [Long Version A.3.1, C.1.4]

Commission proposal: From 2025, pollutant limits on exhaust gases will be set at the strictest EURO 6 limit, regardless of fuel – for diesel cars this means a 25% reduction in the limit on nitrogen oxides. Limits for vans are no longer differentiated by weight class and are the same as for cars.



cep-Assessment: The limits would only be genuinely reasonable if their introduction were accompanied by realistic test conditions and an adequate lead time. They could then be justified in view of the ban on internal combustion engines (ICE), due in 2035, and the massive reduction in air pollution achieved by replacing the fleet with EURO-6 vehicles and e-vehicles. Heavy vans will not be able to comply with the limits, so that many of them – important for distribution and for use by tradesmen – will no longer be economically viable with an ICE.

Cars and vans: Pollutant limits on brake abrasion [Long Version A.3.1, C.1.6]

Commission proposal: For the first time, brake particle emissions smaller than 10 micrograms (PM₁₀) from cars and vans will be limited to 7 mg/km from 2025 to 2034 and to 3 mg/km from 2035. Limits may follow for lorries and buses.



cep-Assessment: In preventing particulate emissions due to brake abrasion, consideration must be given to the fact that brakes are very important components in terms of vehicle safety. When setting limits, an overall assessment must be made which, in addition to health-related environmental aspects, also gives the necessary priority to road safety. Therefore, regulating brake abrasion should come under type-approval provisions regarding general safety [(EU) 2019/2144].

Lorries and buses: Pollutant limits for exhaust gases [Long Version A.3.1, C.1.5]

Commission proposal: Pollutant limits on exhaust emissions from lorries and buses are to become much stricter, e.g. by 77.5% in the case of nitrogen oxides, which is based on the expectation that, in the case of lorries and buses, the combustion engine will be used for longer. Tests will allow "any" engine loading for cold starts.



cep-Assessment: Technically, the limits for lorries and buses are almost unachievable, even under realistic test conditions. They are too strict and not cost-effective as the reduction in pollutant emissions resulting from electrification will be greater than that estimated by the Commission in the impact assessment. In order to ensure legal certainty in verifying EURO 7 conformity, the testing parameters for cold starts must specify realistic loads on the combustion engine. The transposition deadline must be extended.

Pollutant limits on tyre abrasion [Long Version A.3.1, C.1.6]

Commission proposal: Currently, no specific limits have been set for particulate emissions from tyres. The Commission wants to define these only by means of delegated acts.



cep-Assessment: Including these limits in the EURO 7 Regulation makes the vehicle manufacturer solely responsible for compliance with the limits. Even if the manufacturer optimises its vehicles for minimum tyre abrasion emissions and equips them with low-abrasion and safe tyres, it is ultimately the vehicle owners who will decide which tyres to use in the future. The vehicle manufacturer must not therefore be held solely responsible for compliance with the limits; tyre manufacturers must also be included.

On-board monitoring systems (OBM) [Long Version A.3.1, C.1.7]

Commission proposal: In future, as a supplement to on-board diagnostic (OBD) systems, OBM systems must record emissions in real time, allow for wireless transmission of the data, activate a warning light in the event of malfunctions in the exhaust gas cleaning system and "force" repairs in the event of persistent excess emissions.



cep-Assessment: OBMs make small cars considerably more expensive. If emissions data is transmitted to authorities wirelessly – as envisaged – for big data analysis to enable real emission measurements "beyond all testing parameters", this may bring users with above-average emissions – e.g. those with trailers in mountainous areas – into the focus of the authorities. Like the automatic enforcement of repairs in the event of excess emissions, this constitutes disproportionate interference in the rights of vehicle owners.

Durability requirements [Long Version A.3.2, C.1.8]

Commission proposal: Exhaust limits must be complied with over the entire lifetime of the vehicles, but they are softened for cars, vans and minibuses by 20% after the main lifetime (160,000 km or 8 years). Traction batteries must retain 80% or 75% of their initial capacity until five years after registration of the car or van, or up to 100,000 km, and thereafter 75% or 65% until eight years after registration or up to 160,000 km.



cep-Assessment: After the main service life, normal wear and tear justifies a 20% increase in exhaust emissions. Requirements regarding the lifetime of the traction battery on the one hand lead to higher production costs and purchase prices but, on the other hand, they reduce waste and the use of resources as well as the total cost over the lifetime of the vehicle, if the planned period of use is less than the statutory minimum lifetime and thus no costs are incurred for components to be replaced.