

POSITION PAPER

Euro 7/VII

For science-based standards that improve
air quality

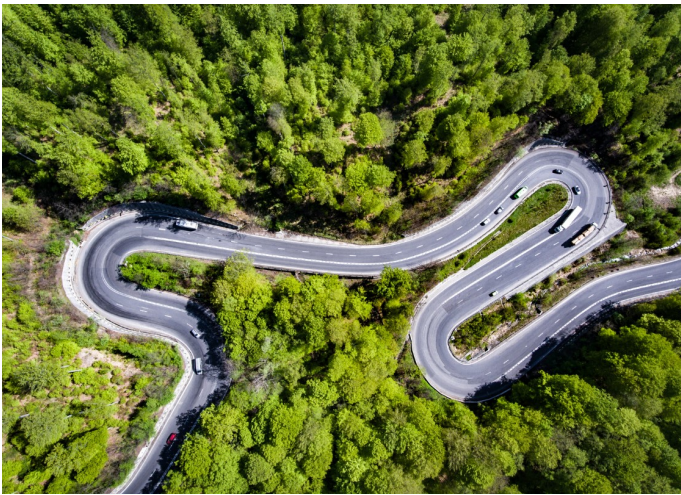


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CLEPA supports the further development of standards for pollutant emissions from light and heavy-duty vehicles that improve air quality, environment and health outcomes.

As providers of sustainable technology solutions for road transport, we advocate for a regulatory framework that facilitates clean and affordable mobility.



To be effective, future regulation should:

- ◆ adopt an analytical approach that ensures optimum effectiveness in achieving the intended outcomes of improved air quality, environment and human health;
- ◆ be based on scientific evidence including modelling of the effectiveness of existing and prospective regulations;
- ◆ continue the simplification of the complex body of current rules and be aligned with other global approaches;
- ◆ respect the principle of fuel and technology neutrality;
- ◆ create the optimum combination of limits and test conditions to reliably reflect real driving emissions;
- ◆ ensure and protect in-use emissions control.

Background

Current legislation for the type approval of motor vehicles with regards to (pollutant) emissions was adopted in 2007/2009 with Euro 5/6 for light duty and V/VI standards for heavy duty.

These have been amended many times since, culminating in Euro 6d and Euro VI-E, which include the world leading approach to emissions under real driving conditions, delivering significant progress in reducing emissions of pollutants from internal combustion engines.

Recently, the European Commission started the regulatory work aimed at setting the next stage of type-approval requirements for vehicles with regard to emissions.

This paper outlines priorities of automotive suppliers regarding the revision of the regulations on type-approval of motor vehicles with respect to emissions from light duty passenger and commercial vehicles and from heavy duty vehicles (hereafter Euro 7/ Euro VII).

¹Estimate based DG Trade's Chief Economist Note, November 2018 and Eurostat FY 2019 data for 8703, 8704 and 8708 Extra EU Trade

²SMMT's 2019 Automotive Trade Report

1. Main principles to ensure effective legislation

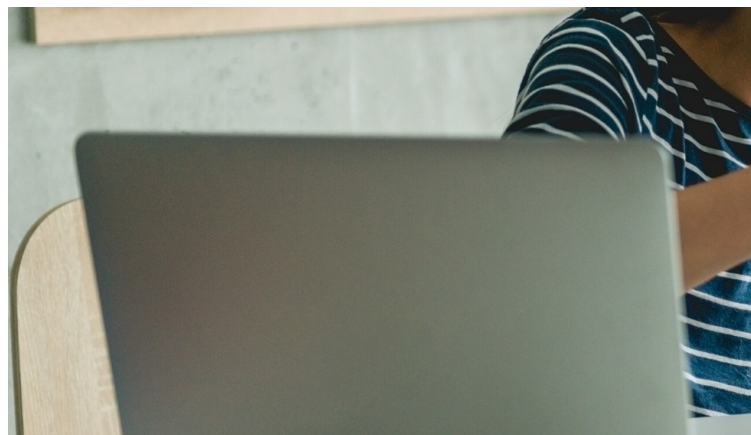
1.1. Sound science and evidence, in-depth analysis of the impact of existing and future regulation

European standards for vehicle emissions have been developed in the framework of an EU strategy to improve air quality. The development of EU legislation has well-established guidelines on Better Regulation, including evaluation and impact assessment, to ensure they are supported by sound science and evidence. The further development of these standards should be guided by these same principles.

New regulations should target optimum effectiveness in achieving the EU air quality, human health and environmental objectives, with technically and economically feasible measures ensuring the optimum contribution of all technologies, including those incorporating efficient ICEs. At this point in time, there is not enough evidence on the impact of the Euro 6d/VI-E implementation to enable an ex-post evaluation of the existing regulation. Therefore, air quality modelling should be used to evaluate the expected effects of current legislation, as a basis for future changes. New modelling will complement and review recent studies that estimate the air quality benefits of Euro 6d/VI-E.

Building on this, modelling of the air quality impact of potential future regulatory scenarios is necessary to inform the most effective way for new standards to achieve the objectives of the legislation. This will enable prioritisation of new regulatory provisions to improve air quality where they will have the greatest impact on environment, human exposure and health outcomes.

Modelling of the air quality impact of potential future regulatory scenarios is necessary to inform the most effective way for new standards



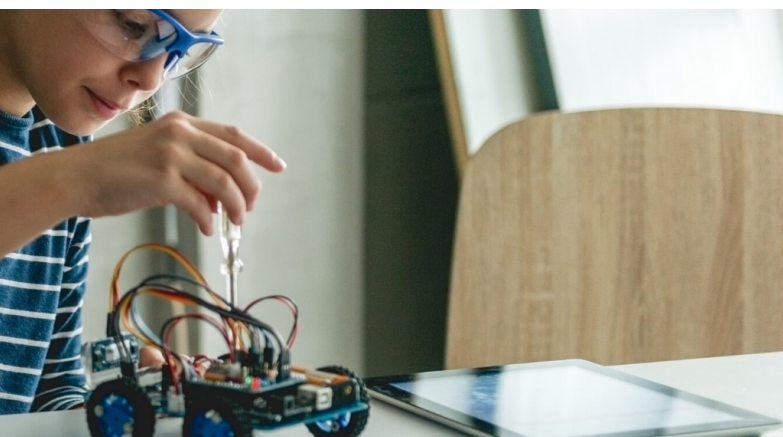
1.2. Simplification and greater efficiency

The amendments to Euro 6/VI have added test procedures and requirements. The rules are comprehensive and effective, but also highly complex and difficult to implement. We recommend using the opportunity of the revision of the legislation to simplify and streamline the standards, to make them easier to understand and to apply, while maintaining the level of ambition.

Evidence shows that test procedures introduced in current emission legislation make certain tests obsolete, such as the smoke test for diesel engines and idle CO emissions, which can therefore be eliminated.

Several standards for the regulation of pollutant emissions are in force globally and are being further developed. An alignment of such standards in the framework of global harmonisation would be beneficial for the implementation, e.g. timelines, test procedures etc.

New standards and testing requirements strongly impact the design of vehicles and systems and therefore require sufficient lead time for implementation. Furthermore, different options for the phase-in of new standards should be assessed, according to their effectiveness in improving air quality and their impact on industry and consumers.



An alignment of standards in the framework of global harmonisation would be beneficial for implementation

2. Technical considerations

2.1. Fuel and technology neutrality, differentiation between light-duty and heavy-duty vehicles

Automotive suppliers fully support the principle of fuel and technology neutrality in order to ensure free competition in the market to determine the most effective compliance strategy.

The very different characteristics of light-duty and heavy-duty vehicles require different testing regimes and measurement metrics (distance-based for light-duty vehicles, energy-based for heavy-duty vehicles). The potential for alignment in certain overlapping cases requires further investigation.

2.2. Creating the optimum combination of emissions limits, test conditions and in-use provisions

Setting of limits and test conditions should be conducted according to evidence, targeting optimum impact on air quality based on the modelling and analysis referred to in the above section, "Sound science and evidence, in-depth analysis of the impact of existing and future regulation."

Modelling should provide data on the optimum contribution to air quality improvements from a combination of changes in limit values and testing procedures at type approval as well as in-service provisions:

- ◆ A thorough qualitative and quantitative assessment of testing and boundary conditions is necessary to determine how they can [reliably reflect real driving emissions](#) (RDE) and deliver optimum impact on air quality.

- ◆ In-service compliance should focus on provisions that most effectively limit excessive emissions during vehicle lifetime, thereby delivering the greatest improvements to air quality.
- ◆ If emission limits need to be adapted, their effectiveness should be determined from the air quality modelling and analysis, and the limits should take into account that RDE conditions and in-use provisions are more challenging than the laboratory testing they replaced.
- ◆ The feasibility and affordability of the technical solutions should be considered in relation to their emissions reduction potential, to ensure successful consumer take up of Euro 7/VII vehicles.

If the air quality modelling and analysis indicate a need to include emission types not yet regulated in the Euro 6/VI standards, a robust measurement technique is essential.

The **modelling and analysis should consider non-exhaust emissions**, including those from tyres and brakes, for all categories of vehicles. Developments in Horizon2020 and the UNECE Particle Measurement Programme should also be taken into account.

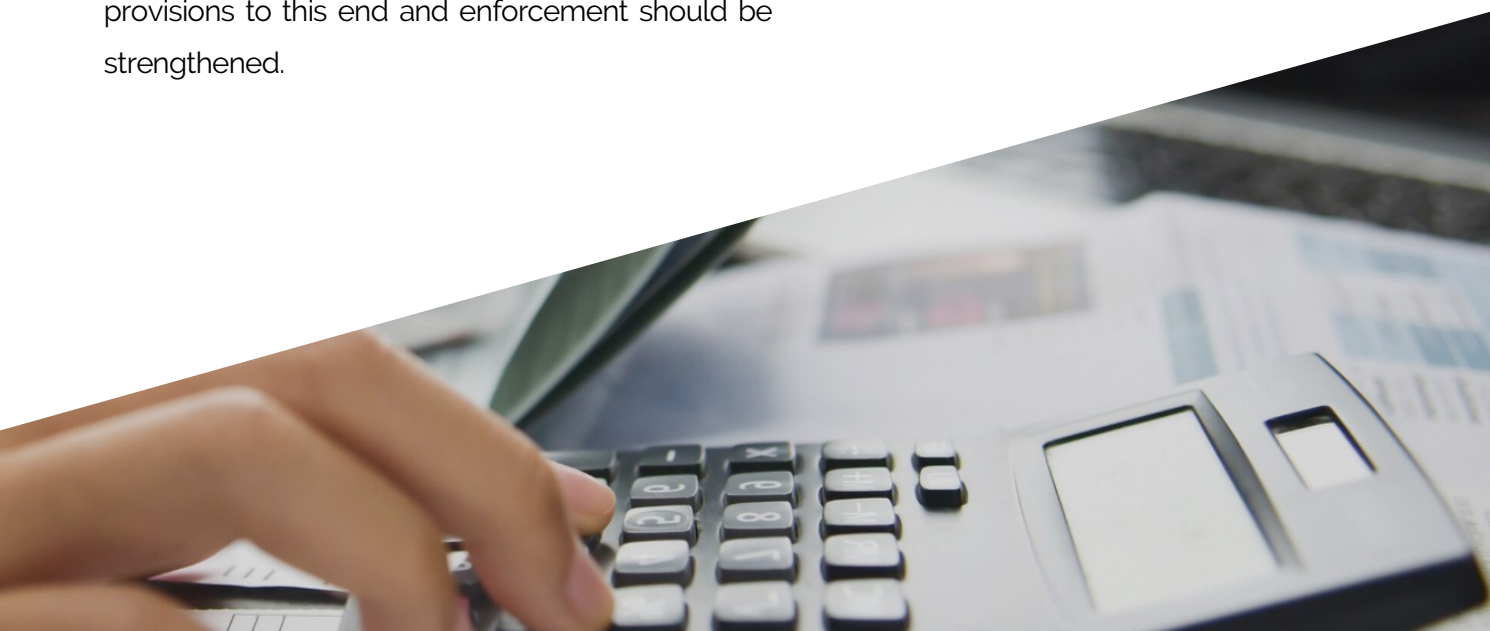
2.3. Protecting in-use emissions control

Additionally, to secure real-world emission performance and avoid excessive pollutant emission events during the lifetime of the vehicle, measures to prevent tampering are essential. New emission standards should contain technical provisions to this end and enforcement should be strengthened.

The **potential contribution of on-board diagnostics and on-board monitoring** to support in-use emissions compliance should also be assessed in detail as part of the full package of measures.

We recommend a **scientific, robust determination of the normal lifetime of vehicles using representative real-world statistics**. This determination is necessary for the development of appropriate regulatory provisions for in-use emissions, such as durability and in-service conformity requirements.

Similarly, the regulations should ensure that the replacement of emission critical parts with aftermarket parts guarantee at least equivalent performance to the original equipment.



CLEPA, the European Association of Automotive Suppliers, represents over 3.000 companies supplying state-of-the-art components and innovative technologies for safe, smart and sustainable mobility.

CLEPA brings together over 120 global suppliers of car parts, systems and modules and more than 20 national trade associations and European sector associations. CLEPA is the voice of the EU automotive supplier industry linking the sector to policy makers.

- The automotive sector accounts for **30% of R&D** in the EU, making it the number one investor.
- European automotive suppliers invest over **25 billion euros** yearly in research and development.
- Automotive suppliers register over **9,000 new patents** each year.
- Automotive suppliers in Europe generate **five million** direct and indirect jobs.

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