

COMMENTS ON THE REVISION OF THE DIRECTIVES OF THE ROADWORTHINESS PACKAGE - ROADMAP

The European Commission released on 4 October 2021 the roadmap on the Revision of the Directives of the Roadworthiness Package for public consultation. The emissions control industry that AECC represents, welcomes the opportunity to comment on the proposed roadmap.

AECC fully supports the revision of the Directives of the Roadworthiness Package. Meaningful emissions tests (including measurement of NOx and PN emissions) during the Periodical Technical Inspection (PTI) will support verifying the vehicle's emission compliance during its lifetime. Clean Internal Combustion Engines (ICEs) have a role to play in further reducing pollutant concentrations and improving European air quality.

AECC's vision¹ for clean, efficient, convenient and affordable mobility and commitment to the European Green Deal are fully aligned with the European Commission's objective towards climate neutral and zero-emission mobility in 2050.

Since the early 1990s, road transport emissions regulations, whether for tailpipe pollutants or CO₂, have been set at the EU level. Vehicles have been equipped with emission control technologies which have led to reductions in emissions across Europe that could not have been achieved by individual Member States acting alone. The reduction of air pollutant concentrations from road transport through technology innovation incentivised by these emission standards, has contributed to the improvement of ambient air quality in European roads and cities.

AECC member companies continue to supply emission control technologies to the automotive industry as part of the vehicle manufacturers' powertrain design. These emission control catalysts, adsorbers and filters are integrated with engine design, hybrid systems and operating strategies into advanced emission control systems by the vehicle manufacturers. It is important to point out that modern light- and heavy-duty vehicles are now equipped with ICEs with integrated emission control technologies, allowing for emissions reduction of nitrogen oxides (NOx) and particles (PM & PN) among other harmful pollutants.

Modern vehicles type approved to Euro 6d-temp and 6d (including hybrid, petrol- and diesel-fuelled vehicles) are already showing very low emissions². It is also important to note that lowering these pollutant emissions is not increasing the CO₂ produced by these vehicles. On the contrary, modern ICEs are also very efficient and constantly reducing greenhouse gas emissions. These vehicles are decisively contributing to cleaner cities in an affordable and accessible manner. These new ICEs should replace old models with support from fleet renewal incentive schemes.

An interplay of measures is needed to ensure emissions are kept low during the lifetime of the vehicle: vehicle system durability testing, On-Board Monitoring (OBM), Remote Sensing Device (RSD), anti-tampering and Periodical Technical Inspection (PTI). For PTI, it is key to conduct meaningful emission tests (including measurement of NOx and PN emissions). In particular, the periodic roadworthiness tests are important to detect non-compliance issues related to a faulty vehicle maintenance and tampering, amongst others.

Further improvements to lower pollutant emissions from road transport are required to comply with the ambitious 2050 goals provided by the European Green Deal on current and new fleet. The Euro 7 regulation, which is being discussed by the Commission's services, is a unique opportunity to implement a regulatory framework that could consider following three overarching principles to improve European Air Quality³:

- The new emissions standards should focus on real world emissions. They need to represent actual mobile source usage in the European region. The new standards should therefore legislate actual tailpipe emissions: use all data of each emissions test without exclusion or modification; and report the actual measured data accepting these will form a range of emission levels according to the route, traffic, weather and driver influence.
- The next standards need to be fuel- and technology-neutral. The same limits and procedures should apply for each type of powertrain within an application, irrespective of engine technology, type of fuel or level of electrification to ensure a free choice for consumers without market distortion.
- Euro 7 should legislate according to a 'total system approach' using a 'whole vehicle basis'. The new emissions standard should consider the vehicle as a single system and define testing procedures accordingly, not

separately for specific components. A total system approach will simplify the legislation and eliminate possible loopholes and derogations. Requirements should be consistent throughout the different legislative elements that apply over the lifetime of the vehicle, from Type-Approval, In-Service Conformity and Periodical Technical Inspections up to Market Surveillance.

As technology continues to improve, the future of personal transport in cities will comprise a range of technologies, from 'conventional' petrol and diesel to electrified engines - mild, full or plug-in hybrid – as well as electric cars powered by batteries and even fuel cell models. These will all be needed to replace older, more polluting vehicles on European roads.

Finally, AECC would like to confirm its strong commitment to provide robust scientific data and facilitate informed discussions on how to improve the local and global air quality whilst maintaining the competitiveness of the European automotive industry through the integration of modern emission control technologies within the vehicle powertrain system.

Should you need more information, you can contact AECC at info@aecc.eu.

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References:

¹ AECC 2025 Vision for clean, efficient, convenient and affordable mobility

<http://www.aecc.eu/wp-content/uploads/2020/02/200203-AECC-Vision-Document-Web.pdf>.

² Based on the database on Euro 6 vehicles (ACEA/JAMA)

<https://www.acea.be/publications/article/access-to-euro-6-rde-monitoring-data>

<http://www.jama-english.jp/europe/publications/rde.html>

³ AECC Euro 7/VII Emission Standards Position Paper

<https://www.aecc.eu/wp-content/uploads/2020/08/200709-AECC-position-on-Euro-7.pdf>

AECC is an international non-profit scientific association of European companies operating worldwide in the research, development, testing and manufacture of key technologies for emissions control. Their products are the ceramic substrates for catalysts and filters; catalysts (substrates with catalytic materials incorporated or coated); adsorbers; filter-based technologies to control engine particulate emissions; and speciality materials incorporated into the catalyst or filter. Members' technology is integrated in the exhaust emissions control systems of cars, commercial vehicles, buses, non-road mobile machinery and motorcycles in Europe. More information on AECC can be found at www.aecc.eu and www.dieselinformation.aecc.eu.

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