

# Position Paper

Proposal for a Euro 7 regulation  
for trucks, buses, coaches and  
heavier vans



## LEGISLATIVE CONTEXT

Since 1992, the EU has introduced increasingly stricter exhaust emission limits for each new vehicle sold in the EU ('Euro' standards). The latest standard for heavy-duty vehicles – Euro VI – was introduced in 2013 and underwent a number of upgrades over the past years, with Euro VI-E being introduced in 2020. With this standard, NOx and particle emissions measured on the road are at barely measurable levels. In November 2022, the European Commission came forward with a proposal for a new standard: Euro 7<sup>1</sup>. This proposal now also addresses non-exhaust particle emissions (from tyres and brakes).

The proposal for revised CO2 standards for heavy-duty vehicles, published in February 2023, entails an accelerated shift to zero-emission vehicles.

## KEY MESSAGES

European vehicle manufacturers, represented by the European Automobile Manufacturers' Association (ACEA), are fully committed to providing the right vehicles to move Europe's mobility and transport sector to climate neutrality and to minimise the impact of our sector on air pollution. Indeed, ACEA already made an ambitious proposal for Euro 7, as a package, in mid-2021<sup>2</sup>. We remain ready to engage with regulators to help frame a proportional and fit-for-purpose Euro 7 regulation for heavy-duty vehicles (HDVs). The Euro 7 proposal that is currently on the table however does not meet these key criteria.

## MARGINAL IMPACT ON NOx EMISSIONS

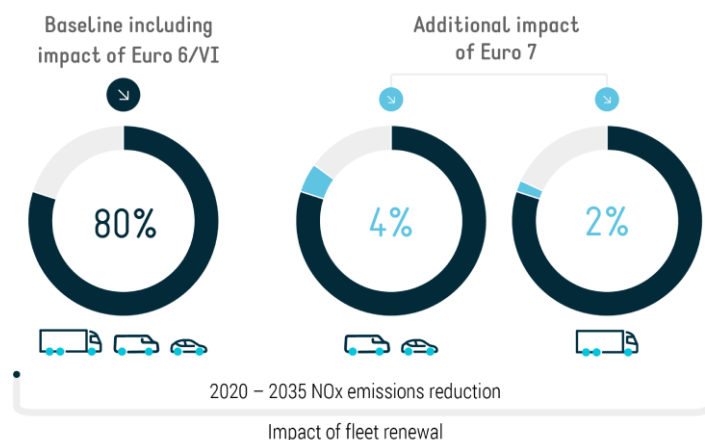
[Recent studies](#) have shown that the renewal of the fleet with the latest Euro VI vehicles – alongside the electrification of new vehicles – would deliver an 80% reduction in road transport NOx emissions by 2035 (compared to 2020). Over the same timeframe, the most stringent Euro 7 scenarios (ie limits for NOx and particles set at zero) would reduce road transport NOx emissions by less than a further 4% for cars and vans compared to Euro 6d levels, and by about 2% for trucks.

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<sup>1</sup> The Commission proposal puts all vehicles under 'Euro 7'. This position paper addresses Euro 7 with respect to heavy-duty vehicles (trucks, buses and coaches).

<sup>2</sup> <https://www.acea.auto/publication/acea-proposals-for-euro-7-and-euro-vii-emission-standards/>

## POTENTIAL OF EURO 7



What is more, any impact of Euro 7 will take several years to realise – meaning that it will start being felt when increasing numbers of zero-emission vehicles are coming to market due to the CO<sub>2</sub> regulation for heavy-duty vehicles. As their sales numbers diminish, Euro 7 vehicles with internal combustion engines will have an ever more marginal impact on improving air quality.

Higher Euro 7 vehicle cost (and likely higher operating costs due to increased fuel consumption) will lead to customers pre-buying Euro VI vehicles, slowing the potential sales of Euro 7 vehicles, and delaying the transition to zero-emission vehicles. Customers will hold onto their older pre-Euro VI vehicles for longer, negatively impacting air quality.

The greatest impact – on both pollutant and CO<sub>2</sub> emissions – will be delivered by the transition to zero-emission vehicles (specifically in urban areas where air quality is a challenge), and by renewing the old vehicle fleet with the latest Euro VI vehicles.

## A COMPLETE REVOLUTION

The Euro 7 proposal for heavy-duty vehicles is not an evolution from Euro VI. It is rather a revolution in the stringency of both the exhaust emission limits and tests. It goes from an effective engine type-approval regulation (with stringent conformity testing on a complete vehicle on the road), to a radically different approach that mirrors the regulation for light-duty vehicles (with RDE testing).

The feasibility of achieving the proposed stringent exhaust pollutant limits under the boundary conditions is unknown at this time, as the main act plus all technical details (annexes, implementation guidelines, etc) are not yet available.

Looking at the massive complexity of this regulation, the proposed date (1 July 2027) is also impossible to achieve.

The investments needed to achieve the Euro 7 HDV proposal – including designing, developing and producing vehicles as well as building and commissioning major new test facilities – would have to be recovered by sales of new vehicles with internal combustion engines for a period of time far shorter than previous regulations have provided.

## PROPOSAL WILL SLOW DOWN DECARBONISATION

European commercial vehicle manufacturers are providing an increasingly large range of battery-electric and hydrogen-powered vehicles to meet CO<sub>2</sub> targets. The transition of the transport and logistics market will take time, but it has started, and it is irreversible.

If the Euro 7 proposal is adopted without significant amendments of substance, it will disturb manufacturers' carefully calibrated investment plans. Close coordination between the CO<sub>2</sub> and Euro 7 files is essential with regard to the content of the regulations, the timelines for their finalisation and their implementation dates. Our industry's efforts in investing to decarbonise road transport will benefit from a coherent regulatory package that strikes the right balance between improving air quality and encouraging a swift shift towards zero-emission vehicles. The Euro 7 proposal for heavy-duty vehicles must not divert attention away from the transition to climate neutrality, be realistic in what is achievable, as well as being consistent with the investment needed for future CO<sub>2</sub> standards.

## NO GLOBAL COMPARISON

Global 'harmonisation' with the EU setting the pace, brings enormous benefits to the European automotive industry. Several elements of Euro VI are now included in major regional regulations (eg UNECE 1958 Regulations, China 6 and the latest US EPA emission regulations). The Euro 7 HDV proposal, which has no global comparison, threatens the EU's role in setting standards that many world markets follow.

## RECOMMENDATIONS

### Recommendations at a glance

- Re-assess the Euro 7 impact assessment
- Review the stringency of the limit values accordingly
- Provide at least three years lead-time from when complete package is known
- Re-introduce one year between the 'new vehicle types' date and the 'all registrations' date
- Retain the effective Euro VI test methods in Euro 7
- Do not make further stepwise changes to Euro 7 (keep implementing/delegated acts to a minimum)
- Address non-exhaust particle emissions from brake wear when test procedure is fully complete
- Address measures to reduce particles due to tyre abrasion directly to the tyre industry

## HEAVY-DUTY VEHICLE EXHAUST EMISSIONS

### 1. Re-assess the Euro 7 impact assessment and review stringency of limit values

The Euro 7 impact assessment assumes a market uptake of zero-emission vehicles that falls significantly short of what will be needed to meet the industry's CO<sub>2</sub> targets. An unrealistically low zero-emission trajectory in the Euro 7 impact assessment<sup>3</sup> is incorrectly used to justify a severe limits for heavy-duty vehicles (a huge reduction of around 87% for NO<sub>x</sub> compared and over 90% for PN compared to Euro VI).

- Critically review the stringency of the Euro 7 proposal for heavy-duty vehicles because its severity has been inflated due to highly questionable assumptions in the impact assessment.
- Use the ACEA proposal of July 2021 for a heavy-duty Euro 7 regulation as a basis for the re-assessment.

### 2. Change the implementation date

The proposed Euro 7 date of 1 July 2027 for heavy-duty vehicles is practically impossible, considering the lack of information currently available on what actually must be done.

- Align re-assessed Euro 7 implementation dates for heavy-duty vehicles with the heavy-duty vehicle CO<sub>2</sub> Regulation at a common feasible date for 2030.
- As a matter of principle, provide at least three years to industry from when the complete regulatory package is known (ie. the main act plus any implementing or delegated act).
- To allow manufacturers and approval authorities to manage all type-approval work, return to the practice of having one year difference between the 'all types' date and the 'new registrations' date (a well-established provision in all previous Euro regulations).

### 3. Retain the effective and well understood Euro VI test methods in Euro 7

Under Euro VI, compliance of engines installed in vehicles is tested on the road, through in-service conformity assessment using portable emission measuring equipment (ISC-PEMS). The Euro 7 proposal now seeks to switch to real driving emissions (RDE). This would extend what exists in Euro 6 for cars and vans to heavy-duty vehicles, disregarding the fact that heavy-duty vehicle have much more diverse transport missions.

Under RDE conditions the variability of the on-road measurement instruments (accounted for in Euro VI) is now incorporated in the limit values. The proposed emission limits already force the engineering target to be set at very low levels; this pushes the engineering target close to zero.

The Euro 7 proposal also aims to extend on-road coverage to the limits of possible driving boundaries, adding complexity and requiring new hardware without any perceivable benefit. Cold start emissions may be also an issue for heavy-duty vehicles used in urban duty cycles.

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<sup>3</sup> See Euro 7 impact assessment Part 1, Figure 7(b).

Taken with the proposed testing conditions, the proposed exhaust pollutant limits cannot be assessed for technical feasibility at this time.

#### 4. Do not repeat the mistakes of Euro VI by allowing stepwise changes in Euro 7

The number of Euro 7 heavy-duty vehicles with ICE will decrease rapidly with the accelerated market uptake of zero-emission vehicles. There is no environmental benefit to be gained from subjecting decreasing numbers of vehicles with ICE to further development steps. It would require significant development capacity and capital investment, on top of that already being put into electrification.

- Restrict powers of implementation or delegation to the Commission to the absolute minimum.

#### 5. Recognise that On-Board Monitoring (OBM) is not appropriate for monitoring vehicle compliance 24/7

Beyond type-approval, Euro 6 already has in place successful measures to ensure vehicle compliance, for example conformity of production (COP), in-service conformity (ISC), on-board diagnostics (OBD) and fleet surveillance through additional real driving emission (RDE) tests.

Euro 7 proposes to require on-board monitoring (OBM) of emissions at all times and for the lifetime of a vehicle. This would require new exhaust sensors, which are either not available or have limited capability and lifetime. Their cost is also unknown.

#### 6. Recognise that a vehicle cannot be designed to be robust over its lifetime against future tampering methods and changes to data transmission standards

- Implement proportional measures to improve vehicle tamper-protection, but not in a way intending to keep pace with new unknown tampering methods that may appear over the lifetime of a vehicle, which were not evident when a vehicle was designed.
- The same applies to over the air data transmission (OTA) because vehicles introduced today cannot be expected to communicate via new data transmission standards that may appear several years after first registration.

#### 7. Address the Euro VI vehicles in stock when Euro 7 would apply

- Facilitate end-of-series derogations through clear encouragement by the Commission to the member states.

#### 8. Do not impose responsibility for vehicle emission compliance on bodybuilders

This would seriously disrupt the well-functioning bodybuilder business (which includes many SMEs).



## HEAVY-DUTY VEHICLE NON-EXHAUST PARTICLE EMISSIONS: BRAKE WEAR AND TYRE ABRASION

ACEA believes that it makes sense to regulate non-exhaust particle emissions (covering all future new vehicles, including electric), since this source will overtake exhaust particle emissions.

### 9. Address non-exhaust particle emissions from brake wear when test procedure is comprehensive and accurate

- Introduce measures to address non-exhaust brake wear particle emissions for new vehicles when all the necessary and heavy-duty relevant test procedures are ready to set the baseline for brake wear particle emissions. This should also account for how other non-friction heavy-duty brake systems function. Only then can appropriate brake particle limits and implementation dates be established. The test procedures being developed for cars and vans are not a suitable starting point for heavy-duty vehicles.
- Adapt the proposed date of 1 July 2027, as it will not allow manufacturers and suppliers to make all the necessary technical developments in new brake systems for all vehicles.
- Put in place a monitoring and reporting phase before confirming any regulation and lead-time appropriate for the vehicle categories.
- Reflect upon what should be measured: ie the heavy-duty tractor unit only or the complete heavy-duty vehicle including the semi-trailer. The fact that heavy-duty tractor units may pull semi-trailers which can be 20 (or more) years old appears to limit options for complete heavy-duty vehicle brake wear limits.

### 10. Address measures to reduce particles due to tyre abrasion directly to the tyre industry

- The tyre industry is best placed to manage the critical interdependencies regarding, for example, tyre wet grip, noise, rolling resistance and wear.
- Adapt the implementation date. It is not clear when such a requirement would apply, but the proposed Euro 7 date of 1 July 2027 is not feasible.



## ABOUT THE EU AUTOMOBILE INDUSTRY

- 13.0 million Europeans work in the auto industry (directly and indirectly), accounting for 7% of all EU jobs
- 11.5% of EU manufacturing jobs – some 3.4 million – are in the automotive sector
- Motor vehicles are responsible for €374.6 billion of tax revenue for governments across key European markets
- The automobile industry generates a trade surplus of €79.5 billion for the European Union
- The turnover generated by the auto industry represents almost 8% of the EU's GDP
- Investing €58.8 billion in R&D per year, automotive is Europe's largest private contributor to innovation, accounting for 32% of the EU total

## ACEA REPRESENTS EUROPE'S 14 MAJOR CAR, VAN, TRUCK AND BUS MANUFACTURERS

### **ACEA**

European Automobile  
Manufacturers' Association  
+32 2 732 55 50  
info@acea.auto

[www.acea.auto](http://www.acea.auto)



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