

ACEA Proposal for Euro VII



1. TIMETABLE FOR EURO VII

ACEA is not against Euro VII and, considering our views outlined in the explanatory note, we propose this integrated package for Euro VII with an ambitious timeframe, criteria pollutant emission limits and fixed test procedures as the three cornerstones.

This proposal is presented as an integral package. One element of the proposal cannot be taken without the others.

It is politically attractive to consider if Euro VII could apply in the year 2025. Considering the level of detail of the proposals for Euro VII we have seen so far from the Commission's consultants (CLOVE), 2025 is much earlier than industry (and many other stakeholders) would consider feasible.

If we look to the severity of the proposals from CLOVE, it can be no surprise that in all stakeholder discussions, industry has consistently called for a minimum of four years lead-time from when the complete package is known (i.e. the political Act for decision of the co-legislators and subsequent technical regulations that the Commission may be mandated to deliver). Only from then would industry know the challenge for compliance, what it must plan to achieve and to decide on the feasibility and big engineering changes to future new vehicles that we foresee as a result of the proposals from CLOVE.

As outlined in the accompanying explanatory note, ACEA requests a balanced approach to Euro VII that allows industry to focus on decarbonisation. In this respect, if we focus on the key issues, we believe it is possible to reduce the request for industry lead-time on condition the regulatory process is completed quickly. What we propose here will still require new development and the introduction of new hardware (for which ACEA would otherwise insist on a minimum of four years lead-time). For this integrated proposal we can accept three years lead-time.

Therefore, considering the key issues explained in this proposal, we believe that a new Euro VII regulation could apply as of the ambitious dates of:

- 31 December 2025 for new types, and
- 31 December 2026 for all new registrations

December dates were the basis of the initial Euro VI Regulation (595/2009) and displacing them by three months compared to the proposal for Euro 7 aims to give some breathing space for type-approval authorities.

These dates are proposed providing the following principles and conditions are respected:

1. Simple amendments to Euro VI or a simple proposal for Euro VII, for the quick decision of the co-legislators.
2. For industry to be ready with Euro VII by the proposed ambitious dates for Euro VII mentioned above, we must call for agreement by the co-legislators no later than the end of 2022. Any delay must extend the proposed dates for Euro VII accordingly. In other words, the dates for Euro VII must be tied to a minimum of three years lead-time in respect to this proposal.
3. We believe there should be minimal need for additional amendments via supplemental delegated/implementing regulations. However, if any subsequent amendments would be required, they must be delivered by the European Commission (a) by the end of 2022, or (b) tied to an Article in the text agreed by the co-legislators that will set the dates for Euro VII in accordance to how long the Commission takes to deliver supplemental delegated/implementing regulations plus three years lead-time.
4. Once the regulations forming Euro VII are agreed there will be no further amendments for a period of five years from when Euro VII becomes mandatory to give industry regulatory stability. However, amendments to Euro VII in order to facilitate the type-approval of new powertrain systems and new technologies that will benefit the efforts of industry on decarbonisation are the exception and providing any such amendments do not impact the on-going validity of already granted Euro VII type-approvals and vehicle CoCs.
5. To help industry to recover from the current crisis and to prepare for what will come in revised CO₂ targets and this ambitious proposal for Euro VII, we call for no further amendments to Euro VI (apart from additional amendments for heavy-duty hybrids and hydrogen mentioned below). Anything else planned could be integrated into Euro VII.

2. EURO VI FOR HEAVY-DUTY VEHICLES

POLLUTANT EMISSION LIMITS

For reference, Table 1 below shows the current Euro VI emission limits:

Euro VI	CO mg/kWh	THC mg/kWh	NMHC mg/kWh	CH₄ mg/kWh	NO_x mg/kWh	NH₃ ppm	PM mg/kWh	PN #/kWh
WHSC (CI)	1500	130			400	10	10	8×10^{11}
WHTC (CI)	4000	160			460	10	10	6×10^{11}
WHTC (PI)	4000		160	500	460	10	10	6×10^{11}

3. EURO VII FOR HEAVY-DUTY VEHICLES

In conjunction with the proposed dates for Euro VII shown in section 1 and the parallel conditions, ACEA proposes the following new technically neutral emission limits for Euro VII.

Table 2 – Euro VII emission limits:

Euro VII	CO mg/kWh	NMHC mg/kWh	CH₄ mg/kWh	NO_x mg/kWh	NH₃ ppm	PM mg/kWh	PN⁽¹⁾ #/kWh
WHSC (CI) and WHTC (CI and PI)	1500	80	500 ⁽³⁾	230	10 ⁽²⁾	8	6×10^{11}
⁽¹⁾ SPN ₁₀ procedure from PMP in UNECE ⁽²⁾ ACEA will accept the conversion from ppm to mg/kWh based on the explanation provided to the Council by the Commission in document DS 1604/15, dated 16 November 2015, Interinstitutional File 2014/0012 (COD) ⁽³⁾ Relevant for niche PI engines							

Criteria pollutant emission limits are reduced by 50% compared to Euro VI. Others are either reduced to the lower level of Euro VI or are unchanged.

Concerning the limit for particle mass (PM) we think that, in many respects, PM is not an issue with the already employed particle emission reduction technology. However, we think alignment with the PM value proposed by CLOVE is appropriate.

In the case of particle number (PN), the limits remain the same as Euro VI the more challenging SPN₁₀ test procedure developed by PMP in UNECE is introduced. The change to the new UNECE SPN₁₀ procedure is already equivalent to an increase in stringency for PN control of 30 to 40%. The Commission should introduce reference to this new PMP SPN₁₀ test procedure directly in the Euro VII proposal to the co-legislators.

GREENHOUSE GASES

CH₄ is regulated under Euro VI for gas engines, so it remains for Euro VII. However, in the case of the diesel engine workhorse for commercial transport, ACEA's view remains that greenhouse gases have no place in regulations dealing with criteria

emissions. N_2O and CH_4 can be addressed in terms of CO_2eq so they must be looked at in the context of the existing CO_2 targets and the current regulatory review.

TESTING CONDITIONS

Because of the ambitious timing of this proposal, no changes to the existing Euro VI test conditions (apart for SPN_{10}) are proposed.

ADDITIONAL AMENDMENTS

Industry would very much appreciate it if the Commission would make proposals to introduce new test provisions which industry needs to introduce new powertrain technologies to support its efforts on decarbonisation:

- We propose the Commission shall commit to propose an amendment to Euro VI as soon as possible to facilitate the type-approval of heavy-duty hybrid powertrains.
- We propose the Commission shall commit to propose an amendment to Euro VI as soon as possible to facilitate the type-approval of heavy-duty engines fuelled by hydrogen.

4. BRAKE WEAR PARTICLE EMISSIONS

There is still work to do to collect brake wear performance data to establish a reasonable proposal for brake wear limit(s), at least for cars and vans and no work has started yet for heavy-duty vehicles.

Setting future brake particle wear limits needs to consider all fleet segments that would be covered as well as aspects of brake safety and the influence of other technologies such as regenerative braking systems. Once the test procedures developed in UNECE have been proven to be representative of entire brake system particle wear emissions and to be robust enough including the contribution of regenerative braking, brake wear emission requirements can be established in a separate UNECE Regulation XXX.

Therefore, the considering the UNECE group does not have heavy-duty vehicles in its sights at this time, it is premature to consider anything for brake wear particle emission limit(s) in Euro VII. A framework that includes 'brake family concepts' and a 'new type/ all type definition for brake systems' has to be first discussed. Furthermore, activities and discussions have to be started concerning the definition of a traceable calibration standard for the testing procedures and equipment.

Since the introduction of new hybrid powertrain will influence future brake designs, it is recommended that any limits and new tests for brake wear particle emissions developed by further work in the UNECE group would apply well after a Euro VII step for exhaust emissions.

In the future, if brake-wear particle emissions would eventually be part of a Euro VII regulation, any future amendments to introduce such requirements shall not impact the validity of already granted Euro VII type-approvals and vehicle CoCs - which tends to support to the idea of a stand-alone regulation.



ABOUT THE EU AUTOMOBILE INDUSTRY

- 14.6 million Europeans work in the auto industry (directly and indirectly), accounting for 6.7% of all EU jobs
- 11.5% of EU manufacturing jobs – some 3.7 million – are in the automotive sector
- Motor vehicles are responsible for €398.4 billion of tax revenue for governments across key European markets
- The automobile industry generates a trade surplus of €74 billion for the European Union
- The turnover generated by the auto industry represents more than 8% of the EU's GDP
- Investing €62 billion in R&D per year, automotive is Europe's largest private contributor to innovation, accounting for 33% of the EU total

REPRESENTING EUROPE'S 15 MAJOR CAR, VAN, TRUCK AND BUS MANUFACTURERS

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