Presidency room document on Euro 7 for Coreper I on 22 September 2023

[Changes compared to document ST 12639/23 published on 15 September 2023 are marked in yellow]

Chapter I – Subject matter, scope and definitions

Article 3 **Definitions**

For the purposes of this Regulation, definitions in Regulation (EU) 2018/858 apply. For the purposes of this Regulation, the following definitions apply:

[...]

(14a) 'particle number above 23 nm' or 'PN23' means the total number of solid particles emitted from the tailpipe or the brakes that have an aerodynamic diameter larger or equal than 23 nm;

[NB: A new definition (14a) to be added to the text in order to be consistent with Annex I, Tables 1 and 2.]





Article 6

Durability requirements for vehicles, systems, components and separate technical units

[...]

The OBM systems installed by the manufacturer in these vehicles shall be capable of all of the following:

(a) monitoring and registering the magnitude and duration of all exhaust emissions exceedances of NOx, NH3 and PM5, and detecting exceedances of 2.5 times the exhaust emission limit or higher in case exhaust emission limit values for the testing of NOx, NH3 and PM exist in Annex I;

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[NB: A new wording on OBM to be added to the text in order to align in-use emission control with the list of pollutants in Annex I, Table 1.]

Chapter III – Obligations of Member States for emission type-approval and market surveillance

Article 10

Emission type-approval, conformity of production, in-service conformity and market surveillance

[...]

- 3a. With effect from 24 30 months after entry into force of this Regulation, approval authorities shall, on grounds relating to CO₂ and pollutant emissions, fuel and electric energy consumption or battery durability, in the case of new types of M₁, N₁ vehicles, refuse to grant EU emission type-approval or national emission type-approval which do not comply with this Regulation.
- 4. With effect from <u>1 July 2025</u> 42 months after entry into force of this Regulation, national authorities shall, in the case of new M₁, N₁ vehicles which do not comply with this Regulation consider certificates of conformity to be no longer valid for the purposes of registration and shall, on grounds relating to CO₂ and pollutant emissions, fuel and <u>electric</u> energy consumption or battery durability, prohibit the registration, sale or entry into service of such vehicles.

[...]

[NB: New application dates to be added to the text in order, together with the Commission's obligation in Article 14(7), to ensure 18 months lead time for the industry in case of new types of M_1 , N_1 vehicles and 30 months lead time for the rest of M_1 , N_1 vehicles.]



Specific obligations of Member States concerning the emission type-approval of systems, components and separate technical units

1. With effect from <u>1 July 2025 24 30 months after entry into force of this Regulation</u>, the sale or installation of a system, component or separate technical unit intended to be fitted on an M₁, N₁ vehicle approved under this Regulation, shall be prohibited if the system, component and separate technical unit is not of type approved in compliance with this Regulation.

[NB: New application dates to be added to the text in order, together with the Commission's obligation in Article 14(7), to ensure 18 months lead time for the industry in case of systems, components and separate technical units intended to be fitted on M_1 , N_1 vehicles.]

Chapter VI- General Provisions

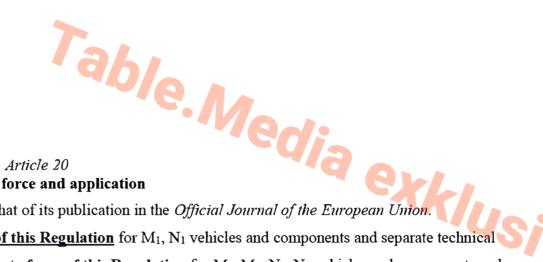
Article 18
Reporting

[...]

6. <u>By</u> 31 December <u>2027</u>, the Commission shall submit to the <u>European</u> Parliament and to the Council a <u>report</u> on brake <u>particle</u> <u>emissions reviewing measuring methods and state-of-the-art, in view of the delegated acts referred to in Article 15(2)(a) on the level of the second stage emission limits set out in Table 5 of Annex I.</u>

[NB: New reporting requirement for brake particle emissions to be added to the text.]

[...]



Entry into force and application

This Regulation shall enter into force on the twentieth day following that of its publication in the Official Journal of the European Union. It shall apply from \(\frac{1}{2}\) July \(\frac{2025}{24}\) \(\frac{24}{30}\) months after entry into force of this Regulation for \(M_1\), \(N_1\) vehicles and components and separate technical units for those vehicles and from 1 July 2027 48 months after entry into force of this Regulation for M2, M3, N2, N3 vehicles and components and separate technical units for those vehicles and O₃, O₄ trailers.

[NB: See justifications for Articles 10 and 11.]

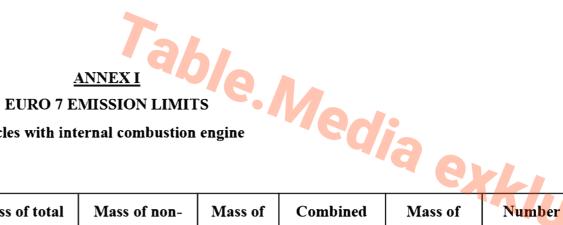


Table 1: Euro 7 exhaust emission limits for M1, N1 vehicles with internal combustion engine

		Mass in running order (MRO) (kg)	Mass of carbon monoxide		Mass of total hydrocarbons (THC)		Mass of non- methane hydrocarbons (NMHC)		Mass of oxides of nitrogen (NOx)		Combined mass of total hydrocarb ns and oxides of		Mass of <u>p</u> articulate matter (<u>PM)</u>		Number of particles (PN _{10 23})	
		(RZ)									(TI	<u>Ox)</u>				
			<u>L</u> 1 (mg/km)		L ₂ (mg/km)		L ₃ (mg/km)		<u>L₄</u> (mg/km)		L ₂ + L ₄ (mg/km)		L ₅ (mg/km)		L ₆ (#/km)	
Category	Class		<u>PI</u>	<u>CI</u>	<u>PI</u>	<u>CI</u>	<u>PI</u>	<u>CI</u>	<u>PI</u>	<u>CI</u>	<u>PI</u>	<u>CI</u>	<u>PI²⁰</u>	<u>CI</u>	<u>PI²⁰</u>	<u>CI</u>
$\underline{\mathbf{M_1}}$	-		<u>1000</u>	<u>500</u>	<u>100</u>	=	<u>68</u>	=	<u>60</u>	<u>80</u>	-	<u>170</u>	4.5	<u>4.5</u>	6x10 ¹¹	6x10 ¹¹
N_1	Ī	MRO < 1280	<u>1000</u>	<u>500</u>	<u>100</u>	=	<u>68</u>	=	<u>60</u>	<u>80</u>	=	<u>170</u>	4.5	<u>4.5</u>	6x10 ¹¹	6x10 ¹¹
	II	1280 < MRO < 1735	<u>1810</u>	<u>630</u>	<u>130</u>	=	<u>90</u>	=	<u>75</u>	<u>105</u>	ī	<u>195</u>	4.5	<u>4.5</u>	6x10 ¹¹	6x10 ¹¹
	Ш	1735 < MRO	<u>2270</u>	<u>740</u>	<u>160</u>	=	<u>108</u>	<u>-</u>	<u>82</u>	<u>125</u>	<u>-</u>	<u>215</u>	<u>4.5</u>	<u>4.5</u>	6x10 ¹¹	6x10 ¹¹

O Positive ignition particulate mass and number limits shall apply only to vehicles with direct injection engines.

Table 2: Euro 7 exhaust emission limits for M₂, M₃, N₂ and N₃ vehicles with internal combustion engine and internal combustion engines used in those vehicles

Pollutant emissions	WHSC (CI) and WHTC (CI and PI)	Cold emissions ¹	Hot emissions ²	Emission budget for all trips less than 3*WHTC long	Real Driving Emissions (RDE)	Optional idle emission limits ³	
	<u>per kWh</u>	per kWh	per kWh	per kWh	<u>per kWh</u>	per hour	
NO _x in mg	<u>230</u>	350	90	150	<u>300</u>	5000	
PM in mg	<u>8</u>	12	8	10	<u>=</u>		
PN _{10 23} in #	6×10^{11}	5x10 ¹¹	$2x10^{11}$	3x10 ¹¹	9×10^{11}		
CO in mg	<u>1500</u>	3500	200	2700	<u>1950</u>		
NMOG in mg	<u>80</u>	200	50	75	<u>105</u>		
NH ₃ in mg	<u>65</u>	65	65	70	<u>85</u>		
CH ₄ in mg	<u>500</u>	500	350	500	<u>650</u>		
N ₂ O in mg	<u>200</u>	160	100	140	<u>260</u>		
HCHO in mg	30	30	30		40		

Cold emissions refers to the 100th percentile of moving windows (MW) of 1 WHTC for vehicles, or WHTC_{eold} for engines

Hot emission refers to the 90th percentile of moving windows (MW) of 1 WHTC for vehicles or WHTC_{hot} for engines

Applicable only if a system is not present that automatically shuts down the engine after 300 seconds of continuous idling operation (once the vehicle is stopped and brakes applied).

[NB: Changes to be included in the text in order to ensure consistency with Euro 6/VI.]