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1.1 Euro 5 & 6 Regulation

1.1.1 Vehicle Categories

according to COMMISSION REGULATION (EU) No 678/2011 of 14 July replacing Annex II and amending Annexes IV, IX and XI to Directive 2007/46/EC of the European Parliament and of the Council establishing a framework for the approval of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles (Framework Directive)

Category M:

Motor vehicles designed and constructed primarily for the carriage of persons and their luggage.	
M1	Vehicles of category M, comprising not more than eight seating positions in addition to the driver's seating position. Vehicles belonging to category M 1 shall have no space for standing passengers. The number of seating positions may be restricted to one (i.e. the driver's seating position).
M2	Vehicles of category M, comprising more than eight seating positions in addition to the driver's seating position and having a maximum mass not exceeding 5 tonnes. Vehicles belonging to category M 2 may have space for standing passengers in addition to the seating positions.
M3	Vehicles of category M, comprising more than eight seating positions in addition to the driver's seating position and having a maximum mass exceeding 5 tonnes. Vehicles belonging to category M 3 may have space for standing passengers.

Category N:

Motor vehicles designed and constructed primarily for the carriage of goods.	
N1	Vehicles of category N having a maximum mass not exceeding 3,5 tonnes.
N2	Vehicles of category N having a maximum mass exceeding 3,5 tonnes but not exceeding 12 tonnes.
N3	Vehicles of category N having a maximum mass exceeding 12 tonnes.

1.1.2 Euro 5 & 6 Regulation 2009/2014

REGULATION (EC) No 715/2007 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 20 June 2007
on type approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information

COMMISSION REGULATION (EC) No 692/2008
of 18 July 2008
implementing and amending Regulation (EC) No 715/2007 of the European Parliament and of the Council on type-approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information

COMMISSION REGULATION (EU) No 566/2011
of 8 June 2011
amending Regulation (EC) No 715/2007 of the European Parliament and of the Council and Commission Regulation (EC) No 692/2008 as regards access to vehicle repair and maintenance information

COMMISSION REGULATION (EU) No 459/2012
of 29 May 2012
amending Regulation (EC) No 715/2007 of the European Parliament and of the Council and Regulation (EC) No 692/2008 as regards emissions from light passenger and commercial vehicles (Euro 6)

COMMISSION REGULATION (EU) No 630/2012
of 12 July 2012
amending Regulation (EC) No 692/2008, as regards type-approval requirements for motor vehicles fuelled by hydrogen and mixtures of hydrogen and natural gas with respect to emissions, and the inclusion of specific information regarding vehicles fitted with an electric power train in the information document for the purpose of EC type-approval

COMMISSION REGULATION (EU) No 143/2013
of 19 February 2013
amending Directive 2007/46/EC of the European Parliament and of the Council and Commission Regulation (EC) No 692/2008 as regards the determination of CO_2 emission from vehicles submitted to multi-stage type-approval

COMMISSION REGULATION (EU) No 171/2013
of 26 February 2013
amending Annexes I and IX, replacing Annex VIII to Directive 2007/46/EC of the European Parliament and of the Council establishing a framework for the approval of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles (Framework Directive), and amending Annexes I and XII to Commission Regulation (EC) No 692/2008 implementing and amending Regulation (EC) No 715/2007 of the European Parliament and of the Council on type-approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information

COMMISSION REGULATION (EU) No 195/2013
of 7 March 2013
amending Directive 2007/46/EC of the European Parliament and of the Council and Commission Regulation (EC) No 692/2008 as concerns innovative technologies for reducing CO_2 emissions from light passenger and commercial vehicles

COMMISSION REGULATION (EU) No 136/2014
of 11 February 2014
amending Directive 2007/46/EC of the European Parliament and of the Council, Commission Regulation (EC) No 692/2008 as regards emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and Commission Regulation (EU) No 582/2011 as regards emissions from heavy duty vehicles (Euro VI)

COMMISSION REGULATION (EU) 2015/45
of 14 January 2015
amending Directive 2007/46/EC of the European Parliament and of the Council and Commission Regulation (EC) No 692/2008 as regards innovative technologies for reducing CO_2 emissions from light commercial vehicles.

Proposal for a
REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
amending Regulations (EC) No 715/2007 and (EC) No 595/2009 as regards the reduction of pollutant emissions from road vehicles

1.1.2.1 Scope

Article 2

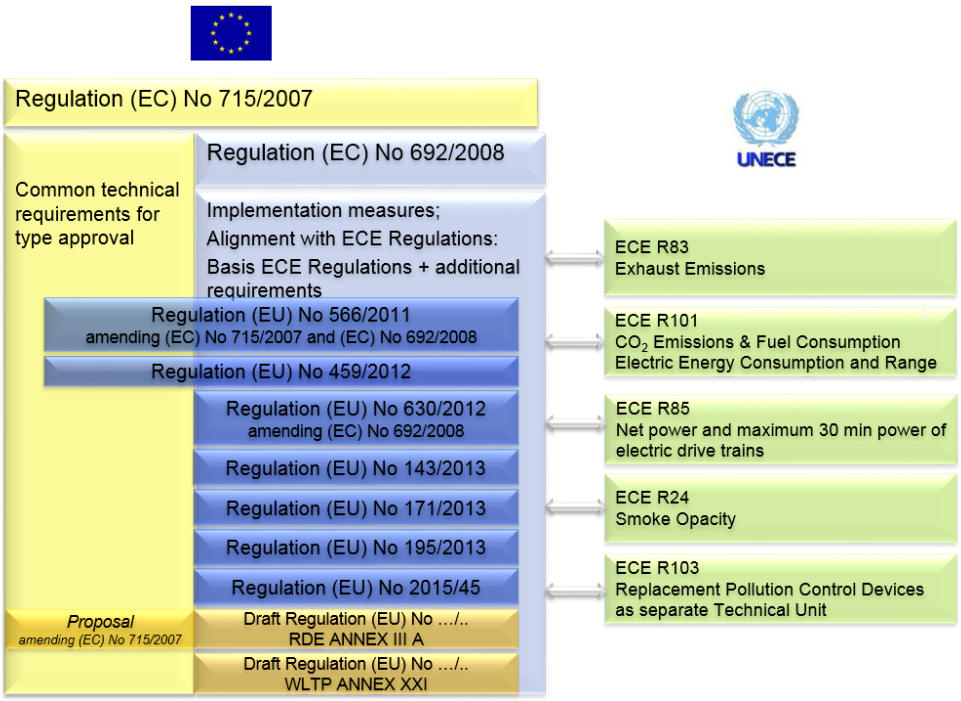
1. This Regulation shall apply to motor vehicles of categories M1, M2, N1 and N2 as defined in Annex II of Directive 70/156/EEC with a reference mass not exceeding 2 610 kg .

2. At the manufacturer's request, type approval granted under this Regulation may be extended from vehicles covered by paragraph 1 to M1, M2, N1 and N2 vehicles with a reference mass not exceeding 2840 kg and which meet the conditions laid down in this Regulation and its implementing measures.

DRAFT EUROPEAN PARLIAMENT LEGISLATIVE RESOLUTION
on the proposal for a regulation of the European Parliament and of the Council amending Regulations (EC) No 715/2007 and (EC) No 595/2009 as regards the reduction of pollutant emissions from road vehicles:

2. After publication of the delegated acts adopted in accordance with the second subparagraph and at the manufacturer's request, this Regulation shall apply to vehicles of categories M1, M2, N1 and N2 as defined in Annex II to Directive 2007/46/EC of the European Parliament and of the Council with a reference mass exceeding 2 610 kg but with a maximum vehicle mass not exceeding 7 500 kg.

1.1.2.2 Legislation Overview



1.1.2.3 Introduction Dates

Vehicle Category	Euro 5		Euro 6	
	New Type [1] Approval	All New [1] Registrations	New Type Approval	All New Registrations
M	1 September 2009	1 January 2011	1 September 2014	1 September 2015
N1 Class I	1 September 2009	1 January 2011	1 September 2014	1 September 2015
N1 Class II & III	1 September 2010	1 January 2012 [2]	1 September 2015	1 September 2016
N2	1 September 2010	1 January 2012	1 September 2015	1 September 2016

[1] For the test on tailpipe emissions, the limit values applied to vehicles designed to fulfil specific social needs shall be the same as for category N1 class III vehicles.
[2] also for vehicles designed to fulfil specific social needs

The 5.0 mg/km emission limit for mass of particulate matter referred to the Tables below shall be effective from the applicable dates for Euro 5 table above. The 4.5 mg/km emission limit for mass of particulate matter and the particle number limit referred to the Tables below shall be effective from 1 September 2011 for the type-approval on new types of vehicles and from 1 January 2013 for all new vehicles sold, registered or put into service in the Community.

1.1.2.4 Type Approval Tests and Emission Overview

Vehicle category	Vehicles with positive ignition engines including hybrids									Vehicles with CI engines including hybrids		Pure Electric Vehicles	Hydrogen Fuel Cell Vehicles
	Mono fuel				Bi-fuel[1]			Flex-fuel[1]		Flex Fuel	Mono fuel		
					Petrol (E5/E10)[5]	Petrol (E5/E10)[5]	Petrol (E5/E10)[5]	Petrol (E5/E10)[5]	NG/ Biomethane	Diesel (B5/B7)[5]	Diesel (B5/B7)[5]		
Reference fuel	**Petrol (E5/E10)[5]**	**LPG**	**NG/ Biomethane**	**Hydro-gen**	**LPG**	**NG/ Biomethane**	**Hydrogen**	**Ethanol (E85)**	**H2NG**	**Biodiesel**			
Gaseous pollutants (Type 1 test)	Yes	Yes	Yes	Yes[4]	Yes (both fuels)	Yes (both fuels)	Yes (both fuels)[4]	Yes (both fuels)	Yes (both fuels)	Yes (B5/B7)[2,5]	Yes		
Particulate mass and number (Type 1 test)	Yes				Yes (petrol)	Yes (petrol)	Yes (petrol)	Yes (both fuels)		Yes (B5/B7)[2,5]	Yes		
Gaseous pollutants, RDE (Type 1A test)	*Yes*	*Yes*	*Yes*	*Yes [4]*	*Yes (both fuels)*	*Yes (both fuels)*	*Yes (both fuels)*	*Yes (both fuels)*	*Yes (both fuels)*	*Yes (both fuels)*	*Yes*	-	-
Particulate number, RDE (Type 1A test) [6]	*Yes*	-	-	-	*Yes (both fuels)*	*Yes (both fuels)*	*Yes (both fuels)*	*Yes (both fuels)*	-	*Yes (both fuels)*	*Yes*	-	-
Idle emissions (Type 2 test)	Yes	Yes	Yes		Yes (both fuels)	Yes (both fuels)	Yes (petrol)	Yes (both fuels)	Yes (NG/biomethane)				
Crankcase emissions (Type 3 test)	Yes	Yes	Yes		Yes (petrol)	Yes (petrol)	Yes (petrol)	Yes (petrol)	Yes (NG/biomethane)				
Evaporative emissions (Type 4 test)	Yes				Yes (petrol)	Yes (petrol)	Yes (petrol)	Yes (petrol)					

Euro 5 & 6 Regulation

Euro 5 & 6 Regulation 2009/2014

Vehicle category	Vehicles with positive ignition engines including hybrids									Vehicles with CI engines including hybrids		Pure Electric Vehicles	Hydrogen Fuel Cell Vehicles
	Mono fuel				Bi-fuel[1]			Flex-fuel[1]		Flex Fuel	Mono fuel		
					Petrol (E5/E10)[5]	Petrol (E5/E10)[5]	Petrol (E5/E10)[5]	Petrol (E5/E10)[5]	NG/ Biomethane	Diesel (B5/B7)[5]	Diesel (B5/B7)[5]		
Reference fuel	**Petrol (E5/E10)[5]**	**LPG**	**NG/ Biomethane**	**Hydro-gen**	**LPG**	**NG/ Biomethane**	**Hydrogen**	**Ethanol (E85)**	**H2NG**	**Biodiesel**			
Durability (Type 5 test)	Yes	Yes	Yes	Yes	Yes (petrol)	Yes (petrol)	Yes (petrol)	Yes (petrol)	Yes (NG/biomethane)	Yes (B5/B7)[2,5]	Yes		
Low temperature emissions (Type 6 test)	Yes				Yes (petrol)	Yes (petrol)	Yes (petrol)	Yes[3] (both fuels)					
In-service conformity	Yes	Yes	Yes	Yes	Yes (both fuels)	Yes (both fuels)	Yes (both fuels)	Yes (both fuels)	Yes (both fuels)	Yes (B5/B7)[2,5]	Yes		
On-board diagnostics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
CO_2 emissions, fuel and electric energy consumption and electric range	Yes	Yes	Yes	Yes	Yes (both fuels)	Yes (both fuels)	Yes (both fuels)	Yes (both fuels)	Yes (both fuels)	Yes (B5/B7)[2,5]	Yes	Yes	Yes
Smoke opacity										Yes (B5/B7)[2,5]	Yes		
Engine power	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes:
[1] When a bi-fuel vehicle is combined with a flex fuel vehicle, both test requirements are applicable.
[2] This provision is temporary, further requirements for biodiesel shall be proposed later on.
Test on petrol only before the dates set out in Article 10(6) of Regulation (EC) No 715/2007. The test will be performed on both fuels after these dates. The E75 test reference fuel specified in Annex IX, Section B, shall be used.
[4] Only NO_x emissions shall be determined when the vehicle is running on hydrogen.
[5] Upon the choice of the manufacturer vehicles with positive and compression ignition engines may be tested with either E5 or E10 and either B5 or B7 fuels, respectively. However:

- Not later than sixteen months after the dates set out in Article 10(4) of Regulation (EC) No 715/2007, new type -approvals shall only be performed with E10 and B7 fuels,
- Not later than three years after the dates set out in Article 10(5) of Regulation (EC) No 715/2007, all new vehicles shall be type-approved with E10 and B7 fuels.

Explanatory note:
The dates of application of the reference fuels E10 and B7 for all new vehicles have been set out to minimise the test burden. If, however, technical evidence for vehicles certified with E5 or B5 reference fuels showing significantly higher emissions when tested with E10 or B7 is established, the Commission should make a proposal advancing these introduction dates.
[6] *The particulate number RDE test only applies to vehicles for which Euro 6 emission limits are defined in Table 2 of Annex I to Regulation (EC) 715/2007*

1.1.2.4.1 Gaseous Pollutants & Particulates (Type 1 Test)

EURO 5		Reference mass (RM) (kg)	Limit values													
			CO		THC		NMHC		NO_x		THC + NO_x		PM[4]		(PN)[5]	
			L1 (mg/km)		L2 (mg/km)		L3 (mg/km)		L4 (mg/km)		L2 + L4 (mg/km)		L5 (mg/km)		L6 (#/km)	
Cate-gory	Class		PI	CI	PI	CI	PI	CI	PI	CI	PI	CI	PI[1,2]	CI	PI	CI
M	—	All	1000	500	100	—	68	—	60	180	—	230	5.0/ 4.5	5.0/ 4.5	—	6.0 x 10^{11}
N1	I	RM ≤ 1305	1000	500	100	—	68	—	60	180	—	230	5.0/ 4.5	5.0/ 4.5	—	6.0 x 10^{11}
	II	1305 < RM ≤ 1760	1810	630	130	—	90	—	75	235	—	295	5.0/ 4.5	5.0/ 4.5	—	6.0 x 10^{11}
	III	1760 < RM	2270	740	160	—	108	—	82	280	—	350	5.0/ 4.5	5.0/ 4.5	—	6.0 x 10^{11}
N2	—	All	2270	740	160	—	108	—	82	280	—	350	5.0/ 4.5	5.0/ 4.5	—	6.0 x 10^{11}

EURO 6		Reference mass (RM) (kg)	Limit values													
			CO		THC		NMHC		NO_x		THC + NO_x		PM[1]		(PN)	
			L1 (mg/km)		L2 (mg/km)		L3 (mg/km)		L4 (mg/km)		L2 + L4 (mg/km)		L5 (mg/km)		L6 (#/km)	
Cate-gory	Class		PI	CI	PI	CI	PI	CI	PI	CI	PI	CI	PI[1,2]	CI	PI [2,3]	CI
M	—	All	1000	500	100	—	68	—	60	80	—	170	5.0/ 4.5	5.0/ 4.5	6.0 x 10^{11}	6.0 x 10^{11}
N1	I	RM ≤ 1305	1000	500	100	—	68	—	60	80	—	170	5.0/ 4.5	5.0/ 4.5	6.0 x 10^{11}	6.0 x 10^{11}
	II	1305 < RM ≤ 1760	1810	630	130	—	90	—	75	105	—	195	5.0/ 4.5	5.0/ 4.5	6.0 x 10^{11}	6.0 x 10^{11}
	III	1760 < RM	2270	740	160	—	108	—	82	125	—	215	5.0/ 4.5	5.0/ 4.5	6.0 x 10^{11}	6.0 x 10^{11}
N2	—	All	2270	740	160	—	108	—	82	125	—	215	5.0/ 4.5	5.0/ 4.5	6.0 x 10^{11}	6.0 x 10^{11}

[1] The limit of 5.0 mg/km for the mass of particulate emissions applies to vehicles type approved to the emission limits of this table with the previous particulate mass measurement protocol, before 1.9.2011.
[2] Positive ignition particulate mass standards apply only to vehicles with direct injection engines.

[3] Until three years after the dates specified in Article 10(4) and (5) for new type approvals and new vehicles respectively, a particle number emission limit of 6.0 × 10^{12} #/km shall apply to Euro 6 PI direct injection vehicles upon the choice of the manufacturer. Until those dates at the latest a type approval test method ensuring the effective limitation of the number of particles emitted by vehicles under real driving conditions shall be implemented.'

[4] A revised measurement procedure shall be introduced before the application of the 4.5 mg/km limit value.
[5] A new measurement procedure shall be introduced before the application of the limit value.

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For Test Procedure see **Type I Test (NEDC)**.

There are exceptions for vehicles "designed to fulfil specific social needs" but these apply for Euro 5 only.

The Euro 5 tailpipe emissions limits for these vehicles will be the same as for N1 Class III.

Recalibrated emission limits for particulate mass and new limits for particle number are specified.

See **Type 1 Test Exhaust Emissions at Ambient Conditions**

1.1.2.4.2 Real Driving Emissions (RDE)

Verifying Real Driving Exhaust Emissions –Annex IIIA

COMMISSION REGULATION (EU) No …/..
of XXX
amending Commission Regulation (EC) No 692/2008 as regards emissions from light passenger and commercial vehicles (Euro 6)
March 2015

This Annex describes the procedure to verify the Real Driving Emissions (RDE) performance of light passenger and commercial vehicles.

General Requirements

2.1 Throughout its normal life the emissions of a vehicle type approved according to Regulation (EC) No 715/2007 as determined according to the requirements of this Annex and emitted at a RDE test performed in accordance to the requirements of this Annex, shall not be higher than the following not-to-exceed (NTE) values:

$$NTE_{pollutant} = CF_{pollutant} \; x \; \text{EURO-6},$$

where Euro-6 is the applicable Euro 6 emission limit of Table 2 of Annex I to Regulation (EC) 715/2007 and $CF_{pollutant}$ the conformity factor for the respective pollutant specified as follows:

	NO_x	PN	CO [1]	THC	$THC+NO_x$
$CF_{pollutant}$	tbd	tbd	-	-	-

[1] CO emissions shall only be measured and recorded at RDE tests.

See: **Real Driving Emissions (RDE)**

1.1.2.4.3 Idle Emissions (Type 2 Test)

	CO Emission Limit
Normal Engine Idling Speed	0.3 %vol.
High Idle Speed (min. 2000min^{-1}, Lambda 1 ± 0.03)	0.2 %vol.

See **Type 2 Test CO at Idling Speeds**

1.1.2.4.4 Crankcase Emissions (Type 3 Test)

The manufacturer shall ensure that for the Type 3 test, the engine's ventilation system does not permit the emission of any crankcase gases into the atmosphere.

See **Type 3 Crankcase Emissions**

1.1.2.4.5 Evaporative Emissions (Type 4 Test)

The evaporative emissions test is designed to determine hydrocarbon evaporative emissions as a consequence of diurnal temperatures fluctuation, hot soaks during parking, and urban driving.

Evaporative HC Emissions	2 g/Test

For Evaporative Test Procedure see **EU Evaporative Test.**

1.1.2.4.6 Durability (Type 5 Test)

Durability testing of pollution control devices undertaken for type approval shall cover 160,000 km. Type 1 Test emission limits apply.
To comply with this durability test, the manufacturers should have the possibility to make use of test bench ageing, subject to the implementing measures of the Directive.
As an alternative to durability testing, a manufacturer may choose to apply the assigned deterioration factors from the following table:

Engine Category	Assigned deterioration factors						
	CO	THC	NMHC	NO_x	HC + NO_x	PM	PN
Positive-ignition	1.5	1.3	1.3	1.6	—	1.0	1.0
Compression-ignition (Euro 5)	1.5	—	—	1.1	1.1	1.0	1.0
Compression-ignition (Euro 6) (1)							

(1) Euro 6 deterioration factors to be determined

See **Type 5 Test Durability**.

1.1.2.4.7 Cold Start Emissions (Type 6 Test)

Test temperature 266 K (– 7 °C)			
Vehicle Category	**Class**	**Mass of carbon monoxide (CO)**	**Mass of hydrocarbons (HC)**
		g/km	g/km
M1		15	1.8
N1	I	15	1.8
	II	24	2.7
	III	30	3.2
N2		30	3.2

The Type 6 test measuring emissions at low temperatures set shall not apply to diesel vehicles.

Ambient temperature levels encountered by the test vehicle shall average: 266 K (-7 °C) 3 K and shall not be less than 260 K (-13 °C), or more than 272 K (-1 °C). The temperature may not fall below 263 K (-10 °C), or exceed 269 K (-4 °C) for more than three consecutive minutes.

The Part One urban driving cycle consists of four elementary urban cycles which together make a complete Part One cycle. See **Part One urban driving cycle**.

However, when applying for type-approval, manufacturers shall present to the approval authority with information showing that the NO_x aftertreatment device reaches a sufficiently high temperature for efficient operation within 400 seconds after a cold start at - 7 °C as described in the Type 6 test.

In addition, the manufacturer shall provide the approval authority with information on the operating strategy of the exhaust gas recirculation system (EGR), including its functioning at low temperatures.
This information shall also include a description of any effects on emissions.

The approval authority shall not grant type-approval if the information provided is insufficient to demonstrate that the aftertreatment device actually reaches a sufficiently high temperature for efficient operation within the designated period of time.
At the request of the Commission, the approval authority shall provide information on the performance of NO_x aftertreatment devices and EGR system at low temperatures.

1.1.2.4.8 In-service Conformity

This Annex II sets out the tailpipe emissions and OBD (inclusive $IUPR_M$) in-service conformity requirements for vehicles type approved to this Regulation.

2.1. The vehicle shall belong to a vehicle type that is type-approved under this Regulation and covered by a certificate of conformity in accordance with Directive 2007/46/EC. For checking of $IUPR_M$, the vehicle shall be approved to the OBD standards Euro 5+, Euro 6- plus IUPR or later. It shall be registered and have been used in the Union.

2.2. The vehicle shall have been in service for at least 15 000 km or 6 months, whichever the later, and for no more than 100 000 km or 5 years, whichever the sooner.

See **In Service Conformity**.

1.1.2.4.9 On-Board Diagnostics

All vehicles shall be equipped with an OBD system so designed, constructed and installed in a vehicle as to enable it to identify types of deterioration or malfunction over the entire life of the vehicle. In achieving this objective the approval authority shall accept that vehicles which have travelled distances in excess of the Type V durability distance (according to Annex 9 of this Regulation) may show some deterioration in OBD system performance such that the emission limits may be exceeded before the OBD system signals a failure to the driver of the vehicle.

The OBD system shall indicate the failure of an emission-related component or system when that failure results in emissions exceeding the Euro 5 threshold limits given below:

EURO 5		Reference mass (RW) (kg)	(CO) (mg/km)		(NMHC) (mg/km)		(NO_x) (mg/km)		(PM) (mg/km)	
Category	Class		PI	CI	PI	CI	PI	CI	PI[1]	CI[2]
M	—	All	1900	1900	250	320	300	540	50	50
N_1 [3]	I	RW ≤ 1305	1900	1900	250	320	300	540	50	50
	II	1305 < RW ≤ 1760	3400	2400	330	360	375	705	50	50
	III	1760 < RW	4300	2800	400	400	410	840	50	50
N_2	-	All	4300	2800	400	400	410	840	50	50

[1] Positive ignition particulate mass standards apply only to vehicles with direct injection engines.
[2] PM threshold limit of 80 mg/km shall apply to vehicles of categories M and N with a reference mass greater than 1,760 kg until 1 September 2011 for the type approval of new types of vehicles.
[3] Includes M1 vehicles that meet the 'special social needs' definition.

For Euro 6 see **Euro 6 OBD threshold limits**.

1.1.2.4.10 Smoke Opacity

In addition to the type-approval certificate set out in point 2.4 of Appendix 4, where a check is carried out on a vehicle taken from the series, the tests shall be carried out as follows:

4.10.2.1 A vehicle which has not been run in shall be subjected to the test under free acceleration described in section 4.3 of Appendix 2 to Annex IV. The vehicle shall be deemed to conform to the approved type if the absorption coefficient determined does not exceed by more than 0.5 m^{-1} the figure shown in the approval mark.

4.10.2.2 If the figure determined in the test referred to in point 4.10.2.1. exceeds by more than 0.5 m^{-1} the figure shown in the approval mark, a vehicle of the type considered or its engine shall be subjected to the test at steady speeds over the full-load curve, as described in section 4.2 of Appendix 2 to Annex IV. The emission levels shall not exceed the limits prescribed in Annex 7 to UN/ECE Regulation No 24 (1).

1.1.3 Type Approval Timetable and Certification Numbering System

Key:

'Euro 5a' emissions standard
= excludes revised measurement procedure for particulate matter, particle number standard and flex fuel vehicle low temperature emission testing with biofuel;

'Euro 5b' emissions standard
= Full Euro 5 emission requirements including revised measurement procedure for particulate matter, particle number standard for CI vehicles and flex fuel vehicle low temperature emission testing with biofuel;

'Euro 6a' emissions standard
= excludes revised measurement procedure for particulate matter, particle number standard and flex fuel vehicle low temperature emission testing with biofuel;

'Euro 6b' emissions standard
= Euro 6 emission requirements including revised measurement procedure for particulate matter, particle number standards (preliminary values for PI vehicles) and flex fuel vehicle low temperature emission testing with biofuel;

'Euro 6c' emissions standard
= Full Euro 6 emission requirements, i.e. Euro 6b emission standard and final particle number standards for PI vehicles and use of E10 and B7 reference fuel (where applicable);

'Euro 5' OBD standard
= Base Euro 5 OBD requirements excluding in use performance ratio (IUPR), NO x monitoring for petrol vehicles and tightened PM threshold limits for diesel;

'Euro 5+' OBD standard
= includes relaxed in use performance ratio (IUPR), NO x monitoring for petrol vehicles and tightened PM threshold limits for diesel;

'Euro 6-' OBD standard
= relaxed OBD threshold limits;

'Euro 6- plus IUPR' OBD standard
= includes relaxed OBD threshold limits and relaxed in use performance ratio (IUPR);

'Euro 6-1' OBD standard
= Full Euro 6 OBD requirements but with preliminary OBD threshold limits as defined in point 2.3.4 of Annex XI and partially relaxed IUPR;

'Euro 6-2' OBD standard
= Full Euro 6 OBD requirements but with final OBD threshold limits as defined in point 2.3.3 of Annex XI.

Character	Emission standard	OBD standard	Vehicle category and class	Engine	Implementation date		Last date of registration
					new types	new vehicles	
A	Euro 5a	Euro 5	M,N_1 class I	PI,CI	01.09.2009	01.01.2011	31.12.2012
B	Euro 5a	Euro 5	M_1 (1)	CI	01.09.2009	01.01.2012	31.12.2012
C	Euro 5a	Euro 5	M_1G(2)	CI	01.09.2009	01.01.2012	31.08.2012
D	Euro 5a	Euro 5	N_1 class II	PI,CI	01.09.2010	01.01.2012	31.12.2012
E	Euro 5a	Euro 5	N_1 class III, N_2	PI,CI	01.09.2010	01.01.2012	31.12.2012
F	Euro 5b	Euro 5	M,N_1 class I	PI,CI	01.09.2011	01.01.2013	31.12.2013
G	Euro 5b	Euro 5	M_1 (1)	CI	01.09.2011	01.01.2013	31.12.2013
H	Euro 5b	Euro 5	N_1 class II	PI,CI	01.09.2011	01.01.2013	31.12.2013
I	Euro 5b	Euro 5	N_1 class III, N_2	PI,CI	01.09.2011	01.01.2013	31.12.2013
J	Euro 5b	Euro 5+	M,N_1 class I	PI,CI	01.09.2011	01.01.2014	31.08.2015
K	Euro 5b	Euro 5+	M_1 (1)	CI	01.09.2011	01.01.2014	31.08.2015
L	Euro 5b	Euro 5+	N_1 class II	PI,CI	01.09.2011	01.01.2014	31.08.2016
M	Euro 5b	Euro 5+	N_1 class III, N_2	PI,CI	01.09.2011	01.01.2014	31.08.2016
N	Euro 6a	Euro 6-	M,N_1 class I	CI			31.12.2012
O	Euro 6a	Euro 6-	N_1 class II	CI			31.12.2012
P	Euro 6a	Euro 6-	N_1 class III, N_2	CI			31.12.2012
Q	Euro 6b	Euro 6-	M,N_1 class I	CI			31.12.2013
R	Euro 6b	Euro 6-	N_1 class II	CI			31.12.2013
S	Euro 6b	Euro 6-	N_1 class III, N_2	CI			31.12.2013
T	Euro 6b	Euro 6- plus IUPR	M,N_1 class I	CI			31.08.2015
U	Euro 6b	Euro 6- plus IUPR	N_1 class II	CI			31.08.2016
V	Euro 6b	Euro 6- plus IUPR	N_1 class III, N_2	CI			31.08.2016
W	Euro 6b	Euro 6-1	M,N_1 class I	PI,CI	01.09.2014	01.09.2015	31.08.2018
X	Euro 6b	Euro 6-1	N_1 class II	PI,CI	01.09.2015	01.09.2016	31.08.2019
Y	Euro 6b	Euro 6-1	N_1 class III, N_2	PI,CI	01.09.2015	01.09.2016	31.08.2019
ZA	Euro 6c	Euro 6-1	M,N_1 class I	PI,CI			31.08.2018
ZB	Euro 6c	Euro 6-1	N_1 class II	PI,CI			31.08.2019
ZC	Euro 6c	Euro 6-1	N_1 class III, N_2	PI,CI			31.08.2019
ZD	Euro 6c	Euro 6-2	M,N_1 class I	PI,CI	01.09.2017	01.09.2018	
ZE	Euro 6c	Euro 6-2	N_1 class II	PI,CI	01.09.2018	01.09.2019	
ZF	Euro 6c	Euro 6-2	N_1 class III, N_2	PI,CI	01.09.2018	01.09.2019	
ZX	n.a.	n.a.	All vehicles	Battery full electric	01.09.2009	01.01.2011	
ZY	n.a.	n.a.	All vehicles	Fuel cell electric	01.09.2009	01.01.2011	
ZZ	n.a.	n.a.	All vehicles (3)	PI,CI	01.09.2009	01.01.2011	

Notes:
(1) to fulfil specific social needs (excluding M 1 G)
(2) to fulfil specific social needs
(3) using certificates according to point 2.1.1 of Annex I

Contact: emrep@avl.com
http://www.avl.com/legislation-services

1.1.4 Euro 5 & 6 Implementing Measures

COMMISSION REGULATION (EC) No 692/2008
of 18 July 2008
implementing and amending Regulation (EC) No 715/2007 of the European Parliament and of the Council on type-approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information

COMMISSION REGULATION (EU) …/…
of XXX
amending Regulation (EC) No 692/2008 as regards emissions from light passenger and commercial vehicles (Euro 6) (Italic)

1.1.4.1 Extensions to Type-Approvals

At the manufacturer's request, type approval granted under this Regulation may be extended from vehicles covered by paragraph 1 to M1, M2, N1 and N2 vehicles with a reference mass not exceeding 2840 kg and which meet the conditions laid down in this Regulation and its implementing measures.

Extension under certain conditions:

Overview:

3.1. Extensions for tailpipe emissions (type 1, type 2 and type 6 tests)

3.1.1. Vehicles with different reference masses

3.1.2. Vehicles with different overall transmission ratios

3.1.3. Vehicles with different reference masses and transmission ratios

3.1.4. Vehicles with periodically regenerating systems

3.1.5. Application of extensions to other vehicles

3.2. Extensions for evaporative emissions (type 4 test)

The Rest of the Text is not available in the Demo Version.

NEWS & UPDATES

No News and Updates in the Demo Version