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COMMISSION DELEGATED REGULATION (EU) 2015/96

of 1 October 2014

supplementing Regulation (EU) No 167/2013 of the European Parliament and of the Council as regards environmental and propulsion unit performance requirements of agricultural and forestry vehicles

(Text with EEA relevance)

(OJ L 16, 23.1.2015, p. 1)

Amended by:

		Official Journal		
		No	page	date
►**M1**	Commission Delegated Regulation (EU) 2016/1788 of 14 July 2016	L 277	1	13.10.2016

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COMMISSION DELEGATED REGULATION (EU) 2015/96

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(Text with EEA relevance)

CHAPTER I

SUBJECT MATTER AND DEFINITIONS

Article 1

Subject matter

This Regulation establishes the detailed technical requirements and test procedures regarding environmental and propulsion unit performance with respect to pollutant emissions and permissible external sound levels, and the approval and market surveillance of agricultural and forestry vehicles, their engines and their systems, components and separate technical units in accordance with Regulation (EU) No 167/2013.

Article 2

Definitions

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For the purposes of this Regulation, the definitions in Annex XXXIII to Commission Delegated Regulation (EU) 2015/208 ([1]) shall apply. The following definitions shall also apply:

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(1) ‘emitted pollutants’ means gaseous and particulate matter exhaust pollutant emissions;

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(2) ‘pollutant exhaust emissions after-treatment system’ means the passage of exhaust gases through a device or system whose purpose is to chemically or physically alter the emitted pollutants prior to their release to the atmosphere, including catalysts, particulate traps or any other component, system or separate technical unit for the reduction or treatment of the engine gaseous and particulate matter exhaust pollutant emissions;

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(3) ‘external sound emissions abatement system’ means all the components and separate technical units that comprise the exhaust and the silencing system, including the exhaust system, the air intake system, the silencer or any systems, components, and

([1]) Commission Delegated Regulation (EU) 2015/208 of 8 December 2014 supplementing Regulation (EU) No 167/2013 of the European Parliament and of the Council with regard to vehicle functional safety requirements for the approval of agricultural and forestry vehicles (OJ L 42, 17.2.2015, p. 1).

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separate technical units with a relevance to the permissible external sound levels emitted by the agricultural or forestry vehicle, of a type fitted to the vehicle at the time of type-approval or extension of type-approval;

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(4) ‘pollution control device’ means a component, system or separate technical unit which is part of the pollutant exhaust emissions after-treatment system;

(5) ‘replacement pollution control device’ means a component, system or separate technical unit intended to replace, partially or fully, a pollutant exhaust emissions after-treatment system on a vehicle type-approved in accordance with Regulation (EU) No 167/2013 and this Regulation;

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(6) ‘engine type’ means a category of engines which do not differ in such essential engine characteristics as specified in Appendix 1 of Annex II, to Directive 97/68/EC;

(7) ‘parent engine’ means an engine representative of the propulsion unit or engine family as set out in point 7 of Annex I to Directive 97/68/EC;

(8) ‘engine family’ means a grouping of engines of a manufacturer in accordance to point 6 of Annex I of Directive 97/68/EC which, due to their design, are expected to have similar exhaust pollutant emission characteristics and which comply with the requirements of this Regulation;

(9) ‘replacement engine’ means a newly built engine intended to replace an engine in an agricultural or forestry vehicle and which has been supplied for that purpose only;

(10) ‘auxiliaries’ means all equipment, apparatus and devices listed in Table 1 of Annex 4 to UNECE Regulation No 120 01 series of amendments;

(11) ‘engine power’ means the power obtained on a test bench at the end of the crankshaft or its equivalent at the corresponding engine speed;

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(12) ‘net power’ means the engine power obtained on a test bench at the end of the crankshaft or its equivalent at the corresponding engine speed with the auxiliaries, listed in Table 1 of Annex 4 to UNECE Regulation No 120, 01 series of amendments [1], determined under reference atmospheric conditions.

[1] OJ L 166, 30.6.2015, p. 170.

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CHAPTER II

OBLIGATIONS OF MANUFACTURERS

Article 3

General obligations

1. The manufacturer shall ensure that all new vehicles placed on the market, registered or entering into service within the Union, all new and replacement engines placed on the market or entering into service within the Union and all new systems, components and separate technical units that may affect the vehicle's environmental and propulsion unit performance which are placed on the market or enter into service within the Union are designed, constructed and assembled so as to enable the vehicle, in normal use and maintained in accordance with the prescriptions of the manufacturer, to comply with the requirements laid down in this Regulation.

2. The manufacturer of vehicles, engines, systems, components and separate technical units shall demonstrate to the approval authority, by means of physical demonstration and testing, that the vehicles, engines, systems, components and separate technical units made available on the market, registered or entering into service in the Union comply with the detailed technical requirements and test procedures laid down in Articles 6 to 9a and Annexes I and II of Directive 97/68/EC.

3. This Article shall not apply to vehicle types for export to third countries.

Article 4

General requirements on pollutant emissions and external sound levels

1. The manufacturer shall comply with the requirements regarding pollutant emissions laid down in Annexes I and II.

The manufacturer shall comply with the requirements regarding external sound level laid down in Annex III.

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2. The type-approval regarding exhaust pollutant emissions and external sound level requirements may be extended by the type-approval authorities to different vehicle variants, versions and engine types and families, provided that the vehicle variant, version, propulsion unit and pollution control system parameters have an identical performance or remain within the levels specified in Article 19(3) and (4) of Regulation (EU) No 167/2013.

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3. The manufacturer shall report without delay to the approval authority any modification to systems, components and separate technical units that may affect the environmental and propulsion unit performance of the agricultural and forestry vehicle after the approved vehicle type is placed on the market in accordance with Article 19 of Regulation (EU) No 167/2013. The obligation to report shall include the following:

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(a) the parameters of the engine type or engine family, as set out in Annex II to Directive 97/68/EC and in point 9.1 of Annex I to this Regulation;

(b) the engine's pollutant exhaust emissions after-treatment system, as described in point 6.10 of Annex I to Directive 97/68/EC and point 9.1.10 of Annex I to this Regulation and point 3.3 of Annex II to this Regulation;

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(c) the external sound emissions abatement system of the vehicle, in accordance with the requirements of Annex III.

4. In addition to the provisions of paragraphs 1, 2 and 3 and Article 14, the manufacturer shall comply to the following environmental and propulsion unit requirements:

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(a) as regards the reference fuels, the requirements set out in Annex 7 to UNECE Regulation No 120, 01 series of amendments or Annex V to Directive 97/68/EC;

(b) as regards pollution control devices and replacement pollution control devices, the requirements set out in Appendix 5 of Annex III to Directive 97/68/EC;

(c) as regards test equipment, the requirements set out in Annex III to Directive 97/68/EC.

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5. The manufacturer shall provide evidence to the approval authority that the changes referred to in paragraph 3 do not deteriorate the environmental performance of a vehicle in relation to the environmental performance demonstrated at type-approval.

6. The manufacturer shall demonstrate that replacement pollution control devices requiring type-approval pursuant to Articles 9 to 13 of this Regulation, which are placed on the market or enter into service in the Union are approved in accordance with the detailed technical requirements and test procedures set out in point 4.1.1. of Annex I of Directive 97/68/EC, where applicable.

7. Vehicles equipped with a replacement pollution control device shall meet the same environmental test requirements and pollutant emission limit values as vehicles equipped with an original pollution control device.

Article 5

Specific obligations with respect to type approval of vehicles or engines

1. The manufacturer shall ensure that the gaseous and particulate matter exhaust pollutant emissions of the engine type do not exceed the gaseous and particulate matter exhaust pollutant emissions as specified for the engine categories and power ranges under the scope of Directive 97/68/EC.

2. The manufacturer shall ensure that the propulsion unit performance corresponds to the level reported to the approval authority in the information folder when making the vehicle available on the market or before its entry into service.

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The use of defeat devices, as defined in point 2.8c of Annex I to Directive 97/68/EC, that reduce the effectiveness of emission control equipment shall be prohibited in accordance to point 4.1.1 of Annex III to Directive 97/68/EC.

3. Changes to the make of a system, component or separate technical unit that occur after a type-approval shall not automatically invalidate a type-approval, unless its original characteristics or technical parameters are changed in such a way that the functionality of the engine or pollution control system is affected.

Article 6

Requirements for type-approval of engines as a separate technical unit

In order to receive an EU type-approval of an engine or engine family as a separate technical unit, the manufacturer shall, in accordance with the provisions of Annex I of this Regulation, demonstrate that the engines are subject to the tests and comply with the requirements set out in this Regulation and in Directive 97/68/EC.

CHAPTER III

OBLIGATIONS OF THE MEMBER STATES

Article 7

Equivalence of alternative type-approvals

1. National authorities shall recognise alternative type-approvals as equivalent to an approval under this Regulation in accordance with Annex IV.

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2. In addition to the requirements referred to in the first paragraph, for an alternative type-approval to be recognised as equivalent to an approval under this Regulation, the manufacturer shall provide non-discriminatory access to vehicle repair and maintenance information as required by Chapter XV of Regulation (EU) No 167/2013 and Article 8 of Commission Delegated Regulation (EU) No 1322/2014 ([1]).

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Article 8

Measurement of pollutant emissions

The technical services shall measure the pollutant exhaust emissions of agricultural and forestry vehicles and engines in accordance with the provisions of Directive 97/68/EC as adapted by the requirements of Annex I to this Regulation.

([1]) Commission Delegated Regulation (EU) No 1322/2014 of 19 September 2014 supplementing and amending Regulation (EU) No 167/2013 of the European Parliament and of the Council with regard to vehicle construction and general requirements for the approval of agricultural and forestry vehicles (OJ L 364, 18.12.2014, p. 1).

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Article 9

Measurement of the external sound level

1. The technical services shall measure the external sound level of agricultural and forestry vehicles of category T equipped with pneumatic tyres and of category C equipped with track belts in motion, for type-approval purposes, in accordance with the test conditions and methods set out in point 1.3.1 of Annex III.

2. The test conditions and methods set out in point 1.3.2 of Annex III shall also be carried out for stationary agricultural and forestry vehicles of categories T and C equipped with track belts and the results shall be recorded by the technical services in accordance to the provisions of point 1.3.2.4 of Annex III.

3. The technical services shall measure the external sound level of agricultural and forestry vehicles of category C equipped with track chains, for type-approval purposes, in accordance with the stationary test conditions and methods set out in point 1.3.2 of Annex III.

4. The test conditions and methods set out in point 1.3.3 of Annex III shall be carried out for agricultural and forestry vehicles of category C equipped with track chains and the results shall be recorded by the technical services.

Article 10

Requirements on propulsion unit performance

For the evaluation of propulsion unit performance of agricultural and forestry vehicles, measurements of net power, engine torque and specific fuel consumption shall be carried out in accordance with UNECE Regulation No 120, 01 series of amendments.

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Article 11

Specific provisions concerning Type approval of vehicles or engines

1. Type-approvals may be granted to vehicles equipped with engines not covered by the scope of application of Directive 97/68/EC.

2. From 24 months after the date of entry into force of the legislation extending the scope of Directive 97/68/EC to vehicles equipped with engines not currently covered by the scope of application of that directive [or on 1 January 2018 at the latest], Member States shall refuse to grant type-approvals under this Regulation to vehicles not complying with all the requirements of this Regulation.

3. Type-approvals granted under the first paragraph shall cease to be valid three years after the date of entry into force of the legislation extending the scope of Directive 97/68/EC to those engines [or on 31 December 2018 at the latest].

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With effect from 1 January 2019, Member States shall consider certificates of conformity in respect of new vehicles to be no longer valid for the purposes of Article 38 of Regulation (EU) No 167/2013, and prohibit the registration, sale and entry into service of such vehicles.

4. ►M1 For the purposes of type-approval, the dates set out in Articles 9(3c), 9(3d) and 9(4a) of Directive 97/68/EC shall, for agricultural and forestry vehicles of categories T2, T4.1 and C2, as defined in Article 4(3), (6) and (9) of Regulation (EU) No 167/2013 and equipped with engines of categories L to R, be postponed for 3 years. ◄ The transition and derogation clauses in Articles 9(4a) and 10(5) of Directive 97/68/EC and Article 39 of Regulation (EU) No 167/2013 shall also be delayed accordingly.

5. Replacement engines shall comply with the same limit values that the engine to be replaced had to meet when originally placed on the market.

6. Replacement engines shall be marked in accordance with the Appendix to Annex I.

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Article 12

EU type-approval procedures

Without prejudice to Article 11, if a manufacturer so requests, national authorities may not, on grounds relating to emissions of vehicles, refuse to grant EU type-approval or national type-approval for a new type of vehicle or engine, or prohibit the registration, sale or entry into service of a new vehicle and the sale or use of new engines, where the vehicle or engines concerned comply with Regulation (EU) No 167/2013 and Commission Implementing Regulation (EU) 2015/504 ([1]).

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Article 13

Making available on the market or installation on a vehicle of replacement pollution control devices

Replacement pollution control devices which are also covered by a system type- approval with respect to a vehicle shall not be subject to any additional component or separate technical unit approval in accordance with Article 26(3) or Regulation EU No 167/2013.

Article 14

Flexibility scheme

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1. By way of derogation from Article 4(1), concerning the pollutant emissions, Member States shall allow the placing on the market of a limited number of vehicles fitted with engines meeting the requirements of Article 9 of Directive 97/68/EC under a flexibility scheme, in

([1]) Commission Implementing Regulation (EU) 2015/504 of 11 March 2015 implementing Regulation (EU) No 167/2013 of the European Parliament and of the Council with regard to the administrative requirements for the approval and market surveillance of agricultural and forestry vehicles (OJ L 85, 28.3.2015, p. 1).

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accordance to the provisions of Annex V to this Regulation, at the request of the manufacturer, and on condition that an approval authority has granted the relevant permit for entry into service.

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2. The flexibility scheme set out in paragraph 1 shall apply from the moment each stage begins and shall have the same duration as the stage itself.

The flexibility scheme referred to in point 1.2 of Annex V shall be restricted to the duration of Stage III B or to a period of three years where no subsequent stage exists.

3. Vehicle types entering into service under the flexibility scheme shall be equipped with engine types which comply with the provisions of Annex V.

CHAPTER IV

FINAL PROVISIONS

Article 15

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 1 January 2016.

This Regulation shall be binding in its entirety and directly applicable in the Member States in accordance with the Treaties.

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ANNEX I

Requirements for the EU type-approval of a type of engine or engine family for an agricultural and forestry vehicle type as a separate technical unit regarding the pollutants emitted

1. **General**

The provisions of Directive 97/68/EC shall apply to the EU type-approval of a type of engine or engine family for an agricultural and forestry vehicle type as a separate technical unit in terms of the emitted pollutants with the following adaptations:

1.1. For the purposes of this Regulation, the references to non-road mobile machinery in Directive 97/68/EC shall be read as references to agricultural and forestry vehicle.

1.2. For the purposes of this Regulation, the references to original equipment manufacturer (OEM) in Directive 97/68/EC shall be read as vehicle manufacturer.

1.3. For the purposes of this Regulation, the dates for placing on the market of engines referred to in Directive 97/68/EC shall be read as dates for initial entry into service of engines and vehicles.

1.4. For the purposes of this Regulation, the dates for type-approval of engine type and engine families in Directive 97/68/EC shall be read as dates for EU type-approval or national type-approval for a type or family of engines or a vehicle type.

2. **Application for EU type-approval of a type or engine family as a separate technical unit.**

2.1. The application for the type-approval of an engine type or family in terms of the emitted pollutants shall be submitted by the engine manufacturer or his representative.

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2.2. The application for type-approval shall be accompanied by the information folder in accordance with Articles 2 and 6 of Implementing Regulation (EU) 2015/504.

2.3. An engine conforming to the engine type or parent engine characteristics described in Annexes I and II to Directive 97/68/EC shall be submitted to the technical service responsible for conducting the approval tests.

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3. **Specifications and Tests**

The provisions of Annex I, sections 4, 8 and 9, Appendixes 1 and 2, and Annexes III, IV and V to Directive 97/68/EC shall apply.

4. **Type-approval of systems, components and separate technical units**

Having regard to the provisions for EU type-approval set out in Chapters IV to VII, IX and X of Regulation (EU) No 167/2013, separate technical units, components and systems affecting environmental and propulsion unit performance of agricultural and forestry vehicles shall be type-approved before being put on the market or first entering into service.

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In accordance with Articles 19 and 52 of Regulation (EU) No 167/2013, those requirements apply in particular to:

— engines,

— pollutant exhaust emissions after-treatment systems,

— external sound emissions abatement system.

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Type-approval information documents shall be in accordance with Article 2 of Implementing Regulation (EU) 2015/504.

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5. **Engine marking**

The engine shall be marked in accordance with the requirements set out in Article 34 of Regulation (EU) No 167/2013 and the implementing act adopted pursuant to Article 68(h) of that Regulation.

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6. **Conformity of production**

In addition to the provisions in Article 28 of Regulation (EU) No 167/2013, Article 7 of Delegated Regulation (EU) No 1322/2014 and Annex IV to Delegated Regulation (EU) No 1322/2014 the conformity of production of engines shall be checked in accordance with the provisions of section 5 of Annex I to Directive 97/68/EC.

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7. **Notification on the issue of approvals**

Notice of the approval, extension, refusal or withdrawal of approval or of production definitely discontinued in relation to an engine type pursuant to this Annex or an agricultural and forestry vehicle type pursuant to Annex II must be communicated by the manufacturer to the Member States in accordance with the provisions of Article 31 and Chapter XVI of Regulation (EU) No 167/2013.

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8. **Market surveillance**

Having regard to Article 7 of Regulation (EU) No 167/2013, market surveillance shall be performed in accordance with Articles 4, 6 and 10 of Implementing Regulation (EU) 2015/504 and Annexes III, V and IX to Implementing Regulation (EU) 2015/504.

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9. **Engine family**

9.1. *Parameters defining the engine family*

The engine family may be defined by basic design parameters which must be common to all engines within the family. In some cases there may be interaction of parameters. These effects must also be taken into consideration in order to ensure that only engines with similar exhaust pollutant emission characteristics are included within an engine family.

For engines to be considered to belong to the same engine family, the following list of basic parameters must be common.

9.1.1. Combustion cycle: 2 stroke/4 stroke

9.1.2. Cooling medium: air/water/oil

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9.1.3. Individual cylinder displacement

— within 85 % and 100 % of the largest displacement within the engine family

9.1.4. Method of air aspiration: naturally aspirated/pressure charged

9.1.5. Fuel type: Diesel/Petrol

9.1.6. Combustion chamber type/design

9.1.7. Valve and porting — configuration, size and number

9.1.8. Fuel system

For diesel:

— pump-line-injector

— in-line pump

— distributor pump

— single element

— unit injector

For petrol:

— carburettor

— port fuel injection

— direct injection

9.1.9. Miscellaneous features

— Exhaust gas recirculation

— Water injection/emulsion

— Air injection

— Charge cooling system

— Ignition type (compression, spark)

9.1.10. Exhaust after-treatment

— Oxidation catalyst

— Reduction catalyst

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— Three way catalyst

— Thermal reactor

— Particulate trap

9.2. *Choice of parent engine*

9.2.1. The parent engine of the engine family shall be selected using the primary criterion of the highest fuel delivery per stroke at the declared maximum torque speed in accordance to the essential characteristics of the engine family set out in Appendix 2 of Annex II of Directive 97/68/EC. If two or more engines share this primary criterion, the parent engine shall be selected using the secondary criterion of highest fuel delivery per stroke at rated speed. Under certain circumstances, the approval authority may conclude that the worst case emission rate of the family can best be characterized by testing a second engine. Thus, the approval authority may select an additional engine for tests based on features which indicate that it may have the highest emission levels of the engines within that engine family.

9.2.2. If engines within the same engine family incorporate other variable features which could be considered to affect emitted pollutants, these features must also be identified and taken into account in the selection of the parent engine.

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Appendix

Marking of engines

1. Any engine approved as a separate technical unit must bear all of the following:

   (a) the trade mark or trade name of the engine's manufacturer;

   (b) the engine type, and if applicable engine family, and a unique engine identification number;

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   (c) the EU type-approval mark in accordance with Article 5 of Implementing Regulation (EU) 2015/504.

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2. The marks referred to in point 1 must last throughout the useful life of the engine and remain clearly legible and indelible. If labels or plates are used, they must be affixed in such a way that they too last throughout the useful life of the engine, and the labels/plates cannot be removed without destroying or defacing them.

3. The marks referred to in point 1 must be secured to an engine part that is necessary for normal engine operation and not normally requiring replacement during engine life. Those marks must be located so as to be readily visible to the average person once the engine has been fitted to the agricultural and forestry vehicle, together with all the auxiliaries needed for engine operation. If a bonnet is to be removed in order to make the mark visible, this requirement shall be considered to have been met if removal of that bonnet is simple.

   In case of doubt concerning the meeting of this requirement, it shall be considered to have been met if an additional mark containing at least the engine identification number and the name, trade name or logo of the manufacturer has been added. That additional mark shall be affixed to, or next to, a major component that would not normally have to be replaced during the service life of the engine, and be easily accessible, without the assistance of tools, during routine maintenance operations; otherwise, it must be located at a distance from the original mark on the engine crankcase. The original mark and, where appropriate, the additional mark shall both be clearly visible once all of the auxiliaries needed for the operation of the engine have been fitted. A bonnet meeting the requirements set out in the above paragraph shall be authorised. The additional mark shall be affixed in a durable manner preferably directly to the topside of the engine, for example by means of an engraving, or a sticker or plate that meets the requirements of point 2.

4. The engines must be classified by means of their identification numbers in such a way that the production sequence can be determined unambiguously.

5. Before leaving the production line, the engines must bear all of the required marks.

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6. The exact location of the engine marks shall be declared in the information document, in accordance with Article 2 of Implementing Regulation (EU) 2015/504.

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7. In the case of replacement engines, the text ‘REPLACEMENT ENGINE’ shall be attached to a label on the engine in the form of a metallic plate.

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ANNEX II

Requirements for the EU type-approval of an agricultural and forestry vehicle type equipped with an engine type or engine family regarding the pollutants emitted

1. **General**

Unless otherwise set out in this Regulation, the definitions, symbols, abbreviations, specifications and tests, specification of conformity of production assessments, parameters defining the engine family, choice of the parent engine as provided for in Annex I to Directive 97/68/EC shall apply.

2. **Application for EU type-approval of an agricultural and forestry vehicle type**

2.1. Application for the EU type-approval of an agricultural and forestry vehicle type in respect of the pollutants emitted

2.1.1. The application for type-approval of an agricultural and forestry vehicle type in terms of the emitted pollutants shall be made by the agricultural and forestry vehicle manufacturer or his representative.

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2.1.2. It shall be accompanied by the information document, in accordance with Article 2 of Implementing Regulation (EU) 2015/504.

2.1.3. The manufacturer shall submit an agricultural and forestry vehicle engine conforming to the engine type or parent engine characteristics in accordance with Annex I to this Regulation and Annex II to Directive 97/68/EC to the technical service responsible for conducting the approval tests.

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2.2. Application for EU type-approval of an agricultural and forestry vehicle type with an approved engine

2.2.1. The application for type-approval of an agricultural and forestry vehicle type in terms of the emitted pollutants shall be made by the agricultural and forestry vehicle manufacturer or his representative.

▼M1

2.2.2. It shall be accompanied by the information document in accordance with Article 2 of Implementing Regulation (EU) 2015/504 and a copy of the EU type-approval certificate for the engine or engine family and, if applicable, for systems, components and separate technical units which are installed in the agricultural and forestry vehicle type.

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3. **Specifications and Tests**

3.1. General

The provisions of Annex I, sections 4, 8 and 9, Appendices 1 and 2, and Annexes III, IV and V to Directive 97/68/EC shall apply.

3.2. Engine installation on the vehicle

The engine installation on the vehicle shall comply with the following requirements in respect to the type-approval of the engine:

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3.2.1. intake depression shall not exceed the maximum allowable intake depression specified for the type-approved engine;

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3.2.2. exhaust back pressure shall not exceed the maximum allowable back pressure specified for the type-approved engine;

3.2.3. particular conditions for the installation of the engine in the vehicle according to the type-approval certificate of the engine.

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3.3. Those vehicle components which may affect the emitted pollutants shall be designed, built and assembled in such a way as to meet the technical requirements of this Regulation under the vehicle's normal operating conditions and despite any vibrations to which it could be subjected.

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4. **Approval**

Any agricultural and forestry vehicle type fitted with an engine for which an EU type-approval certificate has been issued in accordance with Annex I to this Regulation or an equivalent type-approval certificate, in accordance with Annex IV to this Regulation, shall be issued with an EU type-approval certificate in accordance with Annex V of Implementing Regulation (EU) 2015/504.

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ANNEX III

External sound emission requirements

1. **Permissible external sound levels.**

1.1. *Measuring Instruments*

The instrumentation system, including the microphones, cables and windscreen if used, shall meet the requirements for a Class 1 instrument set out in IEC 61672-1:2002. The filters shall meet the requirements for a Class 1 instrument given in IEC 61260:1995.

1.2. *Conditions of measurement*

Measurements shall be made on agricultural and forestry vehicles with their unladen mass in running order in a sufficiently silent and open area (ambient noise and wind noise at least 10 dB (A) below the external sound level being measured).

This area may take the form, for instance, of an open space of 50 metres radius having a central part of at least 20 metres radius which is practically level; it may be surfaced with concrete, asphalt, or similar material and may not be covered with powdery snow, tall grass, loose soil or ashes.

The surface of the test track shall be such as not to cause excessive tyre noise. This condition applies only to measurement of the external sound made by agricultural and forestry vehicles in motion.

Measurement shall be carried out in fine weather with little wind. No person other than the observer taking the readings from the apparatus may remain near the agricultural and forestry vehicle or the microphone, as the presence of spectators near either the agricultural and forestry vehicle or the microphone may considerably affect the readings from the apparatus. Marked fluctuations of the pointer which appear to be unrelated to the characteristics of the general sound level shall be ignored in taking readings.

1.3. *Method of measurement*

1.3.1. Measurement of external sound level of agricultural and forestry vehicles in motion

At least two measurements shall be made on each side of the agricultural and forestry vehicle. Preliminary measurements may be made for adjustment purposes but shall be disregarded.

The microphone shall be situated 1,2 metres above ground level at a distance of 7,5 metres from the path of the agricultural and forestry vehicle's centre line, CC, measured along the perpendicular PP′ to that line (figure 1).

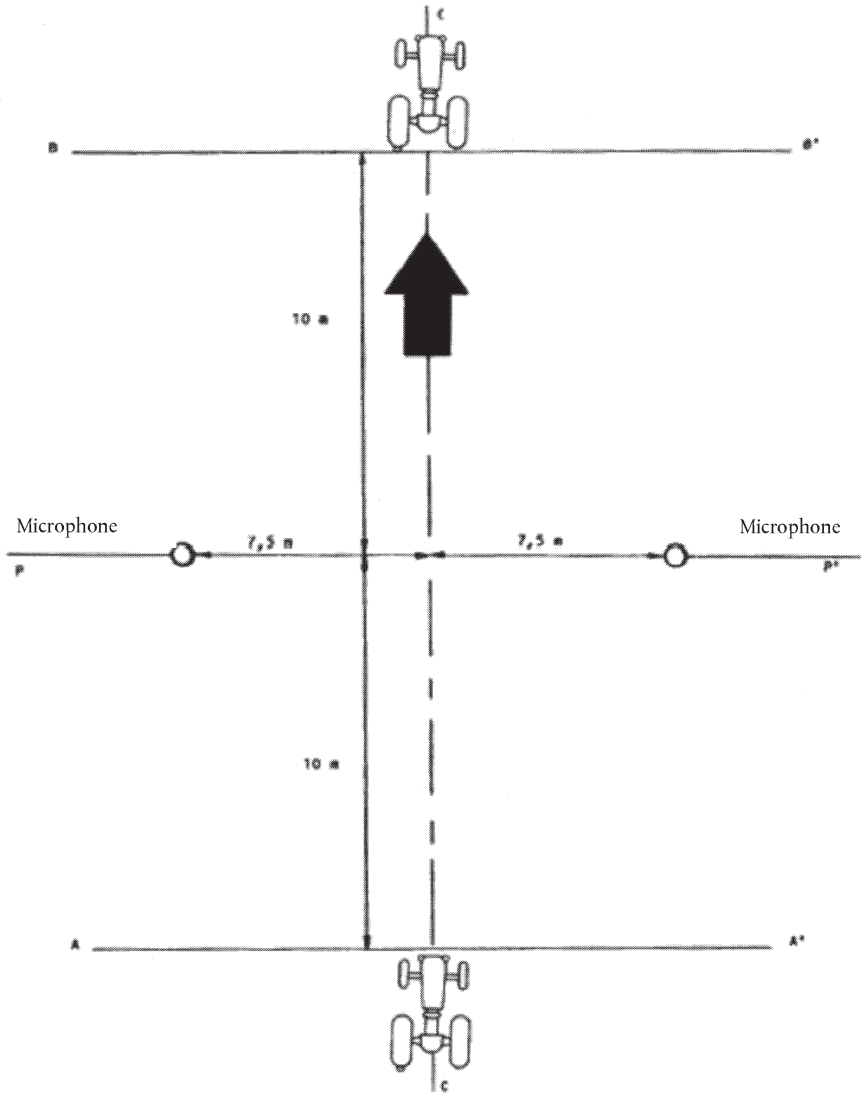
Two lines AA′ and BB′, parallel to line PP′ and situated respectively 10 metres forward and 10 metres rearward of the line, shall be marked out on the test track. Agricultural and forestry vehicles shall approach line AA′ at a steady speed, as specified below. The throttle shall then be fully opened as rapidly as practicable and

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held in the fully opened position until the rear of the agricultural and forestry vehicles crosses line BB′; the throttle shall then be closed again as rapidly as possible. If the agricultural or forestry vehicle is coupled to a trailer, this shall not be taken into account in determining when line BB′ is crossed.

The maximum sound level recorded shall constitute the result of the measurement.

Figure 1



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1.3.1.1. The steady speed before approaching line AA'shall be three-quarters of the maximum design speed (vmax) as declared by the manufacturer which can be attained in the highest gear used for road movement.

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1.3.1.2. Interpretation of results

1.3.1.2.1. To take account of inaccuracies in the measuring instruments, the result obtained from each measurement shall be determined by deducting 1 dB(A) from the meter reading.

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1.3.1.2.2. Measurements shall be considered valid if the difference between two consecutive measurements on the same side of the agricultural and forestry vehicle does not exceed 2 dB(A).

1.3.1.2.3. The highest sound level measured shall constitute the test result. ►M1 Should that result exceed the maximum permissible sound level for the category of agricultural and forestry vehicle tested by at least 1 dB(A), two further measurements shall be made. ◄ Three of the four measurements thus obtained must fall within the prescribed limits.

1.3.2. Measurement of external sound with agricultural and forestry vehicle stationary

1.3.2.1. Position of sound-level meter

Measurements shall be made at point X (shown in figure 2) at a distance of 7 metres from the nearest surface of the agricultural and forestry vehicle. The microphone shall be situated 1,2 metres above ground level.

1.3.2.2. Number of measurements: at least two measurements shall be made.

1.3.2.3. Agricultural and forestry vehicle test conditions

The engine of an agricultural and forestry vehicle without a speed governor shall be run at three-quarters of the rpm speed at which, in accordance with the agricultural and forestry vehicle manufacturer, it develops its maximum power. The rpm speed of the engine shall be measured by means of an independent instrument, e.g. a roller bed and a tachometer. If the engine is fitted with a governor preventing the engine from exceeding the speed at which it develops its maximum power, it shall be run at the maximum speed permitted by the governor.

Before taking any measurements, the engine shall be brought to its normal running temperature.

1.3.2.4. Interpretation of results

All external sound-level readings recorded shall be given in the report. ►M1 The engine speed shall be recorded in accordance with the provisions of Article 9. The state of loading of the agricultural and forestry vehicle shall also be recorded. ◄

The measurements shall be considered valid if the difference between two consecutive measurements on the same side of the agricultural and forestry vehicle does not exceed 2 dB(A).

The maximum figure recorded shall constitute the result of the measurement.

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1.3.3. External sound testing provisions for C-category vehicles with track chains in motion

For agricultural and forestry vehicles of C category equipped with track chains, the noise in motion shall be measured with vehicles with their unladen mass in running order travelling at a constant speed of 5 km/h (+/– 0,5 km/h), with the engine at rated speed over a layer of

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humid sand as specified by paragraph 5.3.2 of ISO 6395:2008. The microphone shall be situated in accordance with the provisions of point 1.3.1. The measured noise value shall be recorded in the test report.

▼B

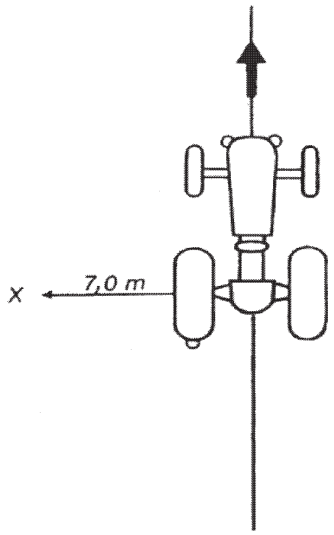
2. **Exhaust System (Silencer)**

2.1. If the agricultural and forestry vehicle is fitted with a device designed to reduce the exhaust noise (silencer), the requirements of this section shall apply. If the inlet of the engine is fitted with an air filter which is necessary in order to ensure compliance with the permissible sound level, the filter shall be considered to be part of the silencer, and the requirements of this point 2 shall also apply to that filter.

The exhaust tailpipe must be positioned in such a way that the exhaust gases cannot penetrate inside the cab.

Figure 2

Measuring positions for stationary agricultural and forestry vehicles



2.2. A drawing of the exhaust system must be annexed to the agricultural and forestry vehicle type-approval certificate.

2.3. The silencer must be marked with a reference to its make and type which is clearly legible and indelible.

2.4. The use of fibrous absorbent material is permitted in the construction of silencers only if the following conditions are fulfilled:

2.4.1. the fibrous absorbent material may not be placed in those parts of the silencer through which gases pass;

2.4.2. suitable devices must ensure that the fibrous absorbent material is kept in place for the whole time that the silencer is being used;

2.4.3. the fibrous absorbent material must be resistant to a temperature at least 20 % higher than the operating temperature (degrees C) which may occur in the region of the silencer where those fibrous absorbent materials are situated.

▼**M1**

ANNEX IV

Recognition of alternative type-approvals

The following type-approvals and, where applicable, the approval marks are recognised as being equivalent to an approval under this Regulation:

1. for engine categories H, I, J and K (stage IIIA) specified in Article 9(3a) and (3b) of Directive 97/68/EC,

1.1. type-approvals in accordance with points 3.1, 3.2 and 3.3 of Annex XII to Directive 97/68/EC;

1.2. Stage IIIA type-approvals in accordance with Directive 97/68/EC;

2. for engine categories L, M, N and P (stage IIIB) specified in Article 9(3c) of Directive 97/68/EC,

2.1. type-approvals in accordance with points 4.1, 4.2 and 4.3 of Annex XII to Directive 97/68/EC;

2.2. Stage IIIB type-approvals in accordance with Directive 97/68/EC;

3. for engine categories Q and R (stage IV) specified in Article 9(3d) of Directive 97/68/EC,

3.1. type-approvals in accordance with points 5.1 and 5.2 of Annex XII to Directive 97/68/EC.

3.2. Stage IV type-approvals in accordance with Directive 97/68/EC;

3.3. type-approvals in accordance with the 04 series of amendments of UNECE Regulation No 96 for power bands Q and R of paragraph 5.2.1 in that UN Regulation.

▼B

ANNEX V

Provisions for agricultural and forestry vehicles and engines placed on the market under the flexibility scheme established under Article 14

1. **Actions by the agricultural and forestry vehicle manufacturer.**

1.1. Except during Stage III B, an agricultural and forestry vehicle manufacturer who wishes to make use of the flexibility scheme shall request permission from the approval authority to place agricultural and forestry vehicles on the market in accordance with the relevant provisions set out in this Annex. The number of agricultural and forestry vehicles shall not exceed the ceilings set out in points 1.1.1 and 1.1.2. The engines shall meet the requirements referred to in Article 9 to Directive 97/68/EC.

1.1.1. The number of agricultural and forestry vehicles placed on the market under the flexibility scheme shall, in each engine category, not exceed 20 % of the annual number of vehicles placed on the market by the manufacturer with engines in that engine power range (calculated as the average of the last five years' sales on the Union market). Where a vehicle manufacturer has placed on the market agricultural and forestry vehicles in the Union for a period of less than five years the average will be calculated based on the actual period for which the vehicle manufacturer has placed on the market agricultural and forestry vehicles in the Union.

1.1.2. As an alternative to point 1.1.1, the number of agricultural and forestry vehicles placed on the market under the flexibility scheme shall, in each power range, not exceed the following ceilings:

Engine power range P (kW)	Number of vehicles
$19 \leq P < 37$	200
$37 \leq P < 75$	150
$75 \leq P < 130$	100
$130 \leq P \leq 560$	50

1.2. During Stage III B, a vehicle manufacturer who wishes to make use of the flexibility scheme shall request permission from the approval authority to place agricultural and forestry vehicles on the market in accordance with the relevant provisions set out in this Annex. The number of agricultural and forestry vehicles shall not exceed the ceilings set out in points 1.2.1 and 1.2.2. The engines shall meet the requirements referred to in Article 9 to Directive 97/68/EC.

1.2.1. The number of agricultural and forestry vehicles placed on the market under the flexibility scheme shall, in each engine power range, not exceed 40 % of the annual number of agricultural and forestry vehicles placed on the market by the vehicle manufacturer with engines in that engine category (calculated as the average of the last five years' sales on the Union market). Where a vehicle manufacturer has marketed agricultural and forestry vehicles in the Union for a period of less than five years the average will be calculated based on the actual period for which the vehicle manufacturer has marketed agricultural and forestry vehicles in the Union.

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1.2.2. As an alternative to point 1.2.1, the number of agricultural and forestry vehicles placed on the market under the flexibility scheme shall, in each power range, not exceed the following ceilings:

Engine power range P (kW)	Number of vehicles
$19 \leq P < 37$	200
$37 \leq P < 75$	175
$75 \leq P < 130$	250
$130 \leq P \leq 560$	125

1.3. The vehicle manufacturer shall include in his application to the approval authority all the following information:

(a) A sample of the labels to be affixed to each agricultural and forestry vehicle in which an engine placed on the market under the flexibility scheme will be installed. The labels shall bear the following text: 'AGRICULTURAL AND FORESTRY VEHICLE NO … (sequence of vehicles) OF … (total number of vehicles in respective power range) WITH ENGINE NO … WITH TYPE-APPROVAL (e.g. in accordance with the provisions of Directive 97/68/EC or recognized alternative type-approval in accordance with Annex IV to Commission Delegated Regulation (EU) 2015/96)';

(b) A sample of the supplementary label to be affixed on the engine bearing the text referred to in point 2.2.

1.4. The agricultural and forestry vehicles manufacturer shall provide the approval authority with any necessary information connected with the implementation of the flexibility scheme that the approval authority may request in order to make a decision.

1.5. The vehicle manufacturer shall file a report every 12 months to the approval authorities of each Member State where the agricultural and forestry vehicles is placed on the market on the implementation of the flexibility schemes he is using. The report shall include cumulative data on the number of agricultural and forestry vehicles placed on the market under the flexibility scheme, engine and vehicle serial numbers, and the Member States where the vehicle has been entered into service. This procedure shall be continued as long as a flexibility scheme is still in progress, without any exceptions.

2. **Actions by the engine manufacturer**

2.1. An engine manufacturer may place on the market engines under the flexibility scheme approved in accordance with sections 1 and 3.

2.2. The engine manufacturer shall label those engines with the following text: 'Engine placed on the market under the flexibility scheme' in accordance with the requirements set out in Annex XIII of Directive 97/68/EC.

3. **Actions by the approval authority**

The approval authority shall evaluate the content of the flexibility scheme request and the enclosed documents. It will inform the agricultural and forestry vehicle manufacturer of its decision as to whether or not to allow use of the flexibility scheme as requested.