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INFORMATION NOTE

From:	General Secretariat of the Council
To:	Permanent Representatives Committee/Council
Subject:	Proposal for a Regulation of the European Parliament and of the Council on requirements relating to emission limits and type-approval for internal combustion engines for non-road mobile machinery - Outcome of the European Parliament's first reading (Strasbourg, 4 to 7 July 2016)

I. INTRODUCTION

The Rapporteur, Elisabetta GARDINI (EPP, IT), presented a report on the proposal for a Regulation, on behalf of the Committee on the Environment, Public Health and Food Safety. The report contained 79 amendments (amendments 1 - 79) to the proposal.

In accordance with the provisions of Article 294 of the TFEU and the joint declaration on practical arrangements for the codecision procedure [1], a number of informal contacts have taken place between the Council, the European Parliament and the Commission with a view to reaching an agreement on this dossier at first reading, thereby avoiding the need for second reading and conciliation.

[1] OJ C 145, 30.6.2007, p.5

In this context, the Committee presented one additional amendment (amendment 80) to the proposal for a Regulation. This amendments had been agreed during the informal contacts referred to above and were consequently intended to replace amendments previously voted by the Committee.

II. VOTE

When it voted on 5 July 2016, the plenary adopted the compromise amendment (amendment 80) to the proposal for a Regulation. No other amendments were adopted. The Commission's proposal as thus amended constitutes the Parliament's first-reading position which is contained in its legislative resolution as set out in the Annex hereto[1].

The Parliament's position reflects what had been previously agreed between the institutions. The Council should therefore be in a position to approve the Parliament's position.

The act would then be adopted in the wording which corresponds to the Parliament's position.

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[1] The version of the Parliament's position in the legislative resolution has been marked up to indicate the changes made by the amendments to the Commission's proposal. Additions to the Commission's text are highlighted in ***bold and italics.*** The symbol " ▌ " indicates deleted text.

Emission limits for non-road mobile machinery ***I

European Parliament legislative resolution of 5 July 2016 on the proposal for a regulation of the European Parliament and of the Council on requirements relating to emission limits and type-approval for internal combustion engines for non-road mobile machinery (COM(2014)0581 – C8-0168/2014 – 2014/0268(COD))

(Ordinary legislative procedure: first reading)

The European Parliament,

– having regard to the Commission proposal to Parliament and the Council (COM(2014)0581),

– having regard to Article 294(2) and Article 114 of the Treaty on the Functioning of the European Union, pursuant to which the Commission submitted the proposal to Parliament (C8-0168/2014),

– having regard to Article 294(3) of the Treaty on the Functioning of the European Union,

– having regard to the opinion of the European Economic and Social Committee of 18 February 2015[1],

– having regard to the undertaking given by the Council representative by letter of 22 April 2016 to approve Parliament's position, in accordance with Article 294(4) of the Treaty on the Functioning of the European Union,

– having regard to Rule 59 of its Rules of Procedure,

– having regard to the report of the Committee on the Environment, Public Health and Food Safety and the opinion of the Committee on the Internal Market and Consumer Protection (A8-0276/2015),

1. Adopts its position at first reading hereinafter set out;

[1] Not yet published in the Official Journal.

2. Calls on the Commission to refer the matter to Parliament again if it intends to amend its proposal substantially or replace it with another text;

3. Instructs its President to forward its position to the Council, the Commission and the national parliaments.

P8_TC1-COD(2014)0268

Position of the European Parliament adopted at first reading on 5 July 2016 with a view to the adoption of Regulation (EU) 2016/... of the European Parliament and of the Council on requirements relating to *gaseous and particulate pollutant* emission limits and type-approval for internal combustion engines for non-road mobile machinery, *amending Regulations (EU) No 1024/2012 and (EU) No 167/2013, and amending and repealing Directive 97/68/EC*

(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 114 thereof,

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments,

Having regard to the opinion of the European Economic and Social Committee[1],

Acting in accordance with the ordinary legislative procedure[2],

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1 OJ C …

2 ***Position of the European Parliament of 5 July 2016.***

Whereas:

(1) The internal market comprises an area without internal frontiers in which the free movement of goods, persons, services and capital has to be ensured. To that end, measures for the reduction of air pollution by engines to be installed in non-road mobile machinery were established by Directive 97/68/EC of the European Parliament and of the Council[1]. It is appropriate to pursue efforts in the development and operation of the internal market of the Union.

(2) The internal market should be based on transparent, simple and consistent rules which provide legal certainty and clarity from which businesses and consumers alike can benefit.

(3) A new regulatory approach has been introduced in respect of Union engine type-approval legislation, with the aim of simplifying and accelerating the adoption of such legislation. Pursuant to that approach, the legislator sets out the fundamental rules and principles and empowers the Commission to adopt delegated ***and implementing*** acts concerning further technical details. Therefore, with regard to substantive requirements, this Regulation should lay down only essential provisions on the emission of gaseous and particulate pollutants and type-approval for internal combustion engines for non-road mobile machinery, and should empower the Commission to lay down the technical specifications in delegated ***and implementing*** acts.

[1] Directive 97/68/EC of the European Parliament and of the Council of 16 December 1997 on the approximation of the laws of the Member States relating to measures against the emission of gaseous and particulate pollutants from internal combustion engines to be installed in non-road mobile machinery (OJ L 59, 27.2.1998, p. 1).

(4) Regulation (EU) No 167/2013 of the European Parliament and of the Council[1] established a regulatory framework for the approval and market surveillance of agricultural and forestry vehicles. Given the similarity of the fields and the positive experience in applying Regulation (EU) No 167/2013, many of the rights and obligations established by that Regulation should be taken into consideration in respect of non-road ***mobile*** machinery. However, it is essential that a distinct set of rules be adopted to fully take into account the specific requirements of engines for non-road mobile machinery.

(5) Directive 2006/42/EC of the ***European Parliament and of the Council[2] lays down the essential health and safety requirements in relation to design and manufacture in order to improve the safety of machinery placed on the market. However, that Directive does not lay down gaseous and particulate pollutant emission requirements for engines for non-road mobile machinery. Certain specific obligations for non-road mobile machinery manufacturers should therefore be laid down in order to ensure that the installation of engines in such machinery is carried out in a manner that does not adversely affect engine performance with regard to gaseous and particulate pollutant emissions. Certain obligations relating to aspects of the emission limits for gaseous and particulate pollutants from engines for non-road mobile machinery are also necessary, in order to ensure the effectiveness of the emission limits for engines laid down in this Regulation.***

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1 Regulation (EU) No 167/2013 of the European Parliament and of the Council of 5 February 2013 on the approval and market surveillance of agricultural and forestry vehicles (OJ L 60, 2.3.2013, p. 1).

2 ***Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machinery, and amending Directive 95/16/EC (OJ L 157, 9.6.2006, p. 24).***

(6) This Regulation should contain substantive requirements relating to emission limits and EU type-approval procedures for engines for non-road mobile machinery. The main elements of the relevant requirements of this Regulation are based on the results of the impact assessment of 20 November 2013 carried out by the Commission, that analysed the different options by listing potential advantages and disadvantages in terms of economic, environmental, safety and societal aspects ***and*** in terms of ***health effects***. Both qualitative and quantitative aspects were included in that analysis.

(7) With a view to ensuring the functioning of the internal market, this Regulation ***should*** lay down harmonised rules for the EU type-approval of engines for non-road mobile machinery. For that purpose, new emission limits should be established and ***applied to engines for*** non-road mobile machinery as well as for ***agricultural and forestry machinery,*** to reflect technological progress and to ensure convergence with Union policies in the on-road sector. Those new emission limits should be established with a view to achieving Union air quality targets and reducing the emissions from non-road mobile machinery ***and agricultural and forestry vehicles***, thus decreasing the share of non-road mobile machinery emissions in relation to road vehicle emissions. Accordingly, the scope of Union legislation in this field should be broadened, with a view to improving market harmonisation at ***Union*** and international level and minimising the ***risk of market distortions and adverse health effects.***

(8) In addition to broadening the scope of Union legislation in the field of market harmonisation, while minimising the risk of market distortions, this Regulation aims to simplify the current legal framework, including by providing for measures for the simplification of administrative procedures, and to improve the general conditions for enforcement of such legislation, in particular by strengthening the rules on market surveillance.

(9) The Commission White Paper of 28 March 2011 entitled 'Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system' highlights the particular role to be played by railways and inland waterways in achieving climate targets. Given that the progress of those modes of transport compares unfavourably with that of other sectors in relation to improving air quality, the Commission and Member States' authorities, within their respective remits, should provide different ways of supporting innovation in emission technology so that the continuing increase in the volume of freight shifted to rail and inland waterways goes hand-in-hand with an improvement in air quality in Europe.

(10) The requirements in respect of engines for non-road ***mobile*** machinery should follow the principles laid down in the Commission Communication of 5 June 2002 entitled 'Action plan "Simplifying and improving the regulatory environment"▌'.

(11) The Seventh General Union Environment Action Programme as adopted by Decision No 1386/2013/EU of the European Parliament and of the Council[1] recalls that the Union has agreed to achieve levels of air quality that do not give rise to significant negative impacts on, and risks to, human health and the environment. Union legislation has established appropriate emission limits for ambient air quality for the protection of human health and sensitive individuals in particular, as well as for national emission ceilings[2]. Following its Communication of 4 May 2001, which established the Clean Air ***for*** Europe (CAFE) ***Programme***, on 21 September 2005 the Commission adopted another Communication entitled 'Thematic ***Strategy on*** air pollution'. One of the conclusions of that thematic strategy is that further reductions in emissions from the transport sector (air, maritime and land transport), from households and from the energy, agricultural and industrial sectors are needed to achieve ***Union*** air quality objectives. In that context, the task of reducing emissions from engines for non-road mobile machinery should be approached as part of an overall strategy. The new emissions limits, referred to as 'Stage V', are one of the measures designed to reduce the ***current*** in-use emissions of air pollutants such as particulate pollutants as well as ozone precursors such as nitrogen oxides (NO_x) and hydrocarbons.

(12) On 12 June 2012, the World Health Organization , through its International Agency for Research on Cancer , reclassified diesel engine exhaust emissions as 'carcinogenic to humans' (Group 1), based on sufficient evidence that exposure is associated with an increased risk of lung cancer.

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1 Decision No 1386/2013/EU of the European Parliament and of the Council of 20 November 2013 on a General Union Environment Action Programme to 2020 'Living well, within the limits of our planet' (OJ L 354, 28.12.2013, p. 171).

2 Decision No 1600/2002/EC ***of the European Parliament and of the Council of 22 July 2002 laying down the Sixth Community Environment Action Programme (OJ L 242, 10.9.2002, p. 1)***; Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe (OJ L 152, 11.6.2008, p. 1).

(13) ***In order to bring about an improvement in*** the Union's air quality ***and reach its*** objectives on ***air protection*** in a sustainable manner ***between now and 2020, and beyond,*** continuous efforts are required to reduce ▌ emissions ***from various types of engines***. For that reason,▌ manufacturers should be provided in advance with clear ***and comprehensive*** information on future emission limit values***,*** and should be afforded an appropriate period of time in which to comply with them and pursue the requisite technical developments.

(14) In setting emission limits it is important to take into account the implications for ***the*** competitiveness of markets and manufacturers, the direct and indirect costs imposed on business and the benefits that accrue in terms of stimulating innovation, improving air quality, reducing health costs and increasing life expectancy.

(15) The reduction of emissions from engines in a sustainable manner requires the constant intensification of direct cooperation between manufacturers and related businesses on the one hand, and well-established scientific research institutions, on the other. Such cooperation plays a significant role in the development of new products and technologies that positively contribute to improving air quality.

(16) Emissions from engines for non-road mobile machinery constitute a significant proportion of the total man-made emissions of certain noxious atmospheric pollutants. Engines responsible for a considerable share of air pollution by NO_x ▌ and particulate matter ▌ should be subject to the new emission limits.

(17) In order to guarantee an optimum level of protection for persons working in the vicinity of machinery, and to keep the cumulative exposure of persons working in the vicinity of several different items of mobile machinery and equipment as low as possible, technology that is currently available should be used to minimise emissions.

(18) The Commission should keep under review emissions which are, as yet, unregulated and which arise as a consequence of the wider use of new fuel formulations, engine technologies and emission control systems. ***Where necessary, the*** Commission should ▌ submit a proposal to the European Parliament and to the Council with a view to regulating such emissions.

(19) It is ***necessary*** to encourage the introduction of alternative fuel engines, which can have low NO_x and particulate pollutant emissions. Therefore, limit values for total hydrocarbons should be adapted in order to take into account non-methane hydrocarbons and methane emissions.

(20) This Regulation is without prejudice to the entitlement of Member States to lay down, in compliance with the Treaties, such requirements as they may deem necessary to ensure that the public and workers are protected whenever non-road mobile machinery referred to in this Regulation is in use, provided that such requirements do not affect the placing on the market of engines for such machinery.

(21) In order to ensure that emissions of ultrafine particulate pollutants (of size 0,1 μm and below) are regulated, the Commission should be empowered to adopt a number-based approach to emissions of particulate pollutants, in addition to the mass-based approach which is currently used. The number-based approach should draw on the results of the Particulate measurement programme▌ of the United Nations Economic Commission for Europe (UNECE) and should be consistent with the existing ambitious objectives for the environment.

(22) In order to achieve those environmental objectives, it is appropriate that the particle number limits laid down in this Regulation are likely to reflect the highest levels of performance currently achieved with particle filters by using the best available technology.

(23) Given the long lifetime of non-road mobile machinery, it is appropriate to consider the retrofitting of engines already in service. Such retrofitting should, in particular, target densely populated urban areas as a means of helping Member States to comply with Union air quality legislation. To ensure a comparable and ambitious level of retrofitting, Member States should take into account the principles of UNECE Regulation No 132.

(24) Where appropriate and where technologies are interlinked, synergies should be sought between the reduction of gaseous and particulate pollutant emissions from engines for non-road mobile machinery, and emission limits as applied to heavy-duty vehicles. Such action could help to improve economies of scale and improve air quality.

(25) The Commission should adopt worldwide harmonised ***test*** cycles in the test procedures that form the basis of EU type-approval emissions regulations. The application of portable emissions measurement systems for monitoring actual in-use emissions should also be considered.

(26) In order to address actual in-use emissions and to prepare the in-service conformity process, a testing methodology for monitoring compliance with emission performance requirements based on the use of portable emission measurement systems should be adopted within an appropriate timeframe.

(27) The proper functioning of the ***exhaust*** after-treatment system, specifically in the case of NO_x, is essential for complying with the established limits for pollutant emissions. In this context, measures aimed at ensuring the proper operation of ***exhaust after-treatment*** systems that rely on the use of ***any consumable or non-recoverable reagent*** should be introduced.

(28) Portable fire-fighting pumps are essential in certain emergency situations in which a channelled water supply is unavailable. The installation of exhaust after-treatment systems in engines for such machinery would, however, increase their weight and operating temperatures to the extent that it would become dangerous for the operator and they would be impossible to carry by hand. Portable fire-fighting pumps should, therefore, be excluded from the scope of this Regulation.

(29) Modifications to an engine such as the inactivation of its exhaust after-treatment system or the increase in its power could have serious consequences for the engine's emissions performance and durability. Legal persons carrying out such modifications should therefore be responsible for ensuring that the applicable emission limits are respected.

(30) Engines which are covered by and comply with the ▌new rules on emission limits and EU type-approval procedures ***laid down by this Regulation*** should be permitted to be placed on the market in the Member States. Such engines should not be subject to any other national emission requirements ***in respect of their being placed on the market***. ***This should be without prejudice to the right of Member States to encourage or restrict the use of engines that have already been placed on the market, provided that the criteria applied are not discriminatory and are objectively justified.*** Member ***States*** granting EU type-approvals should take ▌verification measures in order to ensure that engines produced under ▌EU type-approval procedures can be identified.

(31) Engines for export and for use by the armed forces should not be subject to the emission limits laid down in this Regulation. However, in order to distinguish such engines from engines which are subject to those emission limits, markings should be required in certain cases.

(32) In order to take account of logistic supply constraints and to allow for 'just in time' production flow, and to avoid unnecessary costs and administrative burden, a manufacturer should, with the consent of the original equipment manufacturer ("OEM"), be allowed to deliver an engine separately from its exhaust after-treatment system..

(33) Some non-road mobile machinery operates under conditions of an extreme nature involving risks to life or health, or is subject to very challenging technical requirements. In view of those particular circumstances, and given the relatively small number of engines for such non-road mobile machinery, certain exemptions to the emission limit requirements laid down in this Regulation should be provided for in respect of engines to be used in potentially explosive atmospheres and in lifeboat launch vehicles.

(34) In order to allow for the field testing activities carried out by manufacturers, which are inherent in the engine development process, the temporary placing on the market of engines that have not been EU type-approved at that stage should be allowed. Exemptions allowing the temporary placing on the market of engines for the purpose of field testing prototypes should also be permissible.

(35) In order to take account of long term projects in the railway sector requiring heavy investments, an exemption should be provided, in accordance with Directive 2008/57/EC of the European Parliament and of the Council[1], for engines included in projects which were launched before the date of application of this Regulation and which are at an advanced stage of development.

(36) It is essential not to hamper technical innovation as regards the emission performance of engines for non-road mobile machinery with requirements that are not currently provided for by existing administrative procedures for type-approval. It is therefore necessary to provide for certain exemptions and rules in respect of engines that incorporate new technologies or new concepts***.***

(37) OEMs that produce a limited number of units per year face severe challenges when re-designing their fleet within the standard transition period. Those manufacturers are typically small and medium-sized enterprises ("SMEs") that have limited engineering capacity and often obtain information regarding future stage engines later than other OEMs. This is the case, in particular, of agricultural machinery manufacturers producing a limited number of units per year that would face a serious structural challenge when undertaking the transition to Stage V emission limits. It is therefore necessary to provide for specific rules in respect of such cases.

(38) The placing on the market of engines intended to replace engines that are already installed in non-road mobile machinery, and which comply with less stringent emission limits than those laid down in this Regulation, should be permitted in order to allow manufacturers to fulfil their warranty obligations and to ensure sufficient availability of such engines on the market.

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1 ***Directive 2008/57/EC of the European Parliament and of the Council of 17 June 2008 on the interoperability of the rail system within the Community (OJ L 191, 18.7.2008, p. 1).***

(39) According to current estimates, a number of broad gauge line locomotives will need to be replaced between 2016 and 2025. High-power engine locomotives suitable for the 1520 mm railway network are not available on the Union market. Custom-built solutions would significantly increase the cost of a new locomotive and would deter railway operators from renewing their fleets. The technical and economic constraints of the 1520 mm railway network should be considered in the EU type-approval procedures. In order to facilitate and speed up the greening of the railway sector in the Member States affected and to promote the use of the best technology currently available on the market, a temporary exemption in respect of certain requirements should be granted for those locomotives on the railway network. Such an exemption could allow the impact of rail traffic on the environment to be reduced.

(40) Cotton production within the Union is limited to very few Member States. Due to the high costs of new cotton harvesting machinery, and in order to avoid placing an additional financial burden on the cotton production sector, which would further threaten its economic viability, operators should be granted access to a wide range of second-hand cotton harvesting machinery. Therefore, Member States should have the possibility of applying, for a limited period of time, national law to engines installed in such machinery.

(41) ***In relation to*** market surveillance, ***this Regulation should impose obligations on*** national authorities ***which*** are more specific than the corresponding ▌ obligations laid down in Regulation (EC) No 765/2008 of the European Parliament and of the Council[1].

[1] Regulation (EC) No 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products (OJ L 218, 13.8.2008, p. 30).

(42) In order to ensure that the procedure for monitoring conformity of production, which is one of the cornerstones of the EU type-approval system, has been correctly implemented and functions properly, manufacturers should be regularly checked by the appointed competent authority or by an appropriately qualified technical service designated for that purpose.

(43) The Union is a contracting party to the ***UNECE*** Agreement ***concerning the Adoption of Uniform Technical Prescriptions for Wheeled Vehicles, Equipment and Parts*** which can be fitted to and/or used on ***Wheeled Vehicles*** and the ***Conditions for Reciprocal Recognition of Approvals Granted on the Basis*** of these ***Prescriptions*** ('Revised 1958 Agreement'). As a consequence, ***approvals granted under*** UNECE regulations, and the amendments thereto, which the Union has voted in favour of or to which the Union has acceded, in application of Decision 97/836/EC ***of the Council***[1], should be recognised as equivalent to EU type-approvals granted under this Regulation. Accordingly, ***in order to ensure consistency and alignment between Union and UNECE legislation,*** the Commission should be empowered to adopt delegated acts in order to determine which UNECE regulations are to apply to EU type-approvals.

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1 ***Council Decision 97/836/EC of 27 November 1997 with a view to accession by the European Community to the Agreement of the United Nations Economic Commission for Europe concerning the adoption of uniform technical prescriptions for wheeled vehicles, equipment and parts which can be fitted to and/or be used on wheeled vehicles and the conditions for reciprocal recognition of approvals granted on the basis of these prescriptions ('Revised 1958 Agreement') (OJ L 346, 17.12.1997, p. 78).***

(44) In order to supplement this Regulation with further technical details, the power to adopt acts in accordance with Article 290 of the Treaty on the Functioning of the European Union should be delegated to the Commission in respect of▌ the monitoring of in-service emission performance, technical tests and measurement procedures, conformity of production, separate delivery of engine exhaust after-treatment systems, engines for field testing, engines for use in explosive atmospheres, equivalence of engine ***EU*** type-approvals, information for OEMs and end-users, ▌ and standards and assessment of technical services▌ . ***It is of particular importance that the Commission carry out appropriate consultations during its preparatory work, including at expert level, and that those consultations be conducted in accordance with the principles laid down in the Interinstitutional Agreement of 13 April 2016 on Better Law-Making[1]. In particular, to ensure equal participation in the preparation of delegated acts,*** the European Parliament and ▌ Council ***receive all documents at the same time as Member States' experts, and their experts systematically have access to meetings of Commission expert groups dealing with the preparation of delegated acts***.

(45) In order to ensure uniform conditions for the implementation of this Regulation, implementing powers should be conferred on the Commission. Those powers should be exercised in accordance with Regulation (EU) No 182/2011 of the European Parliament and of the Council[2].

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1 OJ L123, 12.5.2016, p. 1.

2 Regulation (EU) No 182/2011 of the European Parliament and of the Council of 16 February 2011 laying down the rules and general principles concerning mechanisms for control by Member States of the Commission's exercise of implementing powers (OJ L 55, 28.2.2011, p. 13).

(46) Member States should lay down rules on penalties applicable to infringements of this Regulation and ensure that they are implemented. Those penalties should be effective, proportionate and dissuasive.

(47) With a view to taking into account on-going technical progress and the latest findings in the fields of research and innovation, ***the*** further pollutant emission reduction potential of engines already installed in non-road mobile machinery should be identified. The focus of such assessment should be on the engine categories that ***fall*** for the first time ***within*** the scope of this Regulation, and on those in respect of which emission limit values remain unaltered under this Regulation.

(48) The specific limit values, test procedures and requirements for pollutant emissions laid down in this Regulation should also apply to engines for agricultural and forestry tractors covered by Regulation (EU) No 167/2013. Given the combined effect of the Stage IV postponement for agricultural tractors of categories T2, T4.1 and C2 and the Stage V application dates, Stage IV would, in respect of the power range 56 – 130 kW, have a very short duration. In order to avoid inefficiencies and an ~~unnecessary burden~~, the Stage IV compulsory EU type-approval date should be delayed by one year and the flexibility quantity increased appropriately. Furthermore, the transition clauses in this Regulation in respect of the Stage V application requirements should also apply to Stage IIIB engines. Regulation (EU) No 167/2013 and Commission Delegated Regulation (EU) 2015/96[1] should, therefore, be amended accordingly.

[1] ***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 (OJ L 16, 23.1.2015, p. 1).***

(49) In the ***interests*** of clarity, predictability, rationality and simplification, and in order to reduce the burden on engine and ***non-road mobile*** machinery manufacturers, this Regulation should only contain a limited number of implementation stages for the introduction of new emission levels and ***EU*** type-approval procedures. ***The timely*** definition of requirements is essential for ensuring sufficient lead-time for manufacturers to develop, test and implement technical solutions for engines produced in series, and for manufacturers and approval authorities to put in place the necessary administrative systems.

(50) Directive 97/68/EC has been substantially amended several times. In the interests of clarity, predictability, rationality and simplification, ***that*** Directive should be repealed and replaced by a regulation and a limited number of delegated and implementing acts. The adoption of a regulation ***ensures*** that its provisions are directly applicable, in particular, to manufacturers, approval authorities and technical services, and that they can be amended much more quickly and efficiently to take better account of technical progress.

(51) Directive 97/68/EC should ***therefore*** be repealed with effect from ***a*** date ***which would*** allow industry sufficient time to adapt to this Regulation and to the technical specifications and administrative provisions to be laid down in the delegated and implementing acts adopted pursuant thereto.

(52) Directive 97/68/EC does not provide a derogation for engines for non-road mobile machinery to be used in potentially explosive atmospheres. In order to take account of the strict technical requirements that are essential for the operational safety of such engines, Directive 97/68/EC should be amended in order to allow derogations for such engines to be applied until that Directive is repealed.

(53) The exchange of data and information related to EU type-approvals needs to be improved so that this Regulation can be applied effectively and swiftly. Therefore, the national authorities should be required to cooperate efficiently with each other and with the Commission, and to exchange data and information relating to EU type-approvals by means of the Internal Market Information System ('IMI') established by Regulation (EU) No 1024/2012 of the European Parliament and of the Council[1]. In order to facilitate the implementation of this Regulation, a module of IMI specifically customised for non-road mobile machinery should be established. It should also be possible for manufacturers and technical services to use IMI for the exchange of data and information on engines for non-road mobile machinery.

(54) Since the objectives of this Regulation, namely to lay down harmonised rules on the administrative and technical requirements relating to emission limits and EU type-approval procedures for engines for non-road mobile machinery, cannot be sufficiently achieved by the Member States, ***but*** can ***rather***, by reason of their scale and effects, be better achieved at Union level, the Union may adopt measures in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty on European Union. In accordance with the principle of proportionality as set out in that Article, this Regulation does not go beyond what is necessary in order to achieve those objectives,

HAVE ADOPTED THIS REGULATION:

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1 ***Regulation (EU) No 1024/2012 of the European Parliament and of the Council of 25 October 2012 on administrative cooperation through the Internal Market Information System and repealing Commission Decision 2008/49/EC ('the IMI Regulation') (OJ L 316, 14.11.2012, p. 1).***

CHAPTER I

SUBJECT MATTER, SCOPE AND DEFINITIONS

Article 1

Subject matter

1. This Regulation establishes for all ***engines referred to in Article 2(1)*** emission limits for gaseous ▌ and particulate ***pollutants*** as well as the administrative and technical requirements relating to EU type-approval***.***

This Regulation also lays down certain obligations in relation to non-road mobile machinery in which an engine ▌ as referred to in Article 2(1) ***is being, or has been, installed, as regards the emission limits for gaseous and particulate pollutants from such engines***.

2. This Regulation also establishes the requirements for the market surveillance of engines ***referred*** to ***in Article 2(1)*** which are installed ***in*** or are intended to be installed in non-road mobile machinery ***and*** which are subject to EU type-approval.

Article 2

Scope

1. This Regulation ***applies*** to all engines falling within ***the categories*** set out in Article ***4(1)*** which are installed in or are intended to be installed in non-road mobile machinery ***and, insofar as the emission limits for gaseous and particulate pollutants from those engines are concerned, to such non-road mobile machinery***.

2. This Regulation ***does*** not apply to engines for:

(a) the propulsion of vehicles ***referred to in*** Article ***2(1)*** of Directive 2007/46/EC of the European Parliament and of the Council[1];

(b) the propulsion of agricultural and forestry ***tractors*** as defined in point (***8***) of Article 3 of Regulation (EU) No 167/2013***;***

(c) the propulsion of vehicles referred to in Article 2(1) of Regulation (EU) No 168/2013 of the European Parliament and of the Council[2];

(d) stationary machinery;

(e) sea-going vessels requiring a valid maritime navigation or safety certificate;

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[1] Directive 2007/46/EC of the European Parliament and of the Council of 5 September 2007 establishing a framework for the approval of motor vehicles and their trailers, and of the systems, components and separate technical units intended for such vehicles (OJ L 263, 9.10.2007, p.1).

[2] Regulation (EU) No ***168***/2013 of the European Parliament and of the Council of ***15 January*** 2013 on the approval and market surveillance of ***two- or three-wheel*** vehicles ***and quadricycles*** (OJ L 60, ***2.3.2013,*** p. ***52***).

(f) craft as defined in Directive (EU) 2016/… of the European Parliament and of the Council[1] [number and publication reference for the Directive contained in doc. st7532/16] and not falling within its scope;

(g) the propulsion ***or auxiliary purposes*** of inland waterway vessels of a net power of less than ***19*** kW;

(h) ***watercraft*** as defined in ***point (1) of Article 3 of*** Directive 2013/53/EU of the European Parliament and of the Council [2];

(i) aircraft ***as defined in point (a) of Article 2 of Commission Regulation (EU) No 1321/2014[3]***;

(j) recreational vehicles, except snowmobiles, all-terrain vehicles and side-by-side vehicles ;

(k) vehicles and machinery exclusively ***used or*** intended ***to be exclusively used*** in competitions;

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1 ***Directive (EU) 2016/… of the European Parliament and of the Council of … laying down technical requirements for inland waterway vessels, amending Directive 2009/100/EC and repealing Directive 2006/87/EC (OJ L).***

2 Directive 2013/53/EU of the European Parliament and of the Council of 20 November 2013 on recreational craft and personal watercraft and repealing Directive 94/25/EC (OJ L 354, 28.12.2013, p. 90).

3 ***Commission Regulation (EU) No 1321/2014 of 26 November 2014 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks (OJ L 362, 17.12.2014, p. 1)***

(l) portable fire-fighting pumps as defined and covered by the European standard on portable fire-fighting pumps[1];

(m) reduced-scale models or reduced-scale replicas of vehicles or ***machinery*** manufactured, for recreational purposes, to a smaller scale than the original ***and*** having a net power ***of*** less than 19 kW.

Article 3

Definitions

For the purposes of this Regulation, the following definitions apply:

(1) "non-road mobile machinery" means any mobile machine, transportable equipment or vehicle with or without bodywork or wheels, not intended for the transport of passengers or goods on roads, and includes machinery installed on the chassis of vehicles intended for the transport of passengers or goods on roads;

(2) "EU type-approval" means the procedure whereby an approval authority certifies that an engine type or engine family satisfies the relevant administrative provisions and technical requirements of this Regulation;

(3) "gaseous pollutants" means ***the following pollutants in their gaseous state emitted by an engine:*** carbon monoxide (CO), total hydrocarbons (HC) and oxides of nitrogen (NO_x); NO_x being nitric oxide (NO) and nitrogen dioxide (NO_2), expressed as NO_2 equivalent;

[1] European standard EN 14466+A1: 2009 (Fire-fighting pumps - Portable pumps - Safety and performance requirements, tests).

(4) ***"particulate matter" or "PM***" means ***the mass of*** any material ***in the gas emitted by an engine that is*** collected on a specified filter medium after diluting ***the*** gas with clean filtered air so that the temperature does not exceed 325 K (52 °C);

(5) ***"particle number" or "PN***" means the number of solid particles ***emitted by an engine*** with a diameter greater than 23 nm;

(6) "particulate pollutants" means any matter emitted by an engine that is measured as PM or PN;

(7) ***"internal combustion*** engine" ***or "engine"*** means an energy converter other than a gas turbine ***designed to transform chemical energy (input) into mechanical energy (output) with an internal combustion process***; it includes***, where they have been installed,*** the emission control system and the communication interface (hardware and messages) between the engine's ▌ electronic control unit(s) ▌ and any other powertrain or non-road mobile machinery control unit necessary to comply with Chapters II and III;

(8) "engine type" means a ***group*** of engines which do not differ in essential engine characteristics;

(9) "engine family" means a manufacturer's grouping of engine types which, through their design, have similar exhaust emission characteristics, and respect the applicable emission limit values;

(10) "parent engine" means an engine type selected from an engine family in such a way that its emissions characteristics are representative of that engine family;

(11) "replacement engine" means an engine that:

(a) is exclusively used to replace an engine already placed on the market and installed in non-road mobile machinery; and

(b) complies with an emission stage which is lower than that applicable on the date of the engine's replacement;

(12) "in-service engine" means an engine that is operated in non-road mobile machinery over its normal operating patterns, conditions and payloads, and is used to perform the emission monitoring tests as referred to in Article 19;

(13) ***"CI*** engine" means an engine that works on the compression-ignition ***("CI")*** principle;

(14) ***"***SI engine" means an engine that works on the spark-ignition ***("SI")*** principle;

(15) "hand-held SI engine" means an SI engine ***having a reference power of less than 19 kW, and*** used in a piece of equipment that meets at least one of the following conditions:

(a) it is carried by the operator throughout the performance of its intended function(s)***;***

(b) it operates multi-positionally, such as upside down or sideways, to perform its intended function(s)***;***

(c) its dry weight, including engine, is less than 20 ***kg,*** and it meets at least one of the following conditions:

(i) its operator provides physical support for or, alternatively, carries the equipment throughout the performance of its intended function(s);

(ii) its operator provides physical support or attitudinal control for the equipment throughout the performance of its intended function(s);

(iii) it is used in a generator or a pump;

(16) “liquid fuel” means a fuel which exists in the liquid state at standard ambient conditions ***(298K, absolute ambient pressure 101,3 kPa)***;

(17) “gaseous fuel” means any fuel which is wholly gaseous at standard ambient conditions ***(298K, absolute ambient pressure 101,3 kPa)***;

(18) “dual-fuel engine” means an engine that is designed to simultaneously operate with a liquid fuel and a gaseous fuel, both fuels being metered separately, the consumed amount of one of the fuels relative to the other one being able to vary depending on the operation;

(19) “single-fuel engine” means an engine that is not a dual-fuel engine ;

(20) “***GER” (***Gas Energy Ratio) means, in the case of a dual-fuel engine, the ratio of the energy content of the gaseous fuel over the energy content of both fuels; in the case of a single-fuel engine, GER is defined as being either 1 or 0 according to the type of fuel;

(21) "constant-speed engine" means an engine ***the EU*** type-approval of which is limited to constant-speed operation, excluding engines the constant-speed governor function of which is removed or disabled; ***it*** may be provided with an idle speed that can be used during start-up or shut-down ***and it*** may be equipped with a governor that can be set to ***an*** alternative ***speed*** when the engine is stopped;

(22) "variable-speed engine" means an engine that is not a constant-speed engine ;

(23) "constant-speed operation" means ***an*** engine operation with a governor that automatically controls the operator demand to maintain engine speed, even under changing load;

(24) "auxiliary engine" means an engine installed or intended ***to be installed*** in non-road mobile ***machinery*** that ***does*** not directly or indirectly provide propulsion ;

(25) "net power" means the engine power ***in kW*** obtained on a test bench at the end of the crankshaft, or its equivalent, measured in accordance with the method of measuring the power of internal combustion engines specified in UNECE Regulation No 120 using a reference fuel ***or fuel combination*** set out in Article 25(2);

(26) "reference power" means the net power that ***is*** used to determine the applicable emission limit values for the engine;

(27) "rated net power" means the net power ***in kW*** as declared by the manufacturer of an engine at rated speed;

(28) “maximum net power” means the highest value of the net power on the nominal full-load power curve for the engine type;

(29) “rated speed” means the ***maximum full load speed allowed by an engine’s governor, as designed by the manufacturer, or, if a governor is not present, the speed at which the maximum net power is attained by the engine, as specified by the manufacturer***;

(30) “engine production date” means the date, expressed as the month and year, on which the engine passes the final check, after it has left the production line, and is ready to be delivered or to be put into stock;

(31) “transition period” means the first ***24*** months following the dates ***set out in Annex III for the placing on the market of Stage V engines***;

(32) “transition engine” means an engine ***that*** has an engine production date that is prior to the date ***set out in Annex III*** for the placing on the market of ***Stage V*** engines and ***that***:

(a) ***complies*** with the latest applicable emission limits defined in the relevant legislation applicable on … [the day before the date of entry into force of this Regulation]***; or***

(b) ***falls within a power range or is used or intended for use in an application that was not subject to pollutant emission limits and type-approval*** at Union level on … [the day before the date of entry into force of this Regulation] ;

(33) ***"non-road mobile*** machine production date" means the ***month and*** year indicated on the statutory marking of the machine or, in ***the*** absence of a ***statutory*** marking, the ***month and*** year ***in which*** it passes the final check after it has left the production line;

(34) "inland waterway vessel" means a ***craft*** falling within the scope of Directive (EU) 2016/… ***[number of Directive contained in doc. st7532/16]***;

(35) "generating set" means an independent non-road mobile machine that is not part of a power train, primarily intended to produce electric power;

(36) "stationary machinery" means machinery that is intended to be permanently installed in one location for its first use and is not intended to be moved, by road or otherwise, except during shipment from the place of manufacture to the place of first installation;

(37) "permanently installed" means bolted, or otherwise effectively fixed so that it cannot be removed without the use of tools or equipment, to a foundation or an alternative constraint intended to cause the engine to operate in one single location in a building, structure, facility or installation;

(38) "snowmobile" means a self-propelled machine that is intended for off-road travel primarily on snow, is driven by tracks in contact with snow and steered by a ski or skis in contact with the snow, and has a maximum unladen mass, in running order, of 454 kg (including standard equipment, coolant, lubricants, fuel ***and*** tools ▌ but excluding optional accessories ***and the driver***);

(39) ***"all-terrain vehicle" or "ATV"*** means a motorised vehicle, propelled by an engine, intended primarily to travel on unpaved surfaces on four or more wheels with low-pressure tyres, having a seat designed to be straddled by the driver only, or a seat designed to be straddled by the driver and a seat for no more than one passenger, and handlebars for steering;

(40) "***side***-by-***side*** vehicle***" or "***SbS▌ " means a self-propelled, operator-controlled, non-articulated vehicle intended primarily to travel on unpaved surfaces on four or more wheels, having a minimum unladen mass, in running order, of 300 kg (including standard equipment, coolant, lubricants, fuel and tools▌ but excluding optional accessories ***and the driver***) and a maximum design speed of 25 km/h or more; such a vehicle is also designed to transport persons and/or goods, and/or to pull and push equipment, is steered by a control other than a handlebar, is designed for recreational or utility purposes and ***carries*** no more than ***six*** people including the driver, sitting side by side on one or more non-straddle seats;

(41) "railway vehicle" means ▌ non-road mobile ***machinery*** that operates exclusively on railway tracks;

(42) “locomotive” means a railway vehicle designed to provide, either directly through its own wheels or indirectly through the wheels of other railway vehicles, the motive power for propelling itself and for propelling other railway vehicles that are designed to carry freight, passengers and other equipment, itself being designed or intended not to carry freight or passengers, other than those operating it;

(43) “railcar” means a railway vehicle designed to provide, either directly through its own wheels or indirectly through the wheels of other railway vehicles, the motive power for propelling itself, and is specifically designed to carry goods or passengers, or both goods and passengers, and is not a locomotive;

(44) “auxiliary railway vehicle” means a railway vehicle that is not a railcar or locomotive, including but not limited to a railway vehicle specifically designed to perform maintenance or construction work or lifting operations associated with the track or other infrastructure of the railway;

(45) "mobile crane" means a self-powered jib crane capable of travelling on-road or off-road or both, and relying on gravity for stability and operating on tyres, crawlers or with other mobile arrangements;

(46) "snow thrower" means a self-powered machine that is exclusively designed for clearing snow from a paved surface by collecting a quantity of snow and projecting it forcefully through a chute;

(47) "making available on the market" means any supply of an engine ***or non-road mobile machinery*** for distribution or use on the Union market in the course of a commercial activity, whether in return for payment or free of charge;

(48) "placing on the market" means the first making available on the Union market of an engine ***or non-road mobile machinery*** ;

(49) "manufacturer" means any natural or legal person who is responsible to the approval authority for all aspects of the engine EU type-approval or authorisation process and for ensuring conformity of engine production, and who is also responsible for market surveillance concerns for the engines produced, whether or not they are directly involved in all stages of the design and construction of the engine which is the subject of the ***EU type-***approval process;

(50) "manufacturer's ***representative" or "***representative" means any natural or legal person established in the Union whom the manufacturer duly appoints ***by a written mandate*** to represent it in matters concerning the approval authority or the market surveillance authority and to act on its behalf in matters covered by this Regulation;

(51) "importer" means any natural or legal person established in the Union who places on the market an engine ▌ from a third country, whether or not the engine is already installed in ***non-road mobile*** machinery;

(52) "distributor" means any natural or legal person in the supply chain, other than the manufacturer or the importer, who makes ***an engine*** available on the market▌ ;

(53) "economic operator" means the manufacturer▌ , the manufacturer's representative▌ , the importer ▌ or the distributor▌ ;

(54) ***"original equipment manufacturer" or "OEM***" means any natural or legal person that manufactures non-road mobile machinery;

(55) "approval authority" means the authority of a Member State established or appointed by a Member State▌ and notified by it to the Commission ***and which has*** competence for ***:***

(a) all aspects of the ***EU type-***approval of an engine type or of an engine family***;***

(b) the authorisation process***;***

(c) ***granting*** and, where appropriate, withdrawing or refusing ***EU type-***approval, and issuing ***EU type-***approval certificates***;***

(d) acting as the contact point for the approval authorities of other Member States***;***

(e) designating the technical services***;*** and

(f) ensuring that the manufacturer meets its obligations regarding conformity of production;

(56) “technical service” means an organisation or body designated by the approval authority as a testing laboratory to carry out tests, or as a conformity assessment body to carry out the initial assessment and other tests or inspections, on behalf of the approval authority, or the authority itself when carrying out those functions;

(57) “market surveillance” means the activities carried out and the measures taken by national authorities to ensure that engines made available on the market comply with the relevant Union harmonisation legislation ;

(58) “market surveillance authority” means an authority of a Member State that is responsible for carrying out market surveillance in its territory;

(59) “national authority” means an approval authority or any other authority involved in and responsible for, in respect of engines to be installed in non-road mobile machinery ***or of non-road mobile machinery in which engines are installed,*** market surveillance, border control or the placing on the market in a Member State;

(60) “end-user” means any natural or legal person, other than the manufacturer, OEM, importer or distributor, that is responsible for operating the engine installed in non-road mobile machinery;

(*61) **"emission control strategy" means an element or a set of design elements incorporated into the overall design of an engine, or into non-road mobile machinery in which an engine is installed, and used in controlling emissions;***

(62) "emission control system" means any device, system or element of design that controls or reduces emissions;

(63) "defeat strategy" means an emission control strategy that reduces the effectiveness of the emission control system under ambient or engine operating conditions encountered either during normal machine operation or outside the EU type-approval test procedures;

▌

(64) "electronic control unit" means an engine's electronic device that is part of the emission control system and uses data from engine sensors to control engine parameters;

(65) "exhaust gas recirculation***" or "***EGR▌" means a technical device that is part of the emission control system and reduces emissions by routing exhaust gases that have been expelled from the combustion chamber(s) back into the engine to be mixed with incoming air before or during combustion, except for the use of valve timing to increase the amount of residual exhaust gas in the combustion chamber(s) that is mixed with incoming air before or during combustion;

(66) “exhaust after-treatment system” means a catalyst, particulate filter, deNOx system, combined deNOx particulate filter or any other emission-reducing device, with the exception of exhaust gas recirculation ***and turbochargers,*** that is part of the emission control system but is installed downstream of the engine exhaust ***ports***;

(67) “tampering” means inactivation, adjustment or modification of the emission control system, including any software or other logical control elements of ***such a system***, that has the effect, whether intended or not, of worsening the emissions performance of the engine;

(68) “test cycle” means a sequence of test points, each with a defined speed and torque, to be followed by the engine when being tested under steady state or transient operating conditions;

(69) “steady-state test cycle” means a test cycle in which engine speed and torque are held at a finite set of nominally constant values; steady-state tests are either discrete mode tests or ramped-modal tests;

(70) “transient test cycle” means a test cycle with a sequence of normalized speed and torque values that vary on a second-by-second basis with time;

▌

(71) “crankcase” means the enclosed spaces in, or external to, an engine which are connected to the oil sump by internal or external ducts through which gases and vapours can be emitted;

(72) “regeneration” means an event during which emissions levels change while the ***exhaust*** after-treatment system's performance is being restored by design and which can be classified as continuous regeneration or infrequent (periodic) regeneration;

(73) “emission durability period” or "EDP" means the number of hours or, where applicable, the distance used to determine the deterioration factors;

(74) “deterioration factors” means the set of factors that indicate the relationship between emissions at the start and end of the emission durability period;

(75) "virtual testing" means computer simulations, including calculations, undertaken to demonstrate the level of performance of an engine as an aid to decision-making without requiring the use of a physical engine.

Article 4

Engine categories

1. For the purposes of this Regulation, the following engine categories, subdivided into the sub-categories set out in Annex I, apply:

(1) ***'category*** NRE' :

(a) engines for non-road mobile machinery intended and suited to move, or to be moved***,*** by road or otherwise***,*** that are not excluded under Article 2(2) and are not included in any other category set out in points (2) to (10) ***of this paragraph;***

(b) engines ***having*** a reference power of less than 560 kW used in the place of ***Stage V*** engines of categories IWP***, IWA***, RLL or RLR;

(2) ***'category*** NRG'***:*** engines having a reference power that is greater than 560 kW, exclusively for use in generating sets; engines for generating sets other than those having those characteristics ***are*** included in the categories NRE or NRS, according to their characteristics;

(3) ***'category*** NRSh'***:*** hand-held SI engines having a reference power that is less than 19 kW, exclusively for use in hand-held machinery;

(4) ***'category*** NRS'***:*** SI engines having a reference power that is less than 56 kW and not included in category NRSh;

(5) ***'category*** IWP' :

(a) engines exclusively for use in inland waterway vessels, for their direct or indirect propulsion, or intended for their direct or indirect propulsion, having a reference power that is greater than or equal to 19 kW;

(b) engines used in place of engines of category IWA provided that they comply with Article 24(8);

(6) 'category IWA': auxiliary engines exclusively for use in inland waterway vessels and having a reference power that is greater than or equal to 19 kW;

(7) 'category RLL': engines exclusively for use in locomotives, for their propulsion or intended for their propulsion;

(8) 'category RLR':

((a) ▌ engines exclusively for use in railcars, for their propulsion or intended for their propulsion;

(b) engines used in the place of Stage V engines of category RLL;

(9) ***'category*** SMB'***:*** SI engines exclusively for use in snowmobiles; engines for snowmobiles other than ***SI engines are*** included in the category NRE;

(10) ***'category*** ATS'***:*** SI engines exclusively for use in ATVs and SbS; engines for ATVs and SbS other than ***SI engines are*** included in the category NRE.

2. ***A variable-speed*** engine of a particular category ***may*** be used in the place of ***a constant-speed*** engine of the same category▌ .

Variable**-**speed engines of category IWP used ***for*** constant **-**speed ***operation*** shall additionally comply with▌ Article 24(7) or Article 24(8), as applicable.

3. Engines for auxiliary ***railway*** vehicles and auxiliary engines for railcars ***and locomotives are*** included in the categories NRE or NRS, according to their characteristics.

CHAPTER II

GENERAL OBLIGATIONS

Article 5

Obligations of Member States

1. Member States shall establish or appoint approval authorities ▌ and market surveillance authorities ▌ in accordance with this Regulation.

2. Member States shall notify the Commission of the establishment and appointment ▌ of the approval and market surveillance authorities ***referred to in paragraph 1, including*** their names, ***postal and*** electronic addresses and ▌ areas of responsibility. The Commission shall publish ▌ a list and details of the approval authorities ***on its website***.

3. Member States shall only permit the placing on the market of ▌ ***:***

(a) ***engines that are covered by a valid EU type-approval granted in accordance with this Regulation***, regardless of whether they are already installed in ***non-road mobile machinery; and***

(b) ***non-road mobile*** machinery ***in which*** engines as referred to in point (a) ***are installed*** ▌ .

4. Member States shall not prohibit, restrict or impede the placing on the market of***:***

(a) engines on grounds relating to aspects of their construction and functioning covered by this Regulation, where ***those engines satisfy its requirements;***

(b) ***non-road mobile machinery on grounds relating to gaseous and particulate pollutant emissions from engines installed in such machinery, where those engines fall within the scope of this Regulation and*** satisfy its requirements.

5. Member States shall organise and carry out market surveillance and the control of engines on the market in accordance with Chapter III of Regulation (EC) No 765/***2008***.

Article 6

Obligations of approval authorities

1. Approval authorities shall ensure that manufacturers applying for EU type-approval comply with ▌ this Regulation.

2. Approval authorities shall only grant EU type-approval to engine types or engine families that ***comply with*** this Regulation.

3. Approval authorities shall make public***, by means of IMI,*** a register of all engine types and engine families▌ for which ***EU type-approvals*** have ***been*** granted***, extended or withdrawn, or in respect of which an application for*** EU type-approval ***has been rejected.***

That register shall contain at least the following information: ▌

(a) name and address of the manufacturer and name of the company, if different;

(b) trade name(s) or trademark(s), as appropriate, belonging to the manufacturer;

(c) designation of the engine types covered by the EU type-approval of the engine type or, where applicable, by the EU type-approval of the engine family;

(d) engine category***;***

(e) number of ***the EU*** type-approval, ***including the number of any extensions;***

(f) date of granting, extension, refusal or withdrawal of ***the EU*** type-approval***; and***

(g) the content of the sections "General engine information" and "Final emission result" of the test report referred to in Article 24(12).

Article 7

Obligations of *market surveillance authorities*

1. ***Market surveillance authorities*** shall perform documentary checks and, where appropriate, physical and laboratory checks of engines, on an adequate scale and on the basis of adequate samples. When doing so, they shall take account of established principles of risk assessment, of any complaints and of any other relevant information.

2. Market surveillance authorities may require economic operators to make such documentation and information available as is deemed necessary for the purpose of carrying out the authorities' activities.

▌

Article 8

***General obligations** of manufacturers*

1. Manufacturers shall ensure that when their engines are placed on the market, they are manufactured and approved in accordance with ▌ this Regulation.

2. Where manufacturers modify an engine which is subject to EU type-approval in such a manner that it subsequently qualifies to belong to a different category or sub-category, they shall be responsible for ensuring that the engine complies with the requirements applicable to that category or sub-category.

Where a legal person modifies an engine in such a way that it no longer complies with the emission limits applicable to it according to its category or sub-category, that person shall be considered to be responsible for re-establishing compliance with those emission limits.

▌

3. Manufacturers shall be responsible to the approval authority for all aspects of the ***EU type-*** approval process and for ensuring conformity of production, regardless of whether they are directly involved in all stages of the construction of an engine.

4. ***Manufacturers*** shall ensure that procedures are in place for series production to remain in conformity with the approved type ***and for monitoring emissions of in-service engines in accordance with Article 19.***

   Changes in ***the*** design ▌ or characteristics ***of an engine type*** and changes in the requirements with which an engine ***type*** is declared to be in conformity shall be taken into account in accordance with Chapter VI.

5. In addition to the ***statutory*** marking referred to in Article 32, manufacturers shall indicate, ▌ ***on the engines they have manufactured and place on the market*** or, where that is not possible, ▌ in a document accompanying the engine, their name, registered trade name or registered trade mark and the address in the Union at which they can be contacted.

6. Upon reasoned request, manufacturers shall provide the OEM with a duplicate of the statutory marking referred to in Article 15(4).

7. Manufacturers shall ensure that, while they are responsible for an engine, storage or transport conditions do not jeopardise its compliance with ***this Chapter*** and ***Chapter*** III.

8. Manufacturers shall keep the EU type-approval certificate with its attachments as referred to in Article 23(1) and, where applicable, a copy of the statement of conformity referred to in Article 31 at the disposal of the approval authorities for a period of 10 years after the placing on the market of an engine.

9. Manufacturers shall provide national authorities, upon reasoned request and via the approval authority, with a copy of the EU type-approval certificate for an engine. That copy shall be in a language which can be easily understood by the requesting national authority.

10. ***For the purpose of EU type-***approval of engines, manufacturers established outside the Union shall appoint a single representative established within the Union to represent them in their dealings with the approval authority.

11. ***For the purpose of market surveillance, manufacturers*** established outside the Union shall appoint a single representative established within the Union***, which may be the representative referred to in paragraph 10.***

Article 9

Obligations of manufacturers concerning ***engines*** *that are not in conformity*

1. A manufacturer who has reason to believe or considers that one of its engines placed on the market is not in conformity with this Regulation shall immediately conduct an investigation into the nature of the suspected non-conformity and the likely extent of its occurrence.

Based on the outcome of the investigation, the ***manufacturer shall*** take corrective measures to ensure that engines in production are brought into conformity with the approved engine type or engine family in a timely manner.▌

▌ The manufacturer shall immediately inform the approval authority that granted the ***EU type-***approval of the investigation, giving details, in particular, of the non-conformity and of any corrective measures taken.

2. Notwithstanding paragraph 1, a manufacturer shall not be required to take corrective measures in respect of an engine which is not in conformity with this Regulation as a result of modifications made after it has been placed on the market and that were not authorised by the manufacturer.

Article 10

*Obligations of **manufacturers'** representatives **for** market surveillance*

As a minimum, manufacturers' representatives for market surveillance shall perform ***the following*** tasks, ***which shall be*** specified in the ***written*** mandate received from the manufacturer :

(***a) ensure that the EU type-approval certificate with its attachments as referred to in Article 23(1) and, where applicable, a copy of the statement*** of conformity referred to in Article 31 can be ***made available*** to the approval authorities for a period of ten years following the placing on the market of an engine;

(***b) provide the*** approval authority**,** ***upon reasoned request*****,** with all the information and documentation necessary to demonstrate the conformity of production of an engine;

(***c***) ***cooperate*** with the approval and market surveillance authorities, at their request, in respect of any action taken under the mandate.

Article 11

***General obligations** of importers*

1. Importers shall place on the market only compliant engines which have received EU type-approval.

2. Before placing on the market an EU type-approved engine, importers shall ensure that***:***

   (a) ***the EU type-approval certificate with its attachments as referred to in*** Article ***23(1)*** is available***;***

   (b) the engine bears the ***statutory*** marking ***referred to in Article 32;***

   (c) ***the engine*** complies with Article 8(5).

3. ***For*** a period of ten years following the placing on the market of the engine, ***importers shall*** keep***, where applicable,*** a copy of the ***statement*** of conformity ***referred to in Article 31*** at the disposal of the approval and market surveillance authorities, and shall ensure that the ***EU type-approval certificate with its attachments*** as referred to in Article ***23(1)*** can be made available to those authorities, upon request.

4. Importers shall indicate, on the engine or, where ***that*** is not possible, ▌ in a document accompanying the engine, their name, registered trade name or registered trade mark and the address at which they can be contacted.

5. Importers shall ***ensure that the engine is accompanied by the information and*** instructions ***referred to in*** Article 43.

6. Importers shall ensure that, whilst they are responsible for an engine, storage or transport conditions do not jeopardise its compliance with ***this Chapter*** or ***Chapter*** III.

7. Importers shall provide a requesting national authority, upon reasoned request, with all the information and documentation necessary to demonstrate the conformity of an engine. That information and documentation shall be in a language which can be easily understood by the requesting national authority.

Article 12

*Obligations of importers concerning **engines** that are not in conformity*

1. An importer ***that*** has reason to believe or considers that an engine is not in conformity with this Regulation, and in particular that it does not correspond to its ***EU*** type-approval, shall not ***place*** the engine ***on the market*** until it has been brought into conformity.

   The ***importer*** shall inform***, without undue delay,*** the manufacturer and the market surveillance authorities, as well as the approval authority that granted the ***EU type-***approval, ***thereof***.

2. An importer ***that*** has reason to believe or considers that an engine which it has placed on the market is not in conformity with this Regulation shall immediately conduct an investigation into the nature of the suspected non-conformity and the likely extent of its occurrence.

Based upon the outcome of the investigation, the ***importer shall take corrective measures and inform the manufacturer thereof*** to ensure that engines in production are brought into conformity with the approved engine type or engine family in a timely manner.

Article 13

General obligations *of distributors*

1. When making an engine available on the market, distributors shall act with due care with regard to the requirements of this Regulation.

2. Before making an engine available on the market, distributors shall verify that***:***

(a) ***the manufacturer has complied with Article 8(5)***;

(b) ***where applicable***, the importer ***has*** complied with Article 11(2) and (4)***;***

(c) the engine bears the statutory marking ***referred to in Article 32;***

(d) ***the information and*** instructions ***referred to in Article 43 are*** available in a language that can be ***easily understood by*** the OEM.

3. Distributors shall ensure that, while they are responsible for an engine, storage or transport conditions do not jeopardise its compliance with ***this Chapter*** or ***Chapter*** III.

4. Distributors shall, upon reasoned request, ensure that the manufacturer provides the requesting national authority with the documentation specified in Article 8(8), or that the importer provides the requesting national authority with the ***documentation*** specified in Article 11(3).

Article 14

Obligations of distributors concerning ***engines*** *that are not in conformity*

1. Where a distributor has reason to believe or considers that an engine is not in conformity with ▌this Regulation, it shall not ***make*** the engine ***available on the market*** until it has been brought into conformity.

2. The distributor shall inform the manufacturer or the manufacturer's representative if it has reason to believe or considers that an engine which it has ***made available on the market*** is not in conformity with this Regulation, to ensure that the corrective measures necessary to bring the engines in production into conformity with the approved engine type or engine family are taken in accordance with Article 9▌ or ***12.***

▌

Article 15

Obligations of OEMs concerning the installation of engines

1. *OEMs shall install EU type-approved engines in non-road mobile machinery in accordance with the instructions provided by the manufacturer pursuant to Article 43(2), and in a manner that does not adversely affect the engine's performance with regard to its gaseous and particulate pollutant emissions.*

2. *Where an OEM does not follow the instructions referred to in paragraph 1 of this Article, or modifies an engine in the course of its installation in non-road mobile machinery in a manner that adversely affects the engine's performance with regard to its gaseous and particulate pollutant emissions, that OEM shall be considered to be a manufacturer for the purposes of this Regulation and shall, in particular, be subject to the obligations laid down in Articles 8 and 9.*

3. *OEMs shall install EU type-approved engines in non-road mobile machinery only in accordance with the kinds of exclusive use provided for in Article 4.*

4. *Where the statutory marking of the engine referred to in Article 32 is not visible without removing parts, the OEM shall affix to the non-road mobile machinery, in a visible manner, a duplicate of the marking as referred to in that Article and in the relevant implementing act, provided by the manufacturer.*

5. *Where non-road mobile machinery with an installed transition engine is placed on the market in accordance with Article 58(5), OEMs shall indicate the non-road mobile machine production date as part of the marking on the machine.*

6. Where a manufacturer delivers to an OEM an engine separately from its exhaust after-treatment system in accordance with Article 34(3), the OEM shall, where applicable, provide the manufacturer with information relating to the assembly of the engine and its exhaust after-treatment system.

Article 16

***Application** of manufacturers' **obligations** to importers and distributors*

An importer or distributor ***that*** makes an engine available on the market under its name or trademark***,*** or ***that*** modifies ***such an*** engine in ▌ such a way that its compliance with the applicable requirements may be affected***, shall be considered to be*** a manufacturer for the purposes of this Regulation and shall***, in particular,*** be subject to the obligations ***laid down in Articles 8 and 9.***

Article 17

Notification obligation for economic operators and OEMs

Economic operators ***and OEMs*** shall, ***upon*** request, ***notify*** the approval and market surveillance authorities of the following, for a period of five years from the date of placing on the market:

(a) any economic operator who has supplied them with an engine;

(b) any economic operator ***or, where identifiable, any OEM*** to whom they have supplied an engine.

CHAPTER III

SUBSTANTIVE REQUIREMENTS

Article 18

Exhaust emission requirements for EU type-approval

1. Manufacturers shall ensure that engine types and engine families are designed, constructed and assembled so as to comply with the requirements ***laid down*** in Chapter II and ***this*** Chapter ▌.

2. As from the dates for the placing on the market of the engines set out in Annex III, engine types and engine families shall not exceed the exhaust emission limit values referred to as Stage V and set out in Annex II.

   Where, in accordance with the parameters defining the engine family laid down in the ***relevant implementing*** act, one engine family covers more than one power ***range***, the parent engine (for the purposes of ***the EU*** type-approval) and all engine types within the same family (for the purposes of conformity of production) shall, with respect to the applicable power ***ranges***:

   (a) meet the most stringent emission limit values;

   (b) be tested using the test cycles that correspond to the most stringent emission limit values;

   (c) be subject to the earliest applicable dates for ***the EU*** type-approval and placing on the market set out in Annex III.

3. The exhaust emissions of engine types and engine families shall be measured on the basis of the test cycles set out in Article 24 and in accordance with Article 25.

4. Engine types and engine families shall be designed ***and fitted with emission control strategies in such a way as to prevent*** tampering ***to the extent possible. The*** use of ▌ defeat ***strategies shall be prohibited***.

5. The Commission shall ***adopt implementing acts laying down*** the details for the parameters to be used for the definition of ▌ engine ***types and engine families, including their operation modes,*** and the technical details for the prevention of tampering as referred to in paragraph 4 of this Article. Those ***implementing*** acts shall be adopted, by ▌ 31 December 2016, ***in accordance with the examination procedure referred to in Article 56(2)***▌ .

Article 19

Monitoring of emissions of in-service engines

1. ***The gaseous pollutant emissions from engines belonging to*** engine types or engine families ***of emission Stage V that have been type-approved in accordance with this Regulation*** shall be monitored by testing ***in-service*** engines installed in non-road mobile machinery and operated over their normal operating duty cycles. Such testing shall be conducted***, under the responsibility of the manufacturer and in compliance with the requirements of the approval authority,*** on engines that have been correctly maintained, in compliance with the provisions on the selection of engines, ***test*** procedures and reporting of results for the different engine categories.

   The Commission shall conduct pilot programmes with a view to developing appropriate test procedures for those engine categories and sub-categories in respect of which such test procedures are not in place.

   The Commission shall conduct monitoring programmes for each engine category to determine to what extent the emissions measured from the test cycle correspond to the emissions measured in actual operation. Those programmes and their results shall, on a yearly basis, be the subject of a presentation to the Member States and, subsequently, of a communication to the public.

2. The Commission is empowered to adopt delegated acts in accordance with Article 55 for the purpose of supplementing this Regulation ▌ with detailed arrangements with regard to the selection of engines, test procedures and reporting of results referred to in paragraph 1 of this Article. Those delegated acts shall be adopted by ▌ 31 December 2016▌ .

CHAPTER IV

EU TYPE-APPROVAL PROCEDURES

Article 20

Application for EU type-approval

1. Manufacturers shall submit a separate application for each engine type or engine family EU type-approval to the approval authority of a Member State, and each application shall be accompanied by the information folder referred to in Article 21. ***Only one application shall be submitted in respect of a particular engine type or, where applicable, engine family, and it shall be submitted to only one approval authority.***

2. Manufacturers shall make available to the technical service responsible for conducting the ***EU type-***approval tests an engine conforming to the engine type or, in the case of an engine family, to the parent engine characteristics described in the information folder referred to in Article 21.

3. In the case of an application for EU type-approval of an engine family, if the approval authority determines that, with regard to the selected parent engine referred to in paragraph ***2 of this Article,*** the application submitted does not fully represent the engine family described in the information folder ***referred to in Article 21,*** manufacturers shall make available an alternative and, if necessary, an additional parent engine which is considered by the approval authority to represent the engine family.

▌

4. Within one month of the start of production of the approved engine type or engine family, manufacturers shall submit the initial plan for monitoring in-service engines to the approval authority that granted EU type-approval of that engine type or, where applicable, engine family.

▌

Article 21

Information folder

1. The applicant shall provide the approval authority with an information folder which ▌ includes the following:

   (a) an information document***, including a list of reference fuels and, where requested by the manufacturer, any other specified fuels, fuel mixtures or fuel emulsions referred to in Article 25(2) and described in accordance with the delegated acts referred to in Article 25(4) ("the information document")***;

   (b) all relevant data, drawings, photographs and other information relating to the ***engine type or, where applicable, the parent*** engine;

   (c) any additional information requested by the approval authority in the context of the ***EU type-approval*** application procedure.

2. The information folder may be provided in paper form or in an electronic format that is accepted by the technical service and the approval authority.

3. The Commission may adopt implementing acts laying down templates for the information document and for the information folder. Those implementing acts shall be adopted, by ▌ 31 December 2016, in accordance with the examination procedure referred to in Article 56(2).

CHAPTER V

CONDUCT OF EU TYPE-APPROVAL PROCEDURES

Article 22

General provisions

1. The approval authority receiving the application shall grant EU type-approval to all engine types or engine families ***complying*** with each of the following:

   (a) the particulars in the information folder;

   (b) the requirements of this Regulation, and in particular the ***conformity of*** production arrangements referred to in Article 26.

2. Where an engine fulfils the requirements laid down in this Regulation, approval authorities shall not impose any other ***EU*** type-approval requirements with regard to exhaust emissions for non-road mobile machinery in which such an engine is installed.

3. ***After the dates for the EU*** type-approval of engines set out in Annex III for each engine sub-category***, approval*** authorities shall not grant an EU type-approval to an engine type or engine family that does not fulfil the requirements ***laid down*** in this Regulation .

4. EU type-approval certificates shall be numbered in accordance with a harmonised system to be laid down by the Commission.

5. ***By means of IMI, the*** approval authority shall:

(a) ***make available*** to the approval authorities of the other Member States a list of the EU type-approvals it has granted ***or, where applicable, extended, within one month of issuing the corresponding EU type-approval certificate;***

(b) ***make available without delay to the approval authorities of the other Member States a list of the EU type-approvals it has refused to grant*** or has withdrawn , together with the reasons for its decision;

(c) ***within one month of*** receiving a request from the approval authority of another Member State, ***send*** that approval authority a copy of the engine ***type*** or engine family EU type-approval certificate where this exists together with the information package ***referred to in paragraph 6*** for each engine type or engine family which it has approved***,*** refused to approve or the EU type-approval of which it has withdrawn***;***

6. The approval authority shall put together an information package consisting of the information folder accompanied by the test ***report*** and all other documents added by the technical service or by the approval authority to the information folder in the course of carrying out their functions ***("the*** information package***").***

The information package shall include an index listing its contents, suitably numbered or otherwise marked so as to clearly identify all the pages and the format of each document***, in order*** to present a record of the successive steps in the management of the EU type-approval, in particular the dates of revisions and updating.

The approval authority shall ensure that ***the*** information contained in the information package is available for a period of ***at least 25*** years following the end of validity of the EU type-approval concerned.

7. The Commission may adopt implementing acts laying down:

(a) the method for establishing the harmonised numbering system referred to in paragraph 4;

(b) the ***templates and data structure for the exchange of data*** referred to in ▌ paragraph ***5.***

▌

Those implementing acts shall be adopted, by ▌ 31 December 2016, in accordance with the examination procedure referred to in Article 56(2) ▌ .

Article 23

Specific provisions concerning the EU type-approval certificate

1. The EU type-approval certificate shall contain the following attachments:

   (a) the information package;

   ▌

   (b) ***where applicable,*** the names and specimen signatures of the persons authorised to sign ***statements*** of conformity as referred to in Article 31 and ***an indication*** of their position in the company.

2. The Commission shall lay down a template for the EU type-approval certificate.

3. In respect of each ***engine*** type ***or*** engine ***family that has been approved***, the approval authority shall:

   (a) complete all the relevant sections of the EU type-approval certificate ***and attach*** the test ***report***;

   (b) compile the index to the information package;

   (c) issue the completed certificate, together with its attachments, to the applicant without delay.

4. ***Where*** an EU type-approval has, in accordance with Article 35, ***been made subject to*** restrictions as to its validity or where the engine type or engine family ***has been exempted from*** certain ***requirements*** of this Regulation , the EU type-approval certificate shall specify those restrictions or ***exemptions***.

5. The Commission may adopt implementing acts laying down the template for the EU type-approval certificate referred to in paragraph ***2 of this Article.*** Those implementing acts shall be adopted, by 31 December 2016, in accordance with the examination procedure referred to in Article 56(2) .

Article 24

Tests required for EU type-approval

1. Compliance with the technical prescriptions laid down in this Regulation shall be demonstrated by means of appropriate tests performed by designated technical services. The measurement ***and test*** procedures and the specific equipment and tools for the ***conduct*** of those tests shall be those laid down in Article 25.

2. The manufacturer shall make available to the approval authority as many engines as are required under the relevant delegated acts for the performance of the required tests.

3. The required tests shall be ***conducted*** on engines that are representative of the ***engine type or, where applicable, of the parent engine of the engine family*** to be approved.

Notwithstanding the first subparagraph, the manufacturer may, in agreement with the approval authority, select an engine which, although not representative of the ***engine type or, where applicable, of the parent engine of the engine family*** to be approved, combines a number of the most unfavourable features with regard to the required level of performance. Virtual testing methods may be used to aid decision-making during the selection process.

4. For the purposes of conducting the EU type-approval tests, the applicable test cycles are those set out in Annex IV. The test cycles applicable to each engine type included in the EU type-approval shall be indicated in the information document.

5. An ***engine that is representative of the engine type or, where applicable, of the*** parent engine ***of the engine family, or an engine selected in accordance with the second subparagraph of paragraph 3,*** shall be tested on a dynamometer using the applicable ***non-road steady-state*** test cycle identified in Tables IV-1 to IV-***10 of Annex IV.*** The manufacturer may choose whether to conduct that test using the discrete-mode or the ramped-modal test method. Except in the cases ***referred to in paragraphs*** 7 and 8, a variable-speed engine of a particular category used in a constant-speed ***operation*** of the same category ***need*** not be tested using the applicable constant-speed steady-state test cycle.

6. In ***the*** case of a constant-speed engine with a governor that can be set to an alternative speed, the requirements of paragraph 5 shall be ***fulfilled*** at each applicable constant speed and the information document shall indicate the speeds that apply for each engine type.

7. In ***the*** case of an engine of category IWP intended to be used for both variable-speed and constant-speed ***operation***, the requirements of paragraph 5 shall be fulfilled for each applicable steady-state test cycle separately and the information document shall indicate each steady-state test cycle in respect of which ***those*** requirements were fulfilled.

8. In ***the*** case of an engine of category IWP that is intended for use in the place of an engine of category IWA in accordance with Article ***4(2),*** the requirements of paragraph 5 of this Article shall be fulfilled for each applicable steady-state test cycle set out in Tables IV-5 and IV-6 of Annex IV, and the information document shall indicate each steady-state test cycle in respect of which those requirements were fulfilled.

9. Except for engines type-approved pursuant to Article 34(5) and (6), variable-speed engines of category NRE having a net power that is greater than or equal to 19 kW but not more than 560 kW shall***,*** in addition to fulfilling the requirements of paragraph 5 ***of this Article,*** also be tested on a dynamometer using the transient test cycle identified in Table IV-11 of Annex IV.

10. Engines of sub-categories NRS-v-2b and NRS-v-3 having a maximum speed ***of*** less than or equal to 3400 rpm shall, in addition to fulfilling the requirements of paragraph 5, also be tested on a dynamometer using the transient test cycle identified in Table IV-12 of Annex IV.

11. The Commission is empowered to adopt delegated acts in accordance with Article 55 supplementing this Regulation by laying down the detailed technical specifications and characteristics of the steady-state and transient test cycles referred to in this Article***,*** ***including the corresponding method for the determination of the engine load and speed settings***. Those delegated acts shall be adopted by ▌31 December 2016▌ .

12. The Commission may adopt implementing acts laying down the single format of the test report required for EU type-***approval***. Those implementing acts shall be adopted, by ▌31 December 2016, in accordance with the examination procedure referred to in Article 56(2) ▌ .

Article 25

Conduct of measurements and tests for EU type-approval

1. ***The final exhaust*** emission ▌ test results for▌ engines subject to this Regulation shall be ***calculated by applying all of the following to the laboratory test results:***

   (a) the emissions of crankcase gases, where required by paragraph 3 and where not already included in the laboratory measurement;

   (b) any necessary adjustment factor, where required by paragraph 3 and where the engine includes a regenerating exhaust after-treatment system;

   (c) in respect of all engines, deterioration factors appropriate to the emission durability periods specified in Annex V.

2. The testing of an engine type or engine family to determine whether it meets the emission limits set out in this Regulation shall be carried out by ***using*** the ***following*** reference fuels or fuel combinations, as appropriate▌ :

   (a) diesel;

   (b) petrol;

   (c) petrol/oil mixture, for two stroke SI engines;

   (d) natural gas/bio methane;

   (e) liquid petroleum gas (LPG);

   (f) ethanol.

The engine type or engine family shall, in addition, meet the exhaust emission limits set out in this Regulation in respect of any other specified fuels, fuel mixtures or fuel emulsions included by a manufacturer in an application for EU type-approval and described in the information folder.

3. As regards the conduct of measurements and tests, the technical requirements shall be met in respect of ▌ :

(a) apparatus ***and*** procedures for ***the*** conduct of tests;

(b) apparatus ***and*** procedures for emission measurement ***and*** sampling;

(c) methods for data evaluation ***and*** calculations;

(d) methods for establishing deterioration factors;

(e) in relation to engines in ***categories*** NRE, NRG, IWP, IWA, RLR, NRS, NRSh***, SMB and ATS*** complying with Stage V emission limits ***set out*** in Annex II:

(i***)*** methods for taking account of emissions of crankcase gases***;***

(ii***)*** methods for ***determining and*** taking account of ***continuous or*** infrequent regeneration of ***exhaust*** after-treatment systems;

(f) in relation to electronically controlled engines in categories NRE, NRG, IWP, IWA, RLL and RLR complying with Stage V emission limits ***set out*** in Annex II and ***using*** electronic control to determine both the quantity and timing of injecting fuel or ***using*** electronic control to activate, de-activate or modulate the emission control system used to reduce NO_x:

(*i****)*** emission control strategies, and shall include ***the*** documentation required to demonstrate ***those*** strategies***;***

(*ii****)*** NO_x control measures, and shall include the method used to demonstrate ***those*** control measures***;***

(*iii****)*** the area associated with the relevant ***non-road steady-state test*** cycle, within which ▌ the amount ***by which*** the emissions ***are*** permitted to exceed the ***emission limits set out*** in Annex II ***is controlled;***

(*iv****)*** the selection by the technical service of additional measurement points from within the control area during the emission bench test.

4. The Commission is empowered to adopt delegated acts in accordance with Article 55 supplementing this Regulation by setting out:

(a) the methodology for adapting the emission laboratory test results to include the deterioration factors referred to in point (c) of paragraph 1;

(b) the technical characteristics of the reference fuels▌ referred to in paragraph 2 ***and, where applicable, the requirements for the description of any other specified fuels, fuel mixtures or fuel emulsions described in the information folder***;

(c) the detailed technical requirements and characteristics for the conduct of measurements and tests referred to in paragraph 3;

(d) the method used to measure PN, taking account of the specifications given in the 06 series of UNECE Regulation No 49;

(e) the detailed technical requirements applicable to the testing of ***dual-fuel engines or*** gaseous-fuelled ***single-fuel*** engines referred to in Annex II.

Those delegated acts shall be adopted by 31 December 2016.

Article 26

Conformity of production arrangements

1. An approval authority which has granted an EU type-approval shall take the necessary measures in relation to that ***EU type-***approval to verify, if necessary in cooperation with the approval authorities of the other Member States, that adequate arrangements have been made to ensure that the engines in production will be in conformity with the approved type with respect to the requirements of this Regulation.

2. An approval authority which has granted an EU type-approval shall take the necessary measures in relation to that ***EU type-***approval to verify that ***statements*** of conformity issued by the manufacturer comply with ***Article 31.***

3. An approval authority which has granted an EU type-approval shall take the necessary measures in relation to that ***EU type-***approval to verify, if necessary in cooperation with the approval authorities of the other Member States, that the arrangements referred to in ***paragraph*** 1 of this Article continue to be adequate in that engines in production will continue to be in conformity with the approved type and that ***statements*** of conformity***, where applicable,*** will continue to comply with Article 31.

4. In order to verify the conformity of an engine with the approved type, the approval authority which has granted the EU type-approval may carry out any of the checks or tests required for the EU type-approval on samples taken at the premises of the manufacturer, including at the manufacturer's production facilities.

5. Where an approval authority which has granted an EU type-approval establishes that the arrangements referred to in ***paragraph 1*** are not being applied, deviate significantly from the arrangements agreed as referred to in paragraph 1, have ceased to be applied or are no longer considered to be adequate, even though production is continuing, it shall ***either*** take the necessary measures to ensure that the procedure for conformity of production is followed correctly, or ▌ shall withdraw the EU type-approval.

6. The Commission is empowered to adopt delegated acts in accordance with Article 55 supplementing this Regulation by laying down the detailed measures to be taken and procedures to be followed by the approval authorities to ensure that the engines in production are in conformity with the approved type. Those delegated acts shall be adopted by ▌ 31 December 2016▌ .

CHAPTER VI

AMENDMENTS AND VALIDITY OF EU TYPE-APPROVALS

Article 27

General provisions

1. The manufacturer shall inform the approval authority that granted the EU type-approval of any change in the particulars recorded in the information package, without delay.

   In the event of such a change, that approval authority shall decide which of the procedures laid down in Article 28 is to be followed.

   Where necessary, the approval authority may decide, after consulting the manufacturer, that a new EU type-approval is to be granted.

2. An application for the amendment of an EU type-approval shall be submitted only to the approval authority that granted the original EU type-approval.

3. If the approval authority finds that, for the purposes of making an amendment, inspections or tests need to be repeated, it shall inform the manufacturer accordingly.

   The procedures laid down in Article 28 shall apply only if, on the basis of those inspections or tests, the approval authority concludes that the requirements for EU type-approval continue to be fulfilled.

Article 28

Revisions and extensions of EU type-approvals

1. ***Where*** particulars recorded in the information package have been changed, without requiring inspections or tests to be repeated, such an amendment shall be ***termed*** a 'revision'.

   In the event of such a revision, the approval authority shall***, without unjustified delay, revise*** the relevant pages of the information package as necessary, marking each of them to clearly show the nature of the amendment, and it shall also state the date of ***revision and include a revised*** index to the information package. A consolidated, updated version of the information package, accompanied by a detailed description of the amendments, shall be deemed to fulfil the requirement of this paragraph.

2. ***An amendment as referred to in paragraph 1*** shall be ***termed*** an 'extension' ***where*** the particulars recorded in the information package have been changed and any of the following occurs:

   (a) further inspections or tests are required;

   (b) any information included in the EU type-approval certificate, with the exception of its attachments, has changed;

   (c) a new requirement set out in this Regulation ***or in a delegated or implementing act adopted*** pursuant to this Regulation becomes applicable to the approved engine type or engine family.

In the event of an extension, the approval authority shall ***establish*** an updated EU type-approval certificate denoted by an extension number that shall be incremented in accordance with the number of successive extensions previously granted. That ***EU type-***approval certificate shall clearly show the reason for the extension and the date of ***extension***.

3. Whenever pages of the information package are amended or a consolidated, updated version is ***established***, the index to the information package attached to the ***EU type-***approval certificate shall be amended accordingly to indicate the date of the most recent extension or revision, or the date of the most recent consolidation of the updated version.

4. No amendment to the EU type-approval of an engine type or engine family shall be required if a new requirement referred to in point (c) of paragraph 2 is, from a technical point of view, irrelevant to that engine type or engine family with regard to its emission performance.

Article 29

Issue and notification of amendments

1. In the event of a revision ***of an EU type-approval, the approval authority shall issue to the applicant, without unjustified delay,*** the revised documents or the consolidated, updated version, as appropriate, including the revised index to the information package, ***as referred to in the second subparagraph of Article 28(1)***.

2. In the event of an extension ***of an EU type-approval, the approval authority shall issue*** to the applicant, without ***unjustified delay, the updated*** EU type-approval certificate ***referred to in the second subparagraph of Article 28(2), including*** the attachments thereto, and the index to the information package .

3. The approval authority shall, ***by means of IMI,*** notify the approval authorities of the other Member States of any amendment made to EU type-approvals, in accordance with Article 22(5).

Article 30

Validity of EU type-approval

1. EU type-approvals shall be issued for an unlimited duration.

2. An EU type-approval of an engine shall become invalid in any of the following cases:

   (a) ***where*** new requirements applicable to the approved engine type ***or, where applicable, to the engine family*** become mandatory for its ***placing*** on the market and it is not possible to extend or revise the EU type-approval accordingly;

   (b) ***where*** production of the approved engine type or engine family is definitively and voluntarily discontinued;

   (c) ***where*** the validity of the ***EU type-***approval expires by virtue of a restriction, in accordance with Article 35(3);

   (d) ***where*** the ***EU type-***approval has been withdrawn in accordance with Articles 26(5), 39(1) or 40(3).

3. Where the conditions for the validity of ***an EU type-approval are no longer satisfied in respect of*** only one engine type within an engine family , the EU type-approval of the engine family in question shall become invalid only in so far as ***that*** particular engine type is concerned.

4. ***Where*** the production of an ***engine*** type ***or, where applicable, an*** engine ***family*** is definitively discontinued, the manufacturer shall notify the approval authority that granted the corresponding EU type-approval of that discontinuation.

   Within one month of receiving that notification, the approval authority that granted the EU type-approval for the engine ***type or engine family*** shall inform the approval authorities of the other Member States accordingly.

5. Without prejudice to paragraph 4, where an EU type-approval of an engine type or***, where applicable, of an*** engine family is to become invalid, the manufacturer shall notify the approval authority that granted the corresponding EU type-approval of that fact.

   In such cases, the approval authority that granted the EU type-approval shall without delay communicate all relevant information to the approval authorities of the other Member States.

   That communication shall specify, in particular, the date of production and the engine identification number of the last engine produced.

6. The notification requirements referred to in paragraphs 4 and 5 shall be deemed to have been fulfilled where the relevant information has been uploaded onto ***IMI***.

CHAPTER VII

STATEMENT OF CONFORMITY AND MARKINGS

Article 31

Statement *of conformity*

1. The manufacturer, in its capacity as the holder of an engine type or engine family EU type-approval, shall deliver a ***statement*** of conformity ***("statement of conformity")*** to accompany ***engines which are placed on the market, on the basis of:***

(a) an exemption referred to in Article 34(2), (4), (5), (6), (7) or (8), Article 35(4); or

(b) a transitional provision referred to in Article 58(9), (10) or (11).

The ***statement of conformity shall specify the particular features and restrictions that are to apply to the engine,*** shall be delivered free of charge together with the engine and shall, where applicable, accompany the ***non-road mobile*** machine in which the engine is installed. Its delivery ***shall*** not be made dependent on an explicit request or on the submission of additional information to the manufacturer. ***The statement of conformity may also be delivered in the form of a secure electronic file.***

For a period of 10 years after the ***engine*** production date, the manufacturer shall, at the request of the ***end-user***, issue a duplicate of the ***statement*** of conformity in return for payment ***of an amount*** not exceeding the cost of issuing it. The word ‘duplicate’ shall be clearly visible on any such duplicate ***statement of conformity.***

2. The ***statement*** of conformity shall be drawn up in at least one of the official languages of the ***institutions of the*** Union.

Any Member State may request ***from the manufacturer that the statement*** of conformity be translated into its official language or languages.

3. The person(s) authorised to sign ***statements*** of conformity shall ***belong to*** the manufacturer's organisation and shall be duly authorised by the management ***of that organisation*** to fully engage the legal responsibility of the manufacturer with respect to the design and construction, or with respect to the conformity of production, of the engine.

4. The ***statement*** of conformity shall be completed in its entirety and shall not contain any restrictions as regards the use of the engine other than those provided for in this Regulation .

5. The Commission may adopt implementing acts laying down the template for the ***statement*** of conformity, including the features aimed at preventing forgery ***and allowing verification of the secure electronic file***. To that end, the implementing acts shall provide the security features ***used for*** protecting the ***statement of conformity***. Those implementing acts shall be adopted, by 31 December 2016, in accordance with the examination procedure referred to in Article 56(2) .

Article 32

***Statutory marking** of engines*

1. The manufacturer ▌ shall affix a marking to each ***engine*** manufactured in conformity with the approved type ***("the statutory marking")***.

▌

2. In respect of the following engines, the statutory marking shall include supplementary information indicating that the engine is subject to the relevant exemption or transitional provision:

(a) engines for export to third countries referred to in Article 34(1) that are manufactured either in the Union or outside the Union and subsequently installed in non-road mobile machinery in the Union;

(b) engines placed on the market in accordance with Article 34(2), (5), (6) or (8);

(c) engines temporarily placed on the market in accordance with Article 34(4);

(d) transition engines placed on the market in accordance with Article 58(5);

(e) replacement engines placed on the market in accordance with Article 34(7), Article 58(10) or (11).

3. The Commission may adopt implementing acts laying down the template for the ***statutory*** marking**,** including the mandatory essential information ***required when the engine leaves the production line, the mandatory essential information required before the engine is placed on the market and, where applicable, the supplementary information*** referred to in paragraph 2 ***of this Article***. Those implementing acts shall be adopted, by 31 December 2016, in accordance with the examination procedure referred to in Article 56(2) .

Article 33

Temporary marking of engines

1. ***The manufacturer shall affix a temporary marking to each engine that is manufactured in conformity with the approved type and that is placed on the market on the basis of Article 34(3).***

2. ***An engine that is not yet in conformity with the approved type and that is being delivered to the manufacturer of that engine shall only bear a temporary marking.***

3. The Commission may ***adopt implementing acts laying down the template for the temporary markings referred to in paragraphs 1 and 2 of this Article, including the mandatory essential information that is to be indicated thereon. Those implementing*** acts shall be adopted, by ▌31 December 2016, ***in accordance with the examination procedure referred to in Article 56(2)*** ▌.

CHAPTER VIII

EXEMPTIONS

Article 34

General exemptions

1. Except as regards point (a) of Article 32(2), engines for export to third countries shall not be subject to this Regulation.

2. ***Except as regards point (b)*** of Article ***32(2),*** engines for use by ***the armed forces shall not be subject to this Regulation.***

For the purposes of this paragraph, fire services, civil defence services, forces responsible for maintaining public order and emergency medical services shall not be considered to be part of the armed forces.

3. Without prejudice to ▌ Article ***32 and with the consent of the OEM,*** a manufacturer may deliver to ***that*** OEM an engine separately from its exhaust after-treatment system.

4. Notwithstanding▌ Article 5(3), Member States shall authorise the temporary placing on the market, for the purposes of field testing, of engines that have not been EU type-approved in accordance with this Regulation.

5. Notwithstanding ***Articles*** 18(2) ***and 22(3)***, Member States ***shall grant*** EU type-approval ***for,*** and ***authorise the*** placing on the market of***,*** engines that meet the ***gaseous and particulate*** pollutant emission limit values ***for special purpose engines*** set out in Annex ***VI***, ***on*** the condition that the engines are intended for installation in ***non-road mobile machinery*** to be used in potentially explosive atmospheres, as defined in ***point (5) of Article 2 of*** Directive 2014/34/EU of the European Parliament and ***of*** the Council[1] **.**

6. Notwithstanding Articles 18(2) and 22(3), Member States may, upon request, grant EU type-approval for, and authorise the placing on the market of, engines that meet the gaseous and particulate pollutant emission limit values for special purpose engines set out in Annex VI, on the condition that the engines are intended for installation in non-road mobile machinery that is exclusively used for the launch and recovery of lifeboats operated by a national rescue service.

7. Notwithstanding Articles 5(3) and 18(2), in relation to engines of categories RLL or RLR and placed on the Union market on or before 31 December 2011, Member States may authorise the placing on the market of replacement engines if the approval authority, upon examination, recognises and concludes that the installation of an engine that complies with the applicable emission limits set out in Tables II-7 and II-8 of Annex II will involve significant technical difficulties. In such a case, the replacement engines shall either comply with the emission limits that they would have needed to meet in order to be placed on the Union market on 31 December 2011, or shall comply with more stringent emission limits.

[1] Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to equipment and protective systems intended for use in potentially explosive atmospheres (OJ L 96, 29.3.2014, p. 309).

In respect of engines in categories RLL and RLR that were placed on the Union market after 31 December 2011, Member States may authorise the placing on the market of replacement engines complying with the emission limits that the engines to be replaced had to meet when they were originally placed on the Union market.

8. In respect of engines in categories RLL or RLR, Member States may authorise the placing on the market of engines that comply with the latest applicable emission limits defined in the relevant legislation applicable on … [date of the day before the entry into force of this Regulation], provided that:

(a) ***those engines are part of a project which is at an advanced stage of development on … [date of entry into force of this Regulation], as defined in Directive 2008/57/EC; and***

(b) ***the use of engines that comply with the applicable emission limits set out in Tables II-7 or II-8 of Annex II will lead to disproportionate costs.***

By … [one year following the publication of this Regulation], each Member State shall communicate to the Commission the list of any such projects.

9. The Commission is empowered to adopt delegated acts in accordance with Article 55 for the purpose of supplementing this Regulation with the detailed technical specifications and conditions for:

(a) the delivery of an engine separately from its exhaust after-treatment system by a manufacturer to an OEM, as referred to in paragraph 3;

(b) the temporary placing on the market, for the purposes of field testing, of engines that have not been EU type-approved ***in accordance with this Regulation***, as referred to in paragraph 4;

(c) granting the EU type-approval for, and authorising the placing on the market of, engines that meet the ***gaseous and particulate*** pollutant emission limit values ***for special purpose engines*** set out in Annex ***VI***, as referred to in ***paragraphs 5 and 6.***

Those delegated acts shall be adopted by ▌31 December 2016▌ .

Article 35

Exemptions for new technologies or new concepts

1. A manufacturer may apply for an ***EU*** type-approval in respect of an engine type or engine family that incorporates new technologies or ***new*** concepts and that, as a result of those new technologies or ***new*** concepts, is incompatible with one or more requirements of this Regulation.

2. The approval authority shall grant the ***EU*** type-approval referred to in paragraph 1 where all of the following conditions are met:

   (a) the application states the reasons why the ***new*** technologies or ***new*** concepts make the engine type or engine family incompatible with one or more of the requirements ***of*** this Regulation;

   (b) the application describes the environmental implications of the new technologies ***or new concepts*** and the measures taken in order to ensure a level of environmental protection that is at least equivalent to the level provided by the requirements of this Regulation from which exemption is sought;

   (c) test descriptions and results are presented which prove that the condition in point (b) is met.

3. The granting of the ***EU*** type-approval ***referred to in paragraph 1*** shall be subject to authorisation by the Commission.

Where appropriate, the authorisation by the Commission ***shall*** specify whether it is subject to any restrictions.

The authorisation shall be given by means of an implementing act.

4. ***Pending*** the decision on authorisation by the Commission ***pursuant to paragraph 3, the*** approval authority may issue ***a*** provisional ***EU type-approval which*** shall be valid***:***

(a) only in the territory of that Member State***;***

(b) only in respect of ***an*** engine ***type or engine family*** covered by the exemption sought***; and***

(c) ***for at*** least ***36 months***.

Where a provisional EU type-approval is issued, the approval authority shall inform the Commission and the other Member States thereof without delay, by means of a file containing the information referred to in paragraph 2.

The provisional nature and the limited territorial validity ***of such a provisional EU type-approval*** shall be apparent from the heading of the ***EU*** type-approval certificate and the heading of the corresponding ***statement*** of conformity.

5. ***Where*** an approval authority decides to accept a provisional ***EU type-***approval referred to in paragraph 4 within its territory, it ***shall*** inform the relevant approval authority and the Commission ***thereof*** in writing.

6. ***Where*** the Commission decides not to give ***the*** authorisation ***referred to in paragraph*** 3, the approval authority shall immediately notify the holder of the provisional ***EU*** type-approval referred to in paragraph ***4*** that the provisional ***EU type-***approval will be revoked six months after the date of the Commission's refusal.

   Notwithstanding the Commission's decision not to give ***the*** authorisation referred to in paragraph 3, engines manufactured in conformity with the provisional ***EU type-***approval before it ceases to be valid may be placed on the market in any Member State the approval authorities of which accepted the provisional ***EU type-***approval.

7. ***The requirements*** referred to in the second subparagraph of paragraph 4 and in paragraph 5 shall be deemed to be fulfilled where the relevant information has been uploaded onto ***IMI.***

8. The Commission may adopt implementing acts laying down the authorisation referred to in paragraph ***3 of this Article.*** Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 56(2).

9. The Commission may adopt implementing acts laying down the harmonised templates for the ***EU*** type-approval certificate and the ***statement*** of conformity referred to in paragraph ***4 of this Article,*** including ***their*** mandatory essential information. Those implementing acts shall be adopted, by ▌31 December 2016, in accordance with the examination procedure referred to in Article 56(2) ▌.

Article 36

Subsequent adaptation of delegated and implementing acts

1. Where the Commission authorises the granting of an exemption pursuant to Article 35, it shall immediately take the steps necessary to adapt the delegated or implementing acts concerned to technological developments.

   Where the exemption authorised ***pursuant to*** Article 35 relates to a matter that is ***regulated*** by a UNECE regulation, the Commission shall propose an amendment to that regulation in accordance with the procedure applicable under the Revised 1958 Agreement.

2. As soon as the relevant ***delegated or implementing acts referred to in paragraph 1*** have been amended, the Commission shall lift any restriction imposed by the decision authorising the exemption.

   Where the steps necessary to adapt the delegated or implementing acts have not been taken, the Commission may, at the request of the Member State which granted the provisional ***EU type-***approval, authorise that Member State to extend it by means of a decision in the form of an implementing act adopted in accordance with the examination procedure referred to in Article 56(2).

CHAPTER IX

▌

PRODUCTION REPORTING AND VERIFICATION

Article 37

Obligations of** manufacturers **with regard to production reporting

1. The manufacturer shall ***submit*** to the approval authority which granted the EU type-approval ***a list containing the number of engines*** for each engine type ***and engine sub-category*** produced in accordance with ▌ this Regulation and in conformity with the EU type-approval since the last production report was submitted, or since the requirements of this Regulation first became applicable.

That list shall be submitted:

(a) within 45 days following the end of each calendar year***;***

(b) immediately after each of the dates for the placing on the market of engines referred to in Annex III; and

(c) by any other date that the approval authority may stipulate.

2. The list referred to in ***paragraph 1 shall*** specify how the identification numbers correlate to the corresponding engine types and, where applicable, engine families and to the EU type-approval numbers where those correlations are not identified by the engine coding system.

3. The list referred to in ***paragraph 1*** shall indicate clearly any case ***in which*** the manufacturer ceases to produce an approved engine type or engine family.

4. The manufacturer shall retain ***a copy*** of the ***list referred to in paragraph 1*** for a minimum period of 20 years following the end of the validity of the EU type-approval concerned.

5. The Commission may adopt implementing acts laying down the format of the list referred to in paragraph 1 of this Article. Those implementing acts shall be adopted, by ▌ 31 December 2016, in accordance with the examination procedure referred to in Article 56(2).

Article 38

Verification measures

1. The approval authority of a Member State that granted an EU type-approval shall take the measures necessary to ***ensure***, where appropriate in cooperation with the approval authorities of the other Member States, ***that*** the identification numbers relating to the EU type-approval ***are correctly allocated to and are properly used by manufacturers before the type-approved engine is placed or made available on the market***.

2. An additional verification of the identification numbers may ***be carried out*** in conjunction with the control of conformity of production laid down in Article 26.

3. With regard to the verification of the identification numbers, the manufacturer or the manufacturer's ***representative*** shall, ***upon*** request, ***provide*** without delay to the responsible approval authority the information required concerning the manufacturer's purchasers, together with the identification numbers of the engines reported as produced in accordance with Article 37. Where engines are ***made available to an OEM***, no additional information ***shall be*** required of the manufacturer.

4. If, ***further to a*** request from the approval authority, the manufacturer is unable to demonstrate compliance with the ***statutory*** marking requirements***, the approval authority may withdraw the EU type-***approval granted in respect of the corresponding engine type or ***engine*** family. The approval authorities shall inform each other within one month of any EU type-approval withdrawn and of the reasons for that withdrawal, in accordance with Article 22(5).

CHAPTER X

SAFEGUARD CLAUSES

Article 39

Engines not in conformity with the approved type

1. Where engines ***bearing a statutory marking and, where applicable,*** accompanied by a ***statement*** of conformity are not in conformity with the approved engine type or engine family, the approval authority which granted the EU type-approval shall take the necessary measures to ensure that the engines in production are brought into conformity with the approved engine type or engine family. Such measures may include the withdrawal of the EU type-approval if the remedial action taken by the manufacturer is inadequate.

   The ***relevant approval authority shall inform the*** approval authorities of the other Member States of the measures taken.

2. For the purposes of paragraph 1, deviations from the particulars set out in the EU type-approval certificate or in the information package, where those deviations have not been ***authorised*** in accordance with Chapter VI, shall be deemed to constitute a failure to conform to the approved engine type or engine family.

3. ***Where*** an approval authority finds that engines accompanied by a ***statement*** of conformity***, if applicable,*** or bearing ***a type-***approval mark issued in another Member State are not in conformity with the approved engine type or engine family, it may ***request*** that the approval authority which granted the EU type-approval verify that the engines in production continue to conform to the approved engine type or engine family. On receipt of such a request, the approval authority which granted the EU type-approval shall take the action referred to in paragraph 1 as soon as possible, and at the latest within three months of the date of the request.

4. The approval authorities shall inform each other within one month of any EU type-approval withdrawn and of the reasons for that withdrawal, in accordance with Article 22(5).

5. ***Where*** the approval authority that granted the EU type-approval disputes the non-conformity of which it is notified, the Member States concerned shall endeavour to settle the dispute.

   The approval authority shall keep the Commission informed thereof and, where necessary, the Commission shall hold appropriate consultations with a view to reaching a settlement.

Article 40

***Recall** of engines*

1. Where a manufacturer ***that*** has been granted an EU type-approval is obliged, pursuant to Article 20(1) of Regulation (EC) No 765/2008, to recall engines placed on the market, whether or not the engines are installed in ***non-road mobile*** machinery, on the basis that the engines represent a serious ***risk*** with regard to the protection of the environment ***or public health***, that manufacturer shall:

   (a) immediately inform the approval authority that granted the EU▌ type-approval; and

   (b) propose a set of appropriate remedies to address the serious ***risk*** to ***that*** approval authority.

2. The approval authority shall communicate the proposed remedies to the approval authorities of the other Member States ***and to the Commission*** without delay.

   The approval authorities shall ensure that the remedies are effectively implemented in their respective Member States.

3. ***Where an approval authority considers*** that the remedies▌ are insufficient or have not been implemented quickly enough▌ , it shall, without delay, inform▌ ***the*** approval authority that granted the EU type-approval thereof.▌

Where the manufacturer does not ***subsequently*** propose and implement effective corrective measures, the approval authority which granted the EU type-approval shall take all protective measures required, including the withdrawal of the EU type-approval.

In the case of withdrawal of the EU type-approval, the approval authority shall, within one month of ***that*** withdrawal, notify the manufacturer, the approval authorities of the other Member States and the Commission ***thereof*** by registered letter or equivalent electronic means.

Article 41

Notification of decisions and remedies available

1. ***Decisions of the following type or for the following purpose shall state the reasons on which they are based:***

(a) taken pursuant to this Regulation***;***

(b) refusing or withdrawing ***an*** EU type-approval***;***

(c) requiring ***the recall*** of an engine from the market***;***

(d) prohibiting***,*** restricting ***or impeding*** the placing on the market of an engine; ***or***

(e) prohibiting, restricting or impeding the placing on the market of non-road mobile machinery in which an engine falling within the scope of this Regulation is installed.

2. ***The approval authorities shall notify the party concerned of:***

(a) ***any*** decision ***referred to in paragraph 1;***

(b) the remedies available to it under the laws in force in the Member State concerned and of the time limits ***applicable to those*** remedies.

CHAPTER XI

INTERNATIONAL REGULATIONS AND PROVISION OF TECHNICAL INFORMATION

Article 42

Acceptance of equivalent engine type-approvals

1. The Union may, in the framework of multilateral or bilateral agreements between the Union and third countries, acknowledge the equivalence between the conditions and provisions for ***EU*** type-approval of engines established by this Regulation and the procedures established by international regulations or regulations of third countries.

2. Type-approvals granted and ***statutory markings*** that are in conformity with UNECE regulations, or amendments thereto, which the Union has voted in favour of or to which the Union has acceded as set out in the delegated act referred to in ***point (a) of*** paragraph 4 , shall be recognised as being equivalent to the ***EU*** type-approvals granted and ***statutory*** marking required in accordance with this Regulation.

3. ***EU type***-approvals granted on the basis of Union acts as listed in the delegated act referred to in ***point (b) of*** paragraph 4 shall be recognised as being equivalent to ***the EU*** type-approvals granted in accordance with this Regulation.

4. The Commission is empowered to adopt delegated acts in accordance with Article 55 supplementing this Regulation by setting out:

   (a) the list of UNECE regulations, or amendments thereto***, including any requirements set out therein which relate to their application,*** which the Union has voted in favour of or to which the Union has acceded, and which ***are to*** apply to EU type-approval of ***engine types*** and engine families to be installed in non-road mobile machinery;

   (b) the list of Union acts pursuant to which ***EU*** type-approvals are granted***, including any requirements set out therein which relate to their application***.

   Those delegated acts shall be adopted by 31 December 2016 .

Article 43

Information and instructions intended for OEMs and end-users

1. A manufacturer shall not supply to OEMs or end-users any technical information related to the particulars provided for in this Regulation which diverges from the particulars approved by the approval authority.

2. The manufacturer shall make available to OEMs all relevant information and instructions that are necessary for the correct installation of the engine in the ***non-road mobile*** machinery, including a description of any special conditions or restrictions linked to the installation or use of the engine.

3. The manufacturer shall make available to OEMs all relevant information and necessary instructions intended for the end-user, including a description of any special conditions or restrictions linked to the use of an engine.

4. Manufacturers shall make available to OEMs the value of the carbon dioxide (CO_2) emissions determined during the EU type-approval process and shall instruct the OEMs to communicate ***that*** information***, together with explanatory information on the test conditions,*** to the end-user of the ***non-road mobile*** machinery ***in which*** the engine is intended to be installed.

5. The Commission is empowered to adopt delegated acts in accordance with Article 55 supplementing this Regulation by setting out the details of the information and instructions referred to in paragraphs 2, 3 and ***4 of this Article.*** Those delegated acts shall be adopted by ▌31 December 2016▌ .

Article 44

Exchange of data and information via IMI

1. The exchange of data and information related to EU type-approvals ***between national*** authorities, or between ***national*** authorities and the Commission, within the framework of this Regulation ***shall be in electronic format via IMI***.

2. ***Any*** relevant information relating to EU type-approvals granted in accordance with this Regulation shall be gathered centrally and made accessible to the ***national*** authorities and to the Commission ***via IMI***.

3. ***The*** Commission shall ***ensure that IMI also***:

   (a) makes possible the exchange of data and information between manufacturers ***or*** technical services***, on the one hand, and national*** authorities ***or*** the Commission***, on the other***;

   (b) provides public access to certain ***data and*** information related to the results of type-approvals and ***monitoring results of*** in-service ***engines;***

   (c) where appropriate and technically and economically feasible, and in agreement with the Member States concerned, ***provides facilities for the automatic transfer of data between existing national databases and IMI.***

4. ***The uses of IMI referred to in paragraph 3 shall be optional.***

5. The Commission may adopt implementing acts laying down the detailed technical requirements and procedures necessary for the interconnection of IMI with existing national databases as referred to in point (c) of paragraph 3 of this Article. Those implementing acts shall be adopted, by ▌ 31 December 2016, in accordance with the examination procedure referred to in Article 56(2).

CHAPTER XII

DESIGNATION AND NOTIFICATION OF TECHNICAL SERVICES

Article 45

Requirements relating to technical services

1. A technical service shall be designated by an approval authority in accordance with Article 47 and shall ***fulfil*** the requirements laid down in paragraphs 2 to 9 of this Article.

2. ***A*** technical service shall be established under the national law of a Member State and have legal personality.

3. ***The*** technical service shall be a third-party body independent of the process of design, ***manufacture***, supply or maintenance of the engines it assesses.

   A body belonging to a business association or professional federation representing undertakings involved in the design, ***manufacture***, provision, assembly, ***installation,*** use or maintenance of the engines it assesses, tests or inspects may, provided that it demonstrates its independence and the absence of any conflict of interest, be considered to fulfil the requirements of the first subparagraph.

4. The technical service, including its top-level management and the personnel responsible for carrying out the categories of activities for which the technical service is designated in accordance with Article 47(1), shall not be the designer, manufacturer, supplier***, installer*** or maintainer of the engines which it assesses, and shall not represent parties engaged in those activities. This restriction shall not preclude the use of assessed engines referred to in paragraph 3 of this Article that are necessary for the operation of the technical service, or the use of such engines for personal purposes.

The technical service shall ensure that the activities of its subsidiaries or subcontractors do not affect its confidentiality, objectivity or impartiality in relation to the categories of activities for which it has been designated.

5. ***The*** technical service ▌ shall carry out the categories of activities for which it has been designated with the highest degree of professional integrity and the requisite technical competence in the specific field, and ***its personnel*** shall be free from any pressure or inducements, particularly financial, which might influence ***its*** judgment or the results of ***its*** assessment activities, especially such pressure or inducements emanating from persons or groups of persons with an interest in the results of those activities.

6. ***The*** technical service shall demonstrate ***to*** its designating approval authority that it is capable of carrying out all the categories of activities for which it is seeking to be designated in accordance with Article 47(1), by ***ensuring*** that it has:

(a) personnel with appropriate skills and specific technical knowledge and vocational training as well as sufficient and appropriate experience to perform the task;

(b) descriptions of the procedures relevant to the categories of activities for which it is seeking to be designated, thereby ensuring the transparency and reproducibility of those procedures;

(c) procedures for the performance of the categories of activities for which it is seeking to be designated, which take due account of the degree of complexity of the technology of the engine in question and of whether the engine is manufactured ***pursuant to*** a mass or serial production process; and

(d) the means necessary to perform in an appropriate manner the tasks connected with the categories of activities for which it is seeking to be designated and that it has access to all the necessary equipment or facilities.

7. The technical ***service***, including ***its*** top-level management and the assessment personnel, shall be impartial and shall not engage in any activity that could conflict with their independence of judgment or integrity in relation to the categories of activities for which the technical service is designated.

8. The technical service shall take out liability insurance covering its activities, unless liability is assumed by the Member State in accordance with national law or the Member State is itself directly responsible for the assessment.

9. The personnel of a technical service shall be bound by professional secrecy with regard to all information obtained in carrying out their tasks under this Regulation or any provision of national law giving effect to it.

The personnel of a technical service shall not be bound by the obligation referred to in the first subparagraph in respect of the sharing of information with the designating approval authority, or where such sharing is required by Union or national law.

Proprietary rights shall be protected.

Article 46

Subsidiaries of and subcontracting by technical services

1. The technical service may, only with the agreement of their designating approval authority, subcontract specific tasks connected with the categories of activities for which it has been designated in accordance with Article 47(1), or have those activities carried out by a subsidiary.

   In such cases, the technical service shall ensure that the subcontractor or the subsidiary meets the requirements set out in Article 45 and shall inform the designating approval authority accordingly.

2. The technical service shall take full responsibility for the tasks performed by any of its subcontractors or subsidiaries, irrespective of their place of establishment.

3. The technical service shall keep at the disposal of the designating approval authority the relevant documents concerning the assessment of the qualifications of the subcontractor or the subsidiary and the tasks performed by them.

Article 47

Designation of technical services

1. ***Approval authorities shall designate technical*** services for one or more of the following categories of activities, in accordance with their fields of competence:

   (a) category A: carrying out the tests referred to in this Regulation in the facilities belonging to the technical service in question;

   (b) category B: supervising the tests referred to in this Regulation, where such tests are performed in the facilities of a manufacturer or of a third party;

   (c) category C: assessing and monitoring on a regular basis the manufacturer's procedures for ensuring the conformity of production;

   (d) category D: supervising or performing tests or inspections for ensuring the conformity of production.

2. An approval authority may act as a technical service for one or more of the ***categories of*** activities referred to in paragraph 1.

3. Technical services of a third country, other than those designated in accordance with ***this*** Article ▌, may be the subject of a notification pursuant to Article 50 where such a recognition of technical services is provided for by a bilateral agreement concluded between the Union and the third country concerned.

However, a technical service established in accordance with Article 45(2) may establish subsidiaries in third countries, provided that the subsidiaries are directly managed and controlled by that technical service.

▌

Article 48

Procedures for performance standards and assessment of technical services

The Commission is empowered to adopt delegated acts in accordance with Article 55 supplementing this Regulation by laying down:

(a) the standards with which the technical services have to comply; and

(b) the procedure for the assessment of the technical services, including the corresponding report, in accordance with Article 49.

Article 49

Assessment of the skills of technical services

1. The designating approval authority shall draw up an assessment report demonstrating that the candidate technical service has been assessed for its compliance with this Regulation and the delegated acts adopted pursuant to it. The assessment report may include a certificate of accreditation issued by a national accreditation body attesting that the technical service fulfils the requirements of this Regulation.

   The assessment on which the assessment report is based shall be conducted in accordance with the provisions laid down in a delegated act referred to in Article 48.

2. The designating approval authority shall review the assessment report at least once every three years.

3. The designating approval authority shall communicate the assessment report to the Commission upon the latter's request. In such cases, where the assessment is not based on an accreditation certificate issued by a national accreditation body, the designating approval authority shall provide the Commission with documentary evidence which attests to the following:

(a) the technical service's competence;

(b) the arrangements in place to ensure that the technical service is monitored regularly by the designating approval authority; and

(c) that the technical service fulfils the requirements of this Regulation and of the delegated acts adopted pursuant to ***it***.

4. An approval authority that intends to act as a technical service in accordance with Article 47(2) shall document compliance by means of an assessment conducted by auditors independent of the activity being assessed. Such auditors may be from the same organisation, provided that they are managed separately from the personnel undertaking the assessed activity.

Article 50

Procedures for notification

1. ***In*** respect of each technical service that they have designated, Member States shall notify the Commission of the following***:***

   (a) the name of the technical service***;***

   (b) the address**,** including electronic address***;***

   (c) the responsible persons***;***

   (d) the category of activities***; and***

   (e) ***any*** modifications ***relating to the designation referred to in Article 47.***

2. A technical service may only conduct the activities referred to in Article 47(1) on behalf of the designating approval authority if that technical service has been notified beforehand to the Commission in accordance with paragraph 1 of this Article.

3. The same technical service may be designated by several designating approval authorities and notified by the Member States of those designating approval authorities irrespective of the category or categories of activities it is to conduct in accordance with Article 47(1).

4. Where a specific organisation or competent body carrying out an activity not included ▌ in Article 47(1) needs to be designated in application of a delegated act, the Member States concerned shall notify the Commission in accordance with this Article.

5. The Commission shall publish ▌ ***on its website*** a list and details of the technical services which have been the subject to a notification in accordance with this Article.

Article 51

Changes to designations

1. Where a designating approval authority has ascertained or has been informed that a technical service designated by it either no longer fulfils the requirements laid down in this Regulation or is failing to meet its obligations, it shall restrict, suspend or revoke the designation as appropriate, depending on the seriousness of the failure to fulfil those requirements or meet those obligations.

   The Member State that has provided the Commission with notification of that technical service in accordance with Article 50(1) shall immediately inform the Commission of any such restriction, suspension or revocation.

   The Commission shall modify the published information referred to in Article 50(5) accordingly.

2. In the event of the restriction, suspension or revocation of the designation ***referred to in paragraph 1,*** or where the technical service has ceased its activity, the designating approval authority shall take appropriate steps to ensure that the files of that technical service are either processed by another technical service or kept available for the designating approval authority or for the market surveillance authorities at their request.

Article 52

Challenge to the competence of technical services

1. The Commission shall investigate all cases where it has doubts, or ***where*** doubts are brought to its attention, as to the competence of a technical service or the continued fulfilment by a technical service of the requirements and responsibilities to which it is subject.

2. The Member State of the designating approval authority shall, upon request, provide the Commission with all information relating to the basis for the designation or the maintenance of the designation of the technical service concerned.

3. The Commission shall ensure that all sensitive information obtained in the course of its investigations is treated confidentially.

4. Where the Commission ascertains that a technical service does not fulfil or no longer fulfils the requirements for its designation, it shall inform the Member State of the designating approval authority accordingly with a view to establishing, in cooperation with that Member State, the corrective measures necessary and shall request that that Member State take those corrective measures, including the revocation of the designation if necessary.

Article 53

Operational obligations of technical services

1. Technical services shall carry out the categories of activities for which they have been designated on behalf of the designating approval authority and in accordance with the assessment and test procedures provided for in this Regulation and its delegated and implementing acts.

   Technical services shall supervise or shall themselves carry out the tests required for ***EU type-***approval or inspections as set out in this Regulation or in one of its delegated or implementing acts, unless alternative procedures are permitted.

   Technical services shall not conduct tests, assessments or inspections for which they have not been designated.

2. Technical services shall at all times:

   (a) allow the designating approval authority to observe them conducting their assessments, if deemed appropriate by that authority; and

   (b) without prejudice to Article 45(9) and Article 54, provide the designating approval authority with such information as may be requested on the categories of activities which they carry out and which fall ***within*** the scope of this Regulation.

3. Where a technical service finds that the requirements laid down in this Regulation have not been fulfilled by a manufacturer, it shall report ***that fact*** to the designating approval authority, ***which shall, in turn, require*** the manufacturer to take appropriate corrective measures ▌**.**

The designating approval authority shall not issue an EU type-approval certificate ***until the manufacturer has taken*** the appropriate corrective measures ▌ to the satisfaction of ***that*** approval authority.

4. Where, in the course of monitoring conformity of production following the issue of an EU type-approval certificate, a technical service acting on behalf of the designating approval authority finds that an engine type or engine family no longer complies with this Regulation, it shall report that fact to the designating approval authority.

The approval authority shall take the appropriate measures as provided for in Article 26.

Article 54

Information obligations of technical services

1. Technical services shall inform their designating approval authority of ***any***:

(a) ▌ non-conformity which might require a refusal, restriction, suspension or withdrawal of an EU type-approval;

(b) ▌ circumstances affecting the scope of or conditions for their designation;

(c) ▌ request for information from market surveillance authorities regarding their activities.

2. Upon request from their designating approval authority, technical services shall provide information on the activities within the scope of their designation and on any other activity performed, including cross-border activities and subcontracting.

CHAPTER XIII

DELEGATED ACTS AND IMPLEMENTING ACTS

Article 55

Exercise of the delegation

1. The power to adopt the delegated acts is conferred on the Commission subject to the conditions laid down in this Article.

2. The power to adopt delegated acts referred to in Article 19(2), Article 24(11), Article 25(4), Article 26(6), Article 34(9), Article 42(4), Article 43(5) and Article 48 shall be conferred on the Commission for a period of five years from ***... [date of entry into force of this Regulation].***

3. The delegation of power referred to in Article 19(2), Article 24(11), Article 25(4), Article 26(6), Article 34(9), Article 42(4), Article 43(5) and Article 48 may be revoked at any time by the European Parliament or by the Council. A decision to revoke shall put an end to the delegation of the power specified in that decision. It shall take effect the day following the publication of the decision in the *Official Journal of the European Union* or at a later date specified therein. It shall not affect the validity of any delegated acts already in force.

4. ***Before adopting a delegated act, the Commission shall consult experts designated by each Member State in accordance with the principles laid down in the Interinstitutional Agreement of 13 April 2016 on Better Law-Making.***

5. As soon as it adopts a delegated act, the Commission shall notify it simultaneously to the European Parliament and to the Council.

6. A delegated act adopted pursuant to Article 19(2), Article 24(11), Article 25(4), Article 26(6), Article 34(9), Article 42(4), Article 43(5) and Article 48 shall enter into force only if no objection has been expressed either by the European Parliament or the Council within a period of two months of notification of that act to the European Parliament and the Council or if, before the expiry of that period, the European Parliament and the Council have both informed the Commission that they will not object. That period shall be extended by two months at the initiative of the European Parliament or of the Council.

Article 56

Committee procedure

1. The Commission shall be assisted by the 'Technical Committee – Motor Vehicles' (TCMV) established ***by*** Article 40(1) of Directive 2007/46/EC. That committee ***shall be*** a committee within the meaning of Regulation (EU) No 182/2011.

2. Where reference is made to this paragraph, Article 5 of Regulation (EU) No 182/2011 shall apply.

3. Where the committee delivers no opinion, the Commission shall not adopt the draft implementing act and the third subparagraph of Article 5(4) of Regulation (EU) No 182/2011 shall apply.

CHAPTER XIV

FINAL PROVISIONS

Article 57

Penalties

1. Member States shall provide for penalties for infringement of this Regulation and of the delegated or implementing acts adopted pursuant to this Regulation by economic operators or OEMs. ▌ The penalties provided for shall be effective, proportionate and dissuasive.

   Member States shall notify the Commission of those provisions by ▌ **…** [two years after the date of entry into force of this Regulation] and shall notify the Commission without delay of any subsequent amendments affecting them.

   Member States shall take all measures necessary to ensure that the penalties are implemented.

2. Infringements subject to a penalty shall include:

   (a) making false declarations, in particular during ***the EU type-***approval procedures, the procedures leading to a recall or the procedures related to exemptions;

   (b) falsifying test results in relation to an EU type-approval or the ***monitoring of*** in-service ***engines***;

(c) withholding data or technical specifications which could lead to the recall of engines, or to the refusal or the withdrawal of an EU type-approval;

(d) using defeat strategies;

(e) refusing to provide access to information;

(f) placing on the market engines subject to ***EU type-***approval without ***EU type-***approval, or falsifying documents or ***statutory*** markings with the intention to do so;

(g) placing on the market transition engines and ***non-road mobile*** machinery in which ***such*** engines are installed in violation of the exemption provisions;

(h) being in violation of the restrictions ▌ set out in Article ***35(3) and (4)***;

(i) ***placing on the market*** an engine ***modified in such a way*** that it is no longer in conformity with the specifications of its ***EU*** type-approval;

(j) installing an engine in ***non-road mobile*** machinery for a use other than the exclusive use provided for in Article 4;

(k) placing on the market a special purpose engine under Article 34(5) ***or (6)*** for use in non-road mobile ***machinery other than that provided for in those paragraphs;***

(l) placing on the market an engine under Article 34(7) or (8) and Article 58(9), (10) or (11) for use in machinery other than that provided for in those paragraphs;

(m) placing on the market non-road mobile machinery in which engines subject to EU type-approval under this Regulation are installed, without such approval;

(n) placing on the market non-road mobile machinery that is in violation of a restriction regarding non-road mobile machinery set out in Article 34(8).

Article 58

Transitional provisions

1. Without prejudice to ▌ Chapters II and III, this Regulation shall not invalidate, before the dates for placing on the market of engines ***set out*** in Annex III, any EU type-approval ***or exemption***.

2. Approval authorities may, in accordance with the relevant legislation applicable on **…** [date of the day before the entry into force of this Regulation], continue to grant EU type-approvals until the mandatory dates for the EU type-approval of engines ***set out*** in Annex III and continue ***to grant exemptions*** in accordance with that legislation until the mandatory dates for the placing on the market of engines ***set out*** in Annex III.

Member States may, in accordance with the relevant legislation applicable on **…** [date of the day before the entry into force of this Regulation], continue to permit the placing on the market of engines until the mandatory dates for the placing on the market of engines set out in Annex III.

3. By way of derogation from this Regulation, engines which have ▌ received an EU type-approval pursuant to the relevant legislation applicable on ***…[date of the day before the entry into force of this Regulation]***, or which meet the requirements set out by the Central Commission for the Navigation of the Rhine (CCNR) and adopted as CCNR Stage II, in the framework of the ***Revised*** Convention for ▌ Rhine ***Navigation***, may continue to be placed on the market until the dates for the placing on the market of engines ***set out*** in Annex III.

   In such cases, national authorities shall not prohibit, restrict or impede the placing on the market of engines complying with the approved type.

4. Engines which ***on… [date of the day before the entry into force of this Regulation] did not fall within the scope of Directive 97/68/EC*** may continue to be placed on the market on the basis of the national rules in force, if any, until the dates for ***the*** placing on the market of engines ***set out*** in Annex III.

5. Without prejudice to ***Article 5(3), Article 18(2) and, where applicable, Directive 2008/57/EC and Commission Regulation (EU) No 1302/2014***[1]***,*** transition engines and, where applicable, the ***non-road mobile*** machinery in which those transition engines are installed may continue to be placed on the market during the transition period provided that the ***machinery*** in which the transition engine is installed has a production date not later than ***18 months*** following the start of the transition period.

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[1] ***Commission Regulation (EU) No 1302/2014 of 18 November 2014 concerning a technical specification for interoperability relating to the 'rolling stock — locomotives and passenger rolling stock' subsystem of the rail system in the European Union (OJ L 356, 12.12.2014, p. 228).***

For engines of ▌ category NRE, Member States shall authorise the extension of the transition period and of the ***18-month*** period referred to in the first subparagraph by an additional 12 months for OEMs with a total yearly production of less than ***100*** units of non-road mobile machinery equipped with ***internal*** combustion engines. For the purposes of the calculation of that total yearly production, all OEMs under the control of the same natural or legal person shall be considered to be a single OEM.

For engines of category NRE used in mobile cranes, the transition period and the 18-month period referred to in the first subparagraph shall be extended by 12 months.

For engines of category NRS with an engine power of less than 19 kW used in snow throwers, the transition period and the 18-month period referred to in the first subparagraph shall be extended by 24 months.

6. Subject to ▌ paragraph ***5 of this Article,*** transition engines ***shall meet at least one of the following requirements:***

(a) ***be in conformity with*** engine types or engine families ***the*** EU type-approval of which is no longer valid pursuant to ***point (a) of*** Article 30(2)***, and are, on the engines' production dates,*** covered by a valid EU type-approval ***that is in compliance with the latest applicable emission limits defined in the relevant legislation applicable on … [date of the day before the entry into force of this Regulation];***

(b) ***belong to a power range that was not subject to pollutant emission type-approval*** at Union level on ***… [date of the day before the entry into force of this Regulation]; or***

(c) ***be used or intended to be used in an application that was not subject to pollutant emission related type-approval at Union level on … [date of the day before the entry into force of this Regulation].***

7. ***The period for placing transition engines on the market shall be limited to:***

(a) ***24*** months from the applicable date for the placing on the market of engines set out in Annex III, in the case set out in the first subparagraph of paragraph 5;

(b) ***36*** months from the applicable date for the placing on the market of engines set out in Annex III, in the case set out in the second and third subparagraphs of paragraph 5;

(c) ***48*** months from the applicable date for the placing on the market of engines set out in Annex III, in the case set out in the fourth subparagraph of paragraph 5.

8. Manufacturers shall ensure that transition engines ***placed on the market during the transition period comply with the marking referred to in point (d) of Article 32(2).***

9. Notwithstanding Article 5(3), Article 18(2) and Article 22, Member States may, for a period that ends no later than … [10 years after the date of publication of this Regulation], authorise the placing on the market of engines of category RLL with a maximum net power greater than 2000 kW that do not comply with the emission limits set out in Annex II to be installed in locomotives which only run on a technically isolated 1520 mm railway network. During that period, the engines placed on the market shall, as a minimum, comply with the emission limits that engines had to meet to be placed on the market on 31 December 2011. The approval authorities of the Member States shall grant EU type-approval and shall authorise the placing on the market of such engines.

10. Notwithstanding Articles 5(3) and 18(2), Member States shall authorise the placing on the market of replacement engines, for a period not longer than 15 years, starting from the applicable dates for the placing on the market of Stage V engines set out in Annex III, provided that the engines belong to a category equivalent to NRS with a reference power no less than 19 kW, or belong to a category equivalent to NRG, where the replacement engine and the original engine belong to an engine category or power range that was not subject to type-approval at Union level on ... [date before the day of repeal of Directive 97/68/EC].

11. Notwithstanding Articles 5(3) and 18(2), Member States shall authorise the placing on the market of replacement engines, for a period not longer than 20 years, starting from the applicable dates for the placing on the market of Stage V engines set out in Annex III, provided that the engines:

(a) belong to category NRE with a reference power no less than 19 kW and no greater than 560 kW, and comply with an emission stage that expired not more than 20 years before the placing on the market of those engines and that is at least as stringent as the emission limits that the engine to be replaced had to meet when it was placed on the market originally;

(b) belong to a category equivalent to NRE and with a reference power greater than 560 kW, where the replacement engine and the original engine belong to an engine category or power range that was not subject to type-approval at Union level on … [date before the day of repeal of Directive 97/68/EC];

12. Member States may decide not to apply this Regulation, for a period ending no later than … [10 years after the date of publication of this Regulation], to engines installed in cotton harvesting machinery.

13. Manufacturers shall ensure that replacement engines comply with the marking referred to in point (e) of Article 32(2).

Article 59

Report

1. By 31 December 2021, Member States shall inform the Commission of the application of the EU type-approval procedures laid down in this Regulation.

2. ***By 31 December 2022, on*** the basis of the information supplied under paragraph 1, the Commission shall ***submit*** a report to the European Parliament and to the Council on the application of this Regulation .

Article 60

Review

1. By 31 December 2018, the Commission shall submit a report to the European Parliament and to the Council regarding the assessment of the possibility of laying down harmonised measures for the installation of retrofit emission control devices in engines in non-road mobile machinery that has already been placed on the Union market. That report shall also address technical measures and financial incentive schemes as a means of helping Member States to comply with Union air quality legislation, by assessing possible action against air pollution in densely populated areas, and with due respect for the Union rules on state aid.

2. By 31 December 2020, the Commission shall submit a report to the European Parliament and to the Council regarding:

(a) the assessment of further pollutant emission reduction potential, on the basis of available technologies and a cost/benefit analysis.

In particular, for engines of categories IWP and IWA, the assessment of the technological and economic feasibility of:

(i) a further reduction in the emission limit value for PN and NO_x emissions;

(ii) a further reduction in the A-factor for fully and partially gaseous-fuelled engines in the framework of a climate-neutral operation compared to diesel-fuelled engines; and

(iii) the addition of PN limit values to those engine categories for which such values have not been set out in Annex II to this Regulation;

(b) the identification of potentially relevant pollutant types that do not fall within the scope of this Regulation.

3. By 31 December 2025, the Commission shall submit a report to the European Parliament and to the Council regarding the use of the exemption clauses provided for in Article 34(4) and (5)***, and*** the monitoring of the results of the emission tests set out in Article 19 and the conclusions thereof.

In addition, the report shall evaluate the tests required for EU type-approval as set out in Articles 24 and 25, with a particular focus on the extent to which those tests correspond to real engine operation conditions, and it shall also evaluate the feasibility of introducing tests for particulate pollutant emissions as part of the in-service testing set out in Article 19.

4. The reports referred to in paragraphs 2 and 3 shall ▌*:*

(a) be based on consultation with the relevant stakeholders*;*

(b) take into account existing related ***Union*** and international standards*; and*

(c) be accompanied, where appropriate, by legislative proposals.

Article 61

Amendments to Directive 97/68/EC

Directive 97/68/EC is amended as follows:

(1) in Article 9(4a), the following subparagraphs are added:

"By way of derogation from the first subparagraph, Member States may authorise, on request by an OEM, the placing on the market of engines that meet Stage III A emission limit values, provided that those engines are intended for installation in non-road mobile machinery to be used in potentially explosive atmospheres, as defined in point (5) of Article 2 of Directive 2014/34/EU of the European Parliament and of the Council*.

Manufacturers shall provide the approval authority with evidence that the engines are installed exclusively in non-road mobile machinery certified as fulfilling those requirements. A label bearing the text 'Engine for restricted use in machinery manufactured by', followed by the name of the OEM and the unique reference of the associated derogation shall be affixed to any such engines, beside the engine statutory marking set out in section 3 of Annex I.

By way of derogation from the first subparagraph, Member States may grant EU type-approval and authorise the placing on the market of engines of category RLL with a maximum net power greater than 2000 kW that do not comply with the emission limits set out in Annex II, that are to be installed in locomotives which only run on a technically isolated 1520 mm railway network. Those engines shall, as a minimum, comply with the emission limits that engines had to meet to be placed on the market on 31 December 2011.

** Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to equipment and protective systems intended for use in potentially explosive atmospheres (OJ L 96, 29.3.2014, p. 309).";*

(2) in Article 10, the following paragraph is added:

"8. Member States may decide not to apply this Directive to engines installed in cotton harvesting machinery.".

Article 62

Amendment to Regulation (EU) No 1024/2012

In the Annex to Regulation (EU) No 1024/2012, the following point is added:

"9. Regulation (EU) 2016/… [reference number of this Regulation] of the European Parliament and of the Council of … [date of adoption of this Regulation] on requirements relating to gaseous and particulate pollutant emission limits and type-approval for internal combustion engines for non-road mobile machinery, amending Regulations (EU) No 1024/2012 and (EU) No 167/2013, and amending and repealing Directive 97/68/EC*: Article 44.

**** [Publication reference of this Regulation]".***

Article 63

Amendment to Regulation (EU) No 167/2013

Article 19 of Regulation (EU) No 167/2013 is amended as follows:

(1) paragraph 3 is replaced by the following:

"3. The provisions on engine categories, exhaust emission limits, test cycles, emission durability periods, exhaust emission requirements, the monitoring of emissions of in-service engines and the conduct of measurements and tests, as well as the transitional provisions and provisions allowing the early EU type-approval and the placing on the market of Stage V engines laid down for non-road mobile machinery in Regulation (EU) 2016/… [reference number of this Regulation] of the European Parliament and of the Council and the delegated and implementing acts adopted pursuant thereto shall apply.*

For the purposes of the placing on the market, registration or entry into service of tractors of categories T2, T4.1 and C2, the engines in the power range 56 – 130 kW meeting the Stage IIIB requirements shall be considered to be transition engines as defined in point (32) of Article 3 of Regulation (EU) 2016/… [reference number of this Regulation].

** Regulation (EU) 2016/… [reference number of this Regulation] of the European Parliament and of the Council of … [date of adoption of this Regulation] on requirements relating to gaseous and particulate pollutant emission limits and type-approval for internal combustion engines for non-road mobile machinery, amending Regulations (EU) No 1024/2012 and (EU) No 167/2013, and amending and repealing Directive 97/68/EC.";*

(2) in paragraph 6, the following subparagraph is added:

"By way of derogation from the principle set out in the second subparagraph, the Commission shall be empowered to amend, by 31 December 2016, Commission Delegated Regulation (EU) 2015/96[*], so that:

(a) for the purposes of EU type-approval for tractors of categories T2, T4.1 and C2, the period of postponement set out in Article 11(4) of Regulation (EU) 2015/96 is four years; and

(b) under the flexibility scheme referred to in Article 14 of Regulation (EU) 2015/96, the flexibility allowed pursuant to point 1.1.1 of Annex V to that Regulation is increased to 150 %.

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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 (OJ L 16, 23.1.2015, p. 1).".*

Article 64

Repeal

1. Without prejudice to ***Article 58(***1***)*** to ***(***4***)*** of ***this Regulation,*** Directive 97/68/EC is repealed with effect from 1 January 2017.

2. References to the repealed Directive shall be construed as references to this Regulation.

Article 65

Entry into force and application

1. This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

2. This Regulation shall apply from 1 January ***2017, with the exception of Article 61, which shall apply from … [date of entry into force of this Regulation].***

   From ***… [date of entry into force of this Regulation], approval*** authorities shall not refuse ▌ to grant EU type-approval for a new engine type or engine family nor prohibit ***its*** placing on the market where that engine ***type*** or engine family complies with▌ Chapters II, III, IV and VIII ***and the delegated and implementing acts adopted pursuant to this Regulation***.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at ▌▌ ...

For the European Parliament *For the Council*

The President *The President*

… …

ANNEXES

ANNEX I

Definition of engine sub-categories referred to in Article 4

Table I-1: Sub-categories of engine category NRE defined in point (1) of Article 4(1)

Category	*Ignition type*	*Speed operation*	*Power range (kW)*	*Sub-category*	*Reference power*
NRE	*CI*	*variable*	*0<P<8*	*NRE-v-1*	*Maximum net power*
	CI		*8≤P<19*	*NRE-v-2*	
	CI		*19≤P<37*	*NRE-v-3*	
	CI		*37≤P<56*	*NRE-v-4*	
	all		*56≤P<130*	*NRE-v-5*	
			130≤P≤560	*NRE-v-6*	
			P>560	*NRE-v-7*	
	CI	*constant*	*0<P<8*	*NRE-c-1*	*Rated net power*
	CI		*8≤P<19*	*NRE-c-2*	
	CI		*19≤P<37*	*NRE-c-3*	
	CI		*37≤P<56*	*NRE-c-4*	
	all		*56≤P<130*	*NRE-c-5*	
			130≤P≤560	*NRE-c-6*	
			P>560	*NRE-c-7*	

Table I-2: Sub-categories of engine category NRG defined in point (2) of Article 4(1)

Category	Ignition type	Speed operation	Power range (kW)	Sub-category	Reference power
NRG	all	variable	P>560	NRG-v-1	Maximum net power
		constant	P>560	NRG-c-1	Rated net power

Table I-3: Sub-categories of engine category NRSh defined in point (3) of Article 4(1)

Category	Ignition type	Speed operation	Power range (kW)	Swept volume (cm^3)	Sub-category	Reference power
NRSh	SI	variable or constant	0<P<19	SV<50	NRSh-v-1a	Maximum net power
				SV≥50	NRSh-v-1b	

Table I-4: Sub-categories of engine category NRS defined in point (4) of Article 4(1)

Category	Ignition type	Speed operation	Power range (kW)	Swept volume (cm^3)	Sub-category	Reference power
NRS	SI	variable ≥3 600 rpm; or constant	0<P<19	80≤SV<225	NRS-vr-1a	Maximum net power
				SV≥225	NRS-vr-1b	
		variable <3 600 rpm		80≤SV<225	NRS-vi-1a	
				SV≥225	NRS-vi-1b	
		variable or constant	19≤P<30	SV≤1 000	NRS-v-2a	Maximum net power
				SV>1 000	NRS-v-2b	
			30≤P<56	any	NRS-v-3	Maximum net power

For engines <19 kW with SV<80 cm^3 in machinery other than hand-held machinery, engines of the category NRSh shall be used.

Table I-5: Sub-categories of engine category IWP defined in point (5) of Article 4(1)

Category	*Ignition type*	*Speed operation*	*Power range (kW)*	*Sub-category*	*Reference power*
IWP	*all*	*variable*	*19≤P<75*	*IWP-v-1*	*Maximum net power*
			75≤P<130	*IWP-v-2*	
			130≤P<300	*IWP-v-3*	
			P≥300	*IWP-v-4*	
		constant	*19≤P<75*	*IWP-c-1*	*Rated net power*
			75≤P<130	*IWP-c-2*	
			130≤P<300	*IWP-c-3*	
			P≥300	*IWP-c-4*	

Table I-6: Sub-categories of engine category IWA defined in point (6) of Article 4(1)

Category	*Ignition type*	*Speed operation*	*Power range (kW)*	*Sub-category*	*Reference power*
IWA	*all*	*variable*	*19≤P<75*	*IWA-v-1*	*Maximum net power*
			75≤P<130	*IWA-v-2*	
			130≤P<300	*IWA-v-3*	
			P≥300	*IWA-v-4*	
		constant	*19≤P<75*	*IWA-c-1*	*Rated net power*
			75≤P<130	*IWA-c-2*	
			130≤P<300	*IWA-c-3*	
			P≥300	*IWA-c-4*	

Table I-7: Sub-categories of engine category RLL defined in point (7) of Article 4(1)

Category	*Ignition type*	*Speed operation*	*Power range (kW)*	*Sub-category*	*Reference power*
RLL	*all*	*variable*	*P>0*	*RLL-v-1*	*Maximum net power*
		constant	*P>0*	*RLL-c-1*	*Rated net power*

Table I-8: Sub-categories of engine category RLR defined in point (8) of Article 4(1)

Category	*Ignition type*	*Speed operation*	*Power range (kW)*	*Sub-category*	*Reference power*
RLR	*all*	*variable*	*P>0*	*RLR-v-1*	*Maximum net power*
		constant	*P>0*	*RLR-c-1*	*Rated net power*

Table I-9: Sub-categories of engine category SMB defined in point (9) of Article 4(1)

Category	*Ignition type*	*Speed operation*	*Power range (kW)*	*Sub-category*	*Reference power*
SMB	*SI*	*variable or constant*	*P>0*	*SMB-v-1*	*Maximum net power*

Table I-10: Sub-categories of engine category ATS defined in point (10) of Article 4(1)

Category	*Ignition type*	*Speed operation*	*Power range (kW)*	*Sub-category*	*Reference power*
ATS	*SI*	*variable or constant*	*P>0*	*ATS-v-1*	*Maximum net power*

ANNEX II

Exhaust emission limits referred to in Article 18(2)

Table II-1: Stage V emission limits for engine category NRE defined in point (1) of Article 4(1)

Emission stage	*Engine sub-category*	*Power range*	*Ignition type*	*CO*	*HC*	*NO_x*	*PM mass*	*PN*	*A*
		kW		*g/kWh*	*g/kWh*	*g/kWh*	*g/kWh*	*#/kWh*	
Stage V	*NRE-v-1* *NRE-c-1*	*0<P<8*	*CI*	*8,00*	*($HC+NO_x$≤7,50)*		*0,40[1)]*	*-*	*1,10*
Stage V	*NRE-v-2* *NRE-c-2*	*8≤P<19*	*CI*	*6,60*	*($HC+NO_x$≤7,50)*		*0,40*	*-*	*1,10*
Stage V	*NRE-v-3* *NRE-c-3*	*19≤P<37*	*CI*	*5,00*	*($HC+NO_x$≤4,70)*		*0,015*	*$1x10^{12}$*	*1,10*
Stage V	*NRE-v-4* *NRE-c-4*	*37≤P<56*	*CI*	*5,00*	*($HC+NO_x$≤4,70)*		*0,015*	*$1x10^{12}$*	*1,10*
Stage V	*NRE-v-5* *NRE-c-5*	*56≤P<130*	*all*	*5,00*	*0,19*	*0,40*	*0,015*	*$1x10^{12}$*	*1,10*
Stage V	*NRE-v-6* *NRE-c-6*	*130≤P≤560*	*all*	*3,50*	*0,19*	*0,40*	*0,015*	*$1x10^{12}$*	*1,10*
Stage V	*NRE-v-7* *NRE-c-7*	*P>560*	*all*	*3,50*	*0,19*	*3,50*	*0,045*	*-*	*6,00*

[1)] 0,60 for hand-startable, air-cooled direct injection engines

Table II-2: Stage V emission limits for engine category NRG defined in point (2) of Article 4(1)

Emission stage	*Engine sub-category*	*Power range*	*Ignition type*	*CO*	*HC*	*NO_x*	*PM mass*	*PN*	*A*
		kW		*g/kWh*	*g/kWh*	*g/kWh*	*g/kWh*	*#/kWh*	
Stage V	*NRG-v-1* *NRG-c-1*	*P>560*	*all*	*3,50*	*0,19*	*0,67*	*0,035*	*-*	*6,00*

Table II-3: Stage V emission limits for engine category NRSh defined in point (3) of Article 4(1)

Emission stage	*Engine sub-category*	*Power range*	*Ignition type*	*CO*	*HC + NO_x*
		kW		*g/kWh*	*g/kWh*
Stage V	*NRSh-v-1a*	*0<P<19*	*SI*	*805*	*50*
Stage V	*NRSh-v-1b*			*603*	*72*

Table II-4: Stage V emission limits for engine category NRS defined in point (4) of Article 4(1)

Emission stage	*Engine sub-category*	*Power range*	*Ignition type*	*CO*	*HC + NO_x*
		kW		*g/kWh*	*g/kWh*
Stage V	*NRS-vr-1a* *NRS-vi-1a*	*0<P<19*	*SI*	*610*	*10*
Stage V	*NRS-vr-1b* *NRS-vi-1b*			*610*	*8*
Stage V	*NRS-v-2a*	*19≤P≤30*		*610*	*8*
Stage V	*NRS-v-2b*	*19≤P<56*		*4,40**	*2,70**

	NRS-v-3				

**** Optionally, as an alternative, any combination of values satisfying the equation*** $(HC+NO_X) \times CO^{0.784} \leq 8{,}57$ ***as well as the following conditions:*** $CO \leq 20{,}6$ ***g/kWh and*** $(HC+NO_X) \leq 2{,}7$ ***g/kWh***

Table II-5: Stage V emission limits for engine category IWP defined in point (5) of Article 4(1)

Emission stage	***Engine sub-category***	***Power range***	***Ignition type***	***CO***	***HC***	***NO_x***	***PM mass***	***PN***	***A***
		kW		***g/kWh***	***g/kWh***	***g/kWh***	***g/kWh***	***#/kWh***	
Stage V	***IWP-v-1*** ***IWP-c-1***	***19≤P<75***	***all***	***5,00***	***($HC+NO_x$≤4,70)***		***0,30***	***-***	***6,00***
Stage V	***IWP-v-2*** ***IWP-c-2***	***75≤P<130***	***all***	***5,00***	***($HC+NO_x$≤5,40)***		***0,14***	***-***	***6,00***
Stage V	***IWP-v-3*** ***IWP-c-3***	***130≤P<300***	***all***	***3,50***	***1,00***	***2,10***	***0,10***	***-***	***6,00***
Stage V	***IWP-v-4*** ***IWP-c-4***	***P≥300***	***all***	***3,50***	***0,19***	***1,80***	***0,015***	***$1x10^{12}$***	***6,00***

Table II-6: Stage V emission limits for engine category IWA defined in point (6) of Article 4(1)

Emission stage	*Engine sub-category*	*Power range*	*Ignition type*	*CO*	*HC*	*NO_x*	*PM mass*	*PN*	*A*
		kW		*g/kWh*	*g/kWh*	*g/kWh*	*g/kWh*	*#/kWh*	
Stage V	*IWA-v-1* *IWA-c-1*	*19≤P<75*	*all*	*5,00*	*($HC+NO_x$≤4,70)*		*0,30*	*-*	*6,00*
Stage V	*IWA-v-2* *IWA-c-2*	*75≤P<130*	*all*	*5,00*	*($HC+NO_x$≤5,40)*		*0,14*	*-*	*6,00*
Stage V	*IWA-v-3* *IWA-c-3*	*130≤P<300*	*all*	*3,50*	*1,00*	*2,10*	*0,10*	*-*	*6,00*
Stage V	*IWA-v-4* *IWA-c-4*	*P≥300*	*all*	*3,50*	*0,19*	*1,80*	*0,015*	*$1x10^{12}$*	*6,00*

Table II-7: Stage V emission limits for engine category RLL defined in point (7) of Article 4(1)

Emission stage	*Engine sub-category*	*Power range*	*Ignition type*	*CO*	*HC*	*NO_x*	*PM mass*	*PN*	*A*
		kW		*g/kWh*	*g/kWh*	*g/kWh*	*g/kWh*	*#/kWh*	
Stage V	*RLL-c-1* *RLL-v-1*	*P>0*	*all*	*3,50*	*($HC+NO_x$≤4,00)*		*0,025*	*-*	*6,00*

Table II-8: Stage V emission limits for engine category RLR defined in point (8) of Article 4(1)

Emission stage	*Engine sub-category*	*Power range*	*Ignition type*	*CO*	*HC*	*NO_x*	*PM mass*	*PN*	*A*
		kW		*g/kWh*	*g/kWh*	*g/kWh*	*g/kWh*	*#/kWh*	
Stage V	*RLR-c-1* *RLR-v-1*	*P>0*	*all*	*3,50*	*0,19*	*2,00*	*0,015*	*$1x10^{12}$*	*6,00*

Table II-9: Stage V emission limits for engine category SMB defined in point (9) of Article 4(1)

Emission stage	*Engine sub-category*	*Power range*	*Ignition type*	*CO*	*NO_x*	*HC*
		kW		*g/kWh*	*g/kWh*	*g/kWh*
Stage V	*SMB-v-1*	*P>0*	*SI*	*275*	*-*	*75*

Table II-10: Stage V emission limits for engine category ATS defined in point (10) of Article 4(1)

Emission stage	*Engine sub-category*	*Power range*	*Ignition type*	*CO*	*HC + NO_x*
		kW		*g/kWh*	*g/kWh*
Stage V	*ATS-v-1*	*P>0*	*SI*	*400*	*8*

Specific provisions on total hydrocarbon (HC) limits
for fully and partially gaseous-fuelled engines

1. For the sub-categories where an A-factor is defined, the HC limit for fully and partially gaseous-fuelled engines indicated in Tables II-1 to II-10 is replaced by a limit calculated using the following formula:

HC = 0,19 + (1,5*A*GER)

where GER is the average gas energy ratio over the appropriate test cycle. Where both a steady-state and transient test cycle apply, the GER shall be determined from the hot-start transient test cycle. Where more than one steady-state test cycle applies, the average GER shall be determined for each cycle individually.

If the calculated limit for HC exceeds the value of 0,19 + A, the limit for HC shall be set to 0,19 + A.

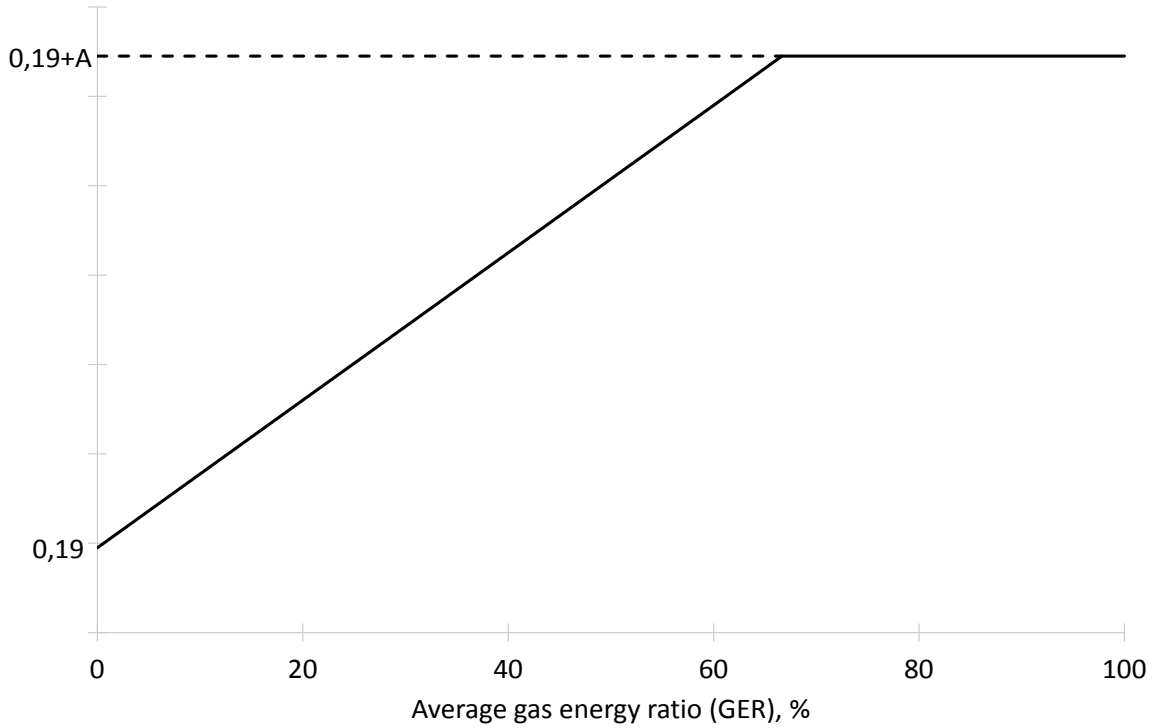


Figure 1. Diagram showing HC emission limit as function of average GER

2. For sub-categories with a combined HC and NO_x limit, the combined limit value for HC and NO_x shall be reduced by 0,19 g/kWh and apply for NO_x only.

3. For non-gaseous-fuelled engines, the formula does not apply.

ANNEX III

Timetable for the application of this Regulation in respect of EU type-approvals and placing on the market

Table III-1: Dates of application of this Regulation for engine category NRE

Category	*Ignition type*	*Power range (kW)*	*Sub-category*	*Mandatory date of application of this Regulation for*	
				EU type-approval of engines	*Placing on the market of engines*
NRE	*CI*	*0<P<8*	*NRE-v-1* *NRE-c-1*	*1 January 2018*	*1 January 2019*
	CI	*8≤P<19*	*NRE-v-2* *NRE-c-2*		
	CI	*19≤P<37*	*NRE-v-3* *NRE-c-3*	*1 January 2018*	*1 January 2019*
		37≤P<56	*NRE-v-4* *NRE-c-4*		
	all	*56≤P<130*	*NRE-v-5* *NRE-c-5*	*1 January 2019*	*1 January 2020*
		130≤P≤560	*NRE-v-6* *NRE-c-6*	*1 January 2018*	*1 January 2019*
		P>560	*NRE-v-7* *NRE-c-7*	*1 January 2018*	*1 January 2019*

Table III-2: Dates of application of this Regulation for engine category NRG

Category	*Ignition type*	*Power range (kW)*	*Sub-category*	*Mandatory date of application of this Regulation for*	
				EU type-approval of engines	*Placing on the market of engines*
NRG	*all*	*P>560*	*NRG-v-1* *NRG-c-1*	*1 January 2018*	*1 January 2019*

Table III-3: Dates of application of this Regulation for engine category NRSh

Category	*Ignition type*	*Power range (kW)*	*Sub-category*	*Mandatory date of application of this Regulation for*	
				EU type-approval of engines	*Placing on the market of engines*
NRSh	*SI*	*0<P<19*	*NRSh-v-1a* *NRSh-v-1b*	*1 January 2018*	*1 January 2019*

Table III-4: Dates of application of this Regulation for engine category NRS

Category	*Ignition type*	*Power range (kW)*	*Sub-category*	*Mandatory date of application of this Regulation for*	
				EU type-approval of engines	*Placing on the market of engines*
NRS	*SI*	*0<P<56*	*NRS-vr-1a* *NRS-vi-1a* *NRS-vr-1b* *NRS-vi-1b*	*1 January 2018*	*1 January 2019*

			NRS-v-2a ***NRS-v-2b*** ***NRS-v-3***		

Table III-5: Dates of application of this Regulation for engine category IWP

Category	*Ignition type*	*Power range (kW)*	*Sub-category*	*Mandatory date of application of this Regulation for*	
				EU type-approval of engines	*Placing on the market of engines*
IWP	*all*	*19≤P<300*	*IWP-v-1* *IWP-c-1* *IWP-v-2* *IWP-c-2* *IWP-v-3* *IWP-c-3*	*1 January 2018*	*1 January 2019*
		P≥300	*IWP-v-4* *IWP-c-4*	*1 January 2019*	*1 January 2020*

Table III-6: Dates of application of this Regulation for engine category IWA

Category	*Ignition type*	*Power range (kW)*	*Sub-category*	*Mandatory date of application of this Regulation for*	
				EU type-approval of engines	*Placing on the market of engines*
IWA	*all*	*19≤P<300*	*IWA-v-1* *IWA-c-1* *IWA-v-2* *IWA-c-2* *IWA-v-3* *IWA-c-3*	*1 January 2018*	*1 January 2019*

		P≥300	***IWA-v-4*** ***IWA-c-4***	***1 January 2019***	***1 January 2020***

Table III-7: Dates of application of this Regulation for engine category RLL

Category	*Ignition type*	*Power range (kW)*	*Sub-category*	*Mandatory date of application of this Regulation for*	
				EU type-approval of engines	*Placing on the market of engines*
RLL	*all*	*P>0*	*RLL-v-1* *RLL-c-1*	*1 January 2020*	*1 January 2021*

Table III-8: Dates of application of this Regulation for engine category RLR

Category	*Ignition type*	*Power range (kW)*	*Sub-category*	*Mandatory date of application of this Regulation for*	
				EU type-approval of engines	*Placing on the market of engines*
RLR	*all*	*P>0*	*RLR-v-1* *RLR-c-1*	*1 January 2020*	*1 January 2021*

Table III-9: Dates of application of this Regulation for engine category SMB

Category	*Ignition type*	*Power range (kW)*	*Sub-category*	*Mandatory date of application of this Regulation for*	
				EU type-approval of engines	*Placing on the market of engines*
SMB	*SI*	*P>0*	*SMB-v-1*	*1 January 2018*	*1 January 2019*

Table III-10: Dates of application of this Regulation for engine category ATS

Category	*Ignition*	*Power range*	*Sub-*	*Mandatory date of application of this*

	type	*(kW)*	*category*	*Regulation for*	
				EU type-approval of engines	*Placing on the market of engines*
ATS	*SI*	*P>0*	*ATS-v-1*	*1 January 2018*	*1 January 2019*

ANNEX IV

Non-road steady-state test cycles (NRSC)

Table IV-1: NRSC test cycles for engines of category NRE

Category	*Speed operation*	*Purpose*	*Sub-category*	*NRSC*
NRE	*variable*	*Variable-speed engine having a reference power of less than 19 kW*	*NRE-v-1* *NRE-v-2*	*G2 or C1*
		Variable-speed engine having a reference power greater than or equal to 19 kW but not more than 560 kW	*NRE-v-3* *NRE-v-4* *NRE-v-5* *NRE-v-6*	*C1*
		Variable-speed engine having a reference power greater than 560 kW	*NRE-v-7*	*C1*
	constant	*Constant-speed engine*	*NRE-c-1* *NRE-c-2* *NRE-c-3* *NRE-c-4* *NRE-c-5* *NRE-c-6* *NRE-c-7*	*D2*

Table IV-2: NRSC test cycles for engines of category NRG

Category	*Speed operation*	*Purpose*	*Sub-category*	*NRSC*
NRG	*variable*	*Variable-speed engine for generating set*	*NRG-v-1*	*C1*
	constant	*Constant-speed engine for generating set*	*NRG-c-1*	*D2*

Table IV-3: NRSC test cycles for engines of category NRSh

Category	*Speed operation*	*Purpose*	*Sub-category*	*NRSC*
NRSh	*variable or constant*	*Engine having a reference power of not more than 19 kW, for use in hand-held machinery*	*NRSh-v-1a* *NRSh-v-1b*	*G3*

Table IV-4: NRSC test cycles for engines of category NRS

Category	*Speed operation*	*Purpose*	*Sub-category*	*NRSC*
NRS	*variable* *<3 600 rpm*	*Variable-speed engine having a reference power of not more than 19 kW, intended for operation <3 600 rpm*	*NRS-vi-1a* *NRS-vi-1b*	*G1*
	variable *≥3 600 rpm; or constant*	*Variable-speed engine having a reference power of not more than 19 kW, intended for operation ≥3 600 rpm; constant-speed engine having a reference power of not more than 19 kW*	*NRS-vr-1a* *NRS-vr-1b*	*G2*
	variable or constant	*Engine having both a reference power of between 19 kW and 30 kW and a total swept volume of less than 1 litre*	*NRS-v-2a*	*G2*
		Engine having a reference power greater than 19 kW, other than engine having both a reference power of between 19 kW and 30 kW and a total swept volume of less than 1 litre	*NRS-v-2b* *NRS-v-3*	*C2*

Table IV-5: NRSC test cycles for engines of category IWP

Category	*Speed operation*	*Purpose*	*Sub-category*	*NRSC*
IWP	*variable*	*Variable-speed engine intended for propulsion that operates on a fixed-pitch propeller curve*	*IWP-v-1* *IWP-v-2* *IWP-v-3* *IWP-v-4*	*E3*
	constant	*Constant-speed engine intended for propulsion that operates with a controllable-pitch or electrically coupled propeller*	*IWP-c-1* *IWP-c-2* *IWP-c-3* *IWP-c-4*	*E2*

Table IV-6: NRSC test cycles for engines of category IWA

Category	*Speed operation*	*Purpose*	*Sub-category*	*NRSC*
IWA	*variable*	*Variable-speed engine intended for auxiliary use on inland waterway vessels*	*IWA-v-1* *IWA-v-2* *IWA-v-3* *IWA-v-4*	*C1*
	constant	*Constant-speed engine intended for auxiliary use on inland waterway vessels*	*IWA-c-1* *IWA-c-2* *IWA-c-3* *IWA-c-4*	*D2*

Table IV-7: NRSC test cycles for engines of category RLL

Category	*Speed operation*	*Purpose*	*Sub-category*	*NRSC*
RLL	*variable*	*Variable-speed engine for propulsion of locomotives*	*RLL-v-1*	*F*
	constant	*Constant-speed engine for propulsion of locomotives*	*RLL-c-1*	*D2*

Table IV-8: NRSC test cycles for engines of category RLR

Category	*Speed operation*	*Purpose*	*Sub-category*	*NRSC*
RLR	*variable*	*Variable-speed engine for propulsion of railcars*	*RLR-v-1*	*C1*
	constant	*Constant-speed engine for propulsion of railcars*	*RLR-c-1*	*D2*

Table IV-9: NRSC test cycles for engines of category SMB

Category	*Speed operation*	*Purpose*	*Sub-category*	*NRSC*
SMB	*variable or constant*	*Engines for propulsion of snowmobiles*	*SMB-v-1*	*H*

Table IV-10: NRSC test cycle for engines of category ATS

Category	*Speed operation*	*Purpose*	*Sub-category*	*NRSC*
ATS	*variable or constant*	*Engines for propulsion of ATVs or SbS*	*ATS-v-1*	*G1*

Non-road transient test cycles

Table IV-11: Non-road transient test cycle for engines of category NRE

Category	*Speed operation*	*Purpose*	*Sub-category*	
NRE	*variable*	*Variable-speed engine having reference power greater than or equal to 19 kW but not more than 560 kW*	*NRE-v-3* *NRE-v-4* *NRE-v-5* *NRE-v-6*	*NRTC*

Table IV-12: Non-road transient test cycle for engines of category NRS[(1)]

Category	*Speed operation*	*Purpose*	*Sub-category*	
NRS	*variable or constant*	*Engine having a reference power greater than 19 kW, other than engine having both a reference power of between 19 kW and 30 kW and a total swept volume of less than 1 litre*	*NRS-v-2b* *NRS-v-3*	*LSI-NRTC*

(1) Only applicable for engines with maximum test speed ≤ 3 400 rpm.

ANNEX V

Emission durability periods (EDP) referred to in Article 25(1)

Table V-1: EDP for engine category NRE

Category	*Ignition type*	*Speed operation*	*Power range (kW)*	*Sub-category*	*EDP (hours)*
NRE	*CI*	*variable*	*0<P<8*	*NRE-v-1*	*3 000*
	CI		*8≤P<19*	*NRE-v-2*	
	CI		*19≤P<37*	*NRE-v-3*	*5 000*
	CI		*37≤P<56*	*NRE-v-4*	*8 000*
	all		*56≤P<130*	*NRE-v-5*	
			130≤P≤560	*NRE-v-6*	
			P>560	*NRE-v-7*	
	CI	*constant*	*0<P<8*	*NRE-c-1*	*3 000*
	CI		*8≤P<19*	*NRE-c-2*	
	CI		*19≤P<37*	*NRE-c-3*	
	CI		*37≤P<56*	*NRE-c-4*	*8 000*
	all		*56≤P<130*	*NRE-c-5*	
			130≤P≤560	*NRE-c-6*	
			P>560	*NRE-c-7*	

Table V-2: EDP for engine category NRG

Category	*Ignition type*	*Speed operation*	*Power range (kW)*	*Sub-category*	*EDP (hours)*

NRG	***all***	***constant***	***P>560***	***NRG-v-1***	***8 000***
		variable		***NRG-c-1***	

Table V-3: EDP for engine category NRSh

Category	*Ignition type*	*Speed operation*	*Power range (kW)*	*Swept volume (cm^3)*	*Sub-category*	*EDP (hours)*
NRSh	*SI*	*variable or constant*	*0<P<19*	*SV<50*	*NRSh-v-1a*	*50/125/300[1)]*
				SV≥50	*NRSh-v-1b*	

[1)] EDP hours correspond to the EDP categories Cat 1/Cat 2/Cat 3 as defined in the delegated acts adopted pursuant to this Regulation.

Table V-4: EDP for engine category NRS

Category	*Ignition type*	*Speed operation*	*Power range (kW)*	*Swept volume (cm^3)*	*Sub-category*	*EDP (hours)*
NRS	*SI*	*variable ≥3 600 rpm; or constant*	*0<P<19*	*80≤SV<225*	*NRS-vr-1a*	*125/250/500[1)]*
		variable <3 600 rpm			*NRS-vi-1a*	
		variable ≥3 600 rpm; or constant		*SV≥225*	*NRS-vr-1b*	*250/500/1 000[1)]*
		variable <3 600 rpm			*NRS-vi-1b*	
		variable or constant	*19≤P<30*	*SV≤1 000*	*NRS-v-2a*	*1 000*
				SV>1 000	*NRS-v-2b*	*5 000*
			30≤P<56	*any*	*NRS-v-3*	*5 000*

[1)] EDP hours correspond to the EDP categories Cat 1/Cat 2/Cat 3 as defined in the delegated acts adopted pursuant to this Regulation.

Table V-5: EDP for engine category IWP

Category	*Ignition type*	*Speed operation*	*Power range (kW)*	*Sub-category*	*EDP (hours)*
IWP	*all*	*variable*	*19≤P<75*	*IWP-v-1*	*10 000*
			75≤P<130	*IWP -v-2*	
			130≤P<300	*IWP -v-3*	
			P≥300	*IWP -v-4*	
		constant	*19≤P<75*	*IWP -c-1*	*10 000*
			75≤P<130	*IWP -c-2*	
			130≤P<300	*IWP -c-3*	
			P≥300	*IWP -c-4*	

Table V-6: EDP for engine category IWA

Category	*Ignition type*	*Speed operation*	*Power range (kW)*	*Sub-category*	*EDP (hours)*
IWA	*all*	*variable*	*19≤P<75*	*IWA-v-1*	*10 000*
			75≤P<130	*IWA -v-2*	
			130≤P<300	*IWA -v-3*	
			P≥300	*IWA -v-4*	
		constant	*19≤P<75*	*IWA -c-1*	*10 000*
			75≤P<130	*IWA -c-2*	
			130≤P<300	*IWA -c-3*	
			P≥300	*IWA -c-4*	

Table V-7: EDP for engine category RLL

Category	*Ignition type*	*Speed operation*	*Power range (kW)*	*Sub-category*	*EDP (hours)*
RLL	*all*	*variable*	*P>0*	*RLL-v-1*	*10 000*
		constant	*P>0*	*RLL-c-1*	

Table V-8: EDP for engine category RLR

Category	Ignition type	Speed operation	Power range (kW)	Sub-category	EDP (hours)
RLR	all	variable	P>0	RLR-v-1	10 000
		constant	P>0	RLR-c-1	

Table V-9: EDP for engine category SMB

Category	Ignition type	Speed operation	Power range (kW)	Sub-category	EDP (hours)
SMB	SI	variable or constant	P>0	SMB-v-1	400[2)]

[2)] Alternatively, an emission durability period of 8 000 km is permitted

Table V-10: EDP for engine category ATS

Category	Ignition type	Speed operation	Power range (kW)	Sub-category	EDP (hours)
ATS	SI	variable or constant	P>0	ATS-v-1	500/1 000[3)]

[3)] EDP hours correspond to the following total engine swept volumes: <100 cm^3 / ≥100 cm^3.

ANNEX VI

Special purpose engine (SPE) emission limit values referred to in Article 34(5)

Table VI-1: SPE emission limit values for engine category NRE

Emission stage	*Engine sub-category*	*Power range*	*Ignition type*	*CO*	*HC*	*NO_x*	*PM mass*	*A*
		kW		*g/kWh*	*g/kWh*	*g/kWh*	*g/kWh*	
SPE	*NRE-v-1* *NRE-c-1*	*0<P<8*	*CI*	*8*	*7,5*		*0,4*	*6,0*
SPE	*NRE-v-2* *NRE-c-2*	*8≤P<19*	*CI*	*6,6*	*7,5*		*0,4*	*6,0*
SPE	*NRE-v-3* *NRE-c-3*	*19≤P<37*	*CI*	*5,5*	*7,5*		*0,6*	*6,0*
SPE	*NRE-v-4* *NRE-c-4*	*37≤P<56*	*CI*	*5,0*	*4,7*		*0,4*	*6,0*
SPE	*NRE-v-5* *NRE-c-5*	*56≤P<130*	*all*	*5,0*	*4,0*		*0,3*	*6,0*
SPE	*NRE-v-6* *NRE-c-6*	*130≤P≤560*	*all*	*3,5*	*4,0*		*0,2*	*6,0*
SPE	*NRE-v-7* *NRE-c-7*	*P>560*	*all*	*3,5*	*6,4*		*0,2*	*6,0*

Table VI-2: SPE emission limit values for engine category NRG

Emission stage	*Engine sub-category*	*Power range*	*Ignition type*	*CO*	*HC*	*NO_x*	*PM mass*	*A*
		kW		*g/kWh*	*g/kWh*	*g/kWh*	*g/kWh*	
SPE	*NRG-c-1* *NRG-v-1*	*P>560*	*all*	*3,5*	*6,4*		*0,2*	*6,0*

Table VI-3: SPE emission limit values for engine category RLL

Emission stage	*Engine sub-category*	*Power range*	*Ignition type*	*CO*	*HC*	*NO_x*	*PM mass*	*A*
		kW		*g/kWh*	*g/kWh*	*g/kWh*	*g/kWh*	
SPE	*RLL-v-1* *RLL-c-1*	*P≤560*	*all*	*3,5*	*(HC+NO_x≤4,0)*		*0,2*	*6,0*
SPE	*RLL-v-1* *RLL-c-1*	*P>560 kW*	*all*	*3,5*	*0,5*	*6,0*	*0,2*	*6,0*
SPE	*RLL-v-1* *RLL-c-1*	*P>2000 kW and SVc[1)]>5 litres*	*all*	*3,5*	*0,4*	*7,4*	*0,2*	*6,0*

1) *Swept Volume per cylinder*