

Regulation (EU) No 540/2014 of the European Parliament and of the Council of 16 April 2014 on the sound level of motor vehicles and of replacement silencing systems, and amending Directive 2007/46/EC and repealing Directive 70/157/EEC (Text with EEA relevance)

REGULATION (EU) No 540/2014 OF THE
EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 16 April 2014

on the sound level of motor vehicles and of replacement silencing systems,
and amending Directive 2007/46/EC and repealing Directive 70/157/EEC

(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⁾,

Whereas:

- (1) In accordance with Article 26(2) of the Treaty on the Functioning of the European Union (TFEU), the internal market comprises an area without internal frontiers in which the free movement of goods, persons, services and capital is to be ensured. To that end, a comprehensive EU type-approval system for motor vehicles is in place. The technical requirements for the EU type-approval of motor vehicles and their silencing systems with regard to permissible sound levels should be harmonised to avoid the adoption of requirements that differ from one Member State to another, and to ensure the proper functioning of the internal market while, at the same time, providing for a high level of environmental protection and public safety, a better quality of life and health, and taking account of road vehicles as a significant source of noise in the transport sector.
- (2) EU type-approval requirements already apply in the context of Union law regulating various aspects of the performance of motor vehicles, such as CO₂ emissions from cars and light commercial vehicles, pollutant emissions and safety standards. The technical requirements applicable pursuant to this Regulation should be developed in a way that ensures a consistent approach throughout that Union law, taking into account all relevant noise factors.
- (3) Traffic noise harms health in numerous ways. Protracted noise-related stress can exhaust human physical reserves, disrupt the regulatory capacity of organ functions and

Status: Point in time view as at 31/12/2020.

Changes to legislation: There are outstanding changes not yet made to Regulation (EU) No 540/2014 of the European Parliament and of the Council. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details)

hence limit their effectiveness. Traffic noise is a potential risk factor for the development of medical conditions and incidents such as high blood pressure and heart attacks. The effects of traffic noise should be further researched in the same manner as provided for in Directive 2002/49/EC of the European Parliament and of the Council⁽³⁾.

- (4) Council Directive 70/157/EEC⁽⁴⁾ harmonised the different technical requirements of Member States relating to the permissible sound level of motor vehicles and of their exhaust systems for the purpose of the establishment and operation of the internal market. For the purposes of the proper functioning of the internal market and in order to ensure a uniform and consistent application throughout the Union, it is appropriate to replace that Directive by this Regulation.
- (5) This Regulation constitutes a separate Regulation in the context of the type-approval procedure under Directive 2007/46/EC of the European Parliament and of the Council⁽⁵⁾. Accordingly, Annexes IV, VI and XI to that Directive should be amended.
- (6) Directive 70/157/EEC refers to Regulation No 51 of the United Nations Economic Commission for Europe (UNECE) on noise emissions⁽⁶⁾, which specifies the test method for noise emissions, and to UNECE Regulation No 59 on uniform provisions concerning the approval of replacement silencing systems⁽⁷⁾. As a Contracting Party to the Agreement of UNECE of 20 March 1958 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⁽⁸⁾, the Union has decided to apply those Regulations.
- (7) Since its adoption, Directive 70/157/EEC has been substantially amended several times. The most recent reduction of sound level limits for motor vehicles, introduced in 1995, did not have the effects expected. Studies showed that the test method used under that Directive no longer reflected real life driving behaviour in urban traffic. In particular, as pointed out in the Green Paper on the Future Noise Policy of 4 November 1996, the contribution of tyre-rolling noise to total noise emissions was underestimated in the test method.
- (8) This Regulation should therefore introduce a different test method from that laid down in Directive 70/157/EEC. The new method should be based on the test method published by the UNECE Working Party on Noise (GRB) in 2007 which incorporated a 2007 version of the standard ISO 362. The results of monitoring of both the old and the new test methods were submitted to the Commission.
- (9) The new test method is considered to be representative for sound levels during normal traffic conditions, but it is less representative for sound levels under worst case conditions. Therefore, it is necessary to lay down in this Regulation additional sound emission provisions. Those provisions should establish preventive requirements intended to cover driving conditions of the vehicle in real traffic outside the type-approval driving cycle and to prevent cycle beating. Those driving conditions are environmentally relevant and it is important to ensure that the sound emission of a vehicle under street-driving conditions does not differ significantly from what can be expected from the type-approval test result for the specific vehicle.

Status: Point in time view as at 31/12/2020.

Changes to legislation: There are outstanding changes not yet made to Regulation (EU) No 540/2014 of the European Parliament and of the Council. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details)

- (10) This Regulation should also further reduce sound level limits. It should take account of the new stricter noise requirements for motor vehicle tyres laid down in Regulation (EC) No 661/2009 of the European Parliament and of the Council⁽⁹⁾. Studies highlighting the annoyance and adverse health effects resulting from road traffic noise and the associated costs and benefits should also be taken into account.
- (11) The overall limit values should be reduced with regard to all noise sources of motor vehicles including the air intake over the power train and the exhaust, taking into account the tyre contribution to noise reduction referred to in Regulation (EC) No 661/2009.
- (12) Chapter III of Regulation (EC) No 765/2008 of the European Parliament and of the Council⁽¹⁰⁾, in accordance with which Member States are required to carry out market surveillance and control products entering the Union market, applies to the products covered by this Regulation.
- (13) Noise is a multifaceted issue with multiple sources and factors that influence the sound perceived by people and the impact of that sound upon them. Vehicle sound levels are partially dependent on the environment in which the vehicles are used, in particular the quality of the road infrastructure, and therefore a more integrated approach is required. Directive 2002/49/EC requires strategic noise maps to be drawn up periodically as regards, inter alia, major roads. The information presented in those maps could form the basis of future research work regarding environmental noise in general, and road surface noise in particular, as well as best practice guides on technological road quality development and a classification of road surface types, if appropriate.
- (14) The Sixth Community Environment Action Programme⁽¹¹⁾ set out the framework for environmental policy-making in the Union for the period 2002-2012. That programme called for actions in the field of noise pollution to substantially reduce the number of people regularly affected by long-term average levels of noise, particularly from traffic.
- (15) Technical measures to reduce the sound level of motor vehicles have to comply with a set of competing requirements, such as those of reducing noise and pollutant emissions and improving safety whilst keeping the vehicle in question as cheap and efficient as possible. In attempting to comply with all those requirements equally and strike a balance between them, the vehicle industry all too often runs up against the limits of what is currently technically feasible. Vehicle designers have repeatedly managed to push those limits back by using new, innovative materials and methods. Union law should set a clear framework for innovation that can be achieved in a realistic timeframe. This Regulation establishes such a framework and thus provides an immediate incentive for innovation in keeping with the needs of society, whilst in no way restricting the economic freedom that is vital to the industry.
- (16) Noise pollution is primarily a local problem, but one which calls for a Union-wide solution. The first step in any sustainable noise emissions policy should be to devise measures to reduce sound levels at source. Since the target of this Regulation is the noise source that motor vehicles represent, and given that that noise source is by definition a mobile one, national measures alone are not sufficient.

Status: Point in time view as at 31/12/2020.

Changes to legislation: There are outstanding changes not yet made to Regulation (EU) No 540/2014 of the European Parliament and of the Council. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details)

- (17) The provision of information on sound emissions to consumers and public authorities has the potential to influence purchasing decisions and accelerate the transition to a quieter vehicle fleet. Accordingly, manufacturers should provide information on sound levels of vehicles at the point of sale and in technical promotional material. A label, comparable to the labels used for information on CO₂ emissions, fuel-consumption and tyre-noise, should inform consumers about the sound emissions of a vehicle. The Commission should undertake an impact assessment on the labelling conditions applicable to air and noise pollution levels and on consumer information. That impact assessment should take into account the different types of vehicles covered by this Regulation (including pure electric vehicles) as well as the effect that such labelling could have on the vehicle industry.
- (18) In order to reduce road traffic noise, public authorities should be able to put in place measures and incentives to encourage the use of quieter vehicles.
- (19) Environmental benefits from hybrid electric and pure electric vehicles have resulted in a substantial reduction of the noise emitted by such vehicles. That reduction has removed an important source of an audible signal that is relied upon by blind and visually impaired pedestrians and cyclists, amongst other road users, to become aware of the approach, presence or departure of those vehicles. As a consequence, industry is developing Acoustic Vehicle Alerting Systems (AVAS) to compensate for this lack of audible signal in hybrid electric and pure electric vehicles. The performance of such AVAS fitted to vehicles should be harmonised. In developing of those AVAS consideration should be given to the overall impact on noise in communities.
- (20) The Commission should examine the potential of active safety systems in more silent vehicles such as hybrid electric and pure electric vehicles in order to better serve the objective of improving the safety of vulnerable road users in urban areas, such as blind, visually impaired and aurally challenged pedestrians, cyclists and children.
- (21) Vehicle sound levels have a direct impact on the quality of life of Union citizens, in particular in urban areas in which there is little or no electric or underground public transport provision or cycling or walking infrastructure. The target of doubling the number of public transport users that the European Parliament set in its resolution of 15 December 2011 on the Roadmap to a Single European Transport Area - Towards a competitive and resource efficient transport system⁽¹²⁾ should also be taken into account. The Commission and the Member States should, in accordance with the subsidiarity principle, promote public transport, walking and cycling, with a view to reducing noise pollution in urban areas.
- (22) A vehicle's sound level is partially dependent on how it is used and how well it is maintained following its purchase. Therefore, steps should be taken to raise public awareness in the Union of the importance of adopting a smooth driving style and keeping within the speed limits in force in each Member State.
- (23) In order to simplify the type-approval legislation of the Union, in line with the 2007 recommendations of the CARS 21 Report, it is appropriate to base this Regulation on

Status: Point in time view as at 31/12/2020.

Changes to legislation: There are outstanding changes not yet made to Regulation (EU) No 540/2014 of the European Parliament and of the Council. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details)

UNECE Regulations No 51, with regard to the test method, and No 59 with regard to replacement silencing systems.

- (24) To enable the Commission to adapt certain requirements of Annexes I, IV, VIII and X to this Regulation to technical progress, the power to adopt acts in accordance with Article 290 TFEU should be delegated to the Commission in respect of the amendment of the provisions in those Annexes related to the test methods and sound levels. It is of particular importance that the Commission carry out appropriate consultations during its preparatory work, including at expert level. The Commission, when preparing and drawing up delegated acts, should ensure a simultaneous, timely and appropriate transmission of relevant documents to the European Parliament and to the Council.
- (25) Since the objective of this Regulation, namely to lay down administrative and technical requirements for the EU type-approval of all new vehicles with regard to their sound level and of replacement silencing systems and components thereof type-approved as separate technical units and intended for those vehicles, cannot be sufficiently achieved by the Member States but can rather, by reason of its 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 that objective.
- (26) As a consequence of the application of the new regulatory framework laid down pursuant to this Regulation, Directive 70/157/EEC should be repealed,

HAVE ADOPTED THIS REGULATION:

Status: Point in time view as at 31/12/2020.

Changes to legislation: There are outstanding changes not yet made to Regulation (EU) No 540/2014 of the European Parliament and of the Council. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details)

- (1) [OJ C 191, 29.6.2012, p. 76.](#)
- (2) Position of the European Parliament of 6 February 2013 (not yet published in the Official Journal) and position of the Council at first reading of 20 February 2014 (not yet published in the Official Journal). Position of the European Parliament of 2 April 2014 (not yet published in the Official Journal).
- (3) Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 relating to the assessment and management of environmental noise ([OJ L 189, 18.7.2002, p. 12](#)).
- (4) Council Directive 70/157/EEC of 6 February 1970 on the approximation of the laws of the Member States relating to the permissible sound level and the exhaust system of motor vehicles ([OJ L 42, 23.2.1970, p. 16](#)).
- (5) 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 systems, components and separate technical units intended for such vehicles (Framework Directive) ([OJ L 263, 9.10.2007, p. 1](#)).
- (6) Regulation No 51 of the Economic Commission for Europe of the United Nations (UN/ECE) — Uniform provisions concerning the approval of motor vehicles having at least four wheels with regard to their noise emissions ([OJ L 137, 30.5.2007, p. 68](#)).
- (7) Regulation No 59 of the Economic Commission for Europe of the United Nations (UN/ECE) — Uniform provisions concerning the approval of replacement silencing systems ([OJ L 326, 24.11.2006, p. 43](#)).
- (8) 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](#)).
- (9) Regulation (EC) No 661/2009 of the European Parliament and of the Council of 13 July 2009 concerning type-approval requirements for the general safety of motor vehicles, their trailers and systems, components and separate technical units intended therefor ([OJ L 200, 31.7.2009, p. 1](#)).
- (10) 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 and repealing Regulation (EEC) No 339/93 ([OJ L 218, 13.8.2008, p. 30](#)).
- (11) 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](#)).
- (12) [OJ C 168 E, 14.6.2013, p. 72.](#)

Status:

Point in time view as at 31/12/2020.

Changes to legislation:

There are outstanding changes not yet made to Regulation (EU) No 540/2014 of the European Parliament and of the Council. Any changes that have already been made to the legislation appear in the content and are referenced with annotations.