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2023/0134 (COD)

Proposal for a

DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

amending Directive 1999/62/EC, Council Directive 1999/37/EC and Directive (EU) 2019/520 as regards the CO₂ emission class of heavy-duty vehicles with trailers

EXPLANATORY MEMORANDUM

1. CONTEXT OF THE PROPOSAL

- **Reasons for and objectives of the proposal**

Directive (EU) 2022/362 of the European Parliament and of the Council¹ amending Directive 1999/62/EC of the European Parliament and of the Council² addressed a number of socio-economic and environmental challenges, including climate change. It did so by enabling CO₂ emission-based differentiation of road charges for heavy-duty vehicles as well as for light-duty vehicles in order to incentivise operators to deploy more efficient vehicles. At the time of its adoption, a legal framework for the certification of the effect of trailers on the CO₂ emissions of heavy goods vehicle combinations was not available yet. Therefore, trailers could not be included in the CO₂ emission-based differentiation of road charges.

As a result, Recital 31 of Directive (EU) 2022/362 called for the Commission to include the effect of trailers and semi-trailers on the CO₂ emissions of heavy goods vehicle combinations when determining the reduction of road charges once legally certified values for the effect of trailers and semi-trailers on the CO₂ emissions of heavy goods vehicle combinations are available. The condition laid down in the recital was fulfilled by the adoption of Commission Implementing Regulation (EU) 2022/1362³.

Trailers have a significant potential for reduction of CO₂ emissions of heavy goods vehicle combinations and demand-oriented measure reducing operational costs of more energy-efficient trailers can incentivise their more rapid deployment. Therefore, the objective of this proposal is to set out the rules to include the effect of trailers on the CO₂ emissions of heavy goods vehicle combinations in road charging schemes that differentiate road charges based on vehicles' CO₂ emission.

Additionally, this proposal modifies the existing provisions of Directive (EU) 2022/362 concerning the variation of the infrastructure and user charges of heavy-duty vehicles according to their CO₂ emissions to reflect the new structure of Regulation (EU) 2019/1242 resulting from its revision under proposal COM(2023) 88 final⁴.

- **Consistency with existing policy provisions in the policy area**

This initiative complements CO₂ emission-based tolling introduced by Directive (EU) 2022/362, as set out in recital 31 of that Directive.

¹ Directive (EU) 2022/362 of the European Parliament and of the Council of 24 February 2022 amending Directives 1999/62/EC, 1999/37/EC and (EU) 2019/520, as regards the charging of vehicles for the use of certain infrastructures (OJ L 69, 4.3.2022, p. 1)

² Directive 1999/62/EC of the European Parliament and of the Council of 17 June 1999 on the charging of vehicles for the use of road infrastructures (OJ L 187 20.7.1999, p. 42)

³ Commission Implementing Regulation (EU) 2022/1362 of 1 August 2022 implementing Regulation (EC) No 595/2009 of the European Parliament and of the Council as regards the performance of heavy-duty trailers with regard to their influence on the CO₂ emissions, fuel consumption, energy consumption and zero emission driving range of motor vehicles and amending Implementing Regulation (EU) 2020/683 (OJ L 205, 5.8.2022, p. 145)

⁴ Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Regulation (EU) 2019/1242 as regards strengthening the CO₂ emission performance standards for new heavy-duty vehicles and integrating reporting obligations, and repealing Regulation (EU) 2018/956. See section "Consistency with other Union policies" below.

- **Consistency with other Union policies**

This proposal complements the proposal COM(2023) 88 final for a Regulation amending Regulation (EU) 2019/1242, which extends its scope so as to set requirements on trailers' manufacturers with regard to their new fleets, and thus applies to the supply side of the road freight transport sector. This proposal applies to the demand side of this sector by incentivizing the purchase of more efficient trailers by transport operators. This proposal also reflects the amendments made to Regulation (EU) 2019/1242 in the provisions of Directive (EU) 2022/362 making reference to that Regulation.

This proposal also contributes to the objectives of the REPowerEU Plan⁵ by enhancing energy savings and efficiencies in the road transport sector.

2. LEGAL BASIS, SUBSIDIARITY AND PROPORTIONALITY

- **Legal basis**

The legal basis for Directive 1999/62/EC is Articles 71 and 93 of the Treaty establishing the European Community, now Articles 91 and 113 on the Treaty on the functioning of the European Union (TFEU).

The provisions of the Directive affected by this proposal pertain to road charges on vehicles, an area to which Article 91 TFEU applies.

- **Subsidiarity (for non-exclusive competence)**

The EU shares competence with Member States to regulate in the field of transport pursuant to Article 4(2)(g) TFEU. However, an adaptation of the existing rules can only be operated by the EU itself. The extension of EU rules to trailers is justified by the impacts of vehicle combinations on climate change since these vehicles make use of the same road infrastructure and contribute to CO2 emissions.

- **Proportionality**

The proposed measures only contribute to achieving the objectives set, notably of a consistent application of the 'polluter pays' and 'user pays' principles, and do not go beyond what is necessary to achieve the Union's objectives of reducing greenhouse gas emissions in a cost-effective manner, while ensuring fairness and environmental integrity.

- **Choice of the instrument**

Since the legal act to be amended is a Directive, the amending act should take the same form.

3. RESULTS OF EX-POST EVALUATIONS, STAKEHOLDER CONSULTATIONS AND IMPACT ASSESSMENTS

- **Ex-post evaluations/fitness checks of existing legislation**

Directive (EU) 2022/362 addressed various problems linked to road charging of heavy goods vehicles. The stakeholders' contribution to the evaluation leading to that Directive pointed at the need to reduce CO2 emissions of the road sector.

⁵ Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions REPowerEU Plan (COM/2022/230 final)

Directive (EU) 2022/362 mandated differentiated road charges for heavy-duty vehicles and included the possibility for Member States to differentiate road charges for light duty vehicles based on CO2 emissions. Due to the lack of a legislative framework for the certification of the effect of trailers on the CO2 emissions of vehicle combinations at the time of its adoption, Directive (EU) 2022/362 did not take into account the effect of trailers in the heavy-duty vehicle road charges differentiation. For full regulatory consistency, recital 31 of the Directive suggests an amendment to fill this gap by including the effect of trailers in the heavy-duty vehicle road charges differentiation.

- **Stakeholder consultations**

Targeted consultation methods with specific stakeholders and specialists were used. Nine interviews were conducted with representatives from Member States' transport ministries, transport operators, vehicle compliance authorities representatives, tolling service providers and manufacturers, and standardisation bodies.

- **Summary of input received and use of results**

The inclusion of trailers in the differentiation of road charges based on CO2 emissions was considered technically feasible by stakeholders. At the same time, stakeholders pointed at possible implementation-related complexities as well as at scope for simplification and improvement. Below is described how the input received was taken into account in the proposal.

The draft proposal that was discussed with stakeholders consisted in the computation of the total CO2 emissions of vehicle combinations as the product of the CO2 emissions of the motor vehicle in grams per ton-kilometre times the efficiency ratio of the trailer linked to it. The CO2 emission class of the vehicle combination would then be defined in accordance with Article 7ga(2). However, both Member States and tolling service providers identified issues with the process. Member States' transport ministries highlighted possible inconsistencies with their implementation of Directive (EU) 2022/362. Specifically, to implement the CO2 emission-based differentiation in these Member States, the on-board equipment⁶ stores the CO2 emissions class of the motor vehicle and is not required to store the CO2 emissions in grams per ton-kilometre. Tolling service providers recognised that such a computation would require storing the efficiency ratio on the on-board equipment for each trailer that is usually linked to the motor vehicle. The driver of this vehicle would have to select the trailer used during a specific journey from a list of these trailers. Such a list could be significantly long for undertakings with a large trailer fleet. In light of this, tolling service providers highlighted that it is important to keep the on-board equipment's interface simple to reduce the risk of misinterpretation or mistake from part of the drivers. At the same time, tolling service providers shared that on-board equipment's with similar functionalities already exist, such as the possibility for a driver to select the number of axels and the weight of the vehicle combination. A similar observation on the importance of simplicity and risk of additional burden was advanced by transport operators.

In response to the above points, this proposal defines in a new annex to the Directive three trailer classes based on efficiency ratio thresholds. For each trailer class, it is defined how the variation of the CO2 emission class of the motor vehicle is affected, resulting in the CO2

⁶ On-board equipment is defined in point 11 of Article 2 of Directive (EU) 2019/520 as: “*on-board equipment (OBE)*”, means the complete set of hardware and software components to be used as part of the toll service which is installed or carried on board a vehicle in order to collect, store, process and remotely receive/transmit data, either as a separate device or embedded in the vehicle;”

emission class of the vehicle combination. This change renders this proposal more consistent with the ongoing implementation of the CO₂ emissions-based differentiation of road charges introduced in Directive (EU) 2022/362. Specifically, a computation as included in the draft proposal that was discussed with stakeholders is not required, and consequently it is not required to have the motor vehicle's CO₂ emissions in grams per ton-kilometre stored on the on-board equipment. Similarly, it is not required that the on-board equipment of a motor vehicle stores the efficiency ratio of each trailer that is normally used with a motor vehicle. Accordingly, the driver of a vehicle combination would not be required to select a value from a list of trailers; instead, it would be required to select the trailer's class, resulting in the simplification of the on-board equipment's interface and of the new functionality.

To reduce the risk of misinterpretation or mistake from part of the drivers, toll service providers also suggested that trailers' parameters be communicated to the motor vehicle's on-board equipment electronically by using the trailers' on-board weighting equipment. This proposal does not further elaborate on this suggestion because of two reasons. First, the use of on-board weighting equipment is one of the options outlined in Article 10d of the Council Directive 96/53/EC⁷ and no Member State made use of this option at this moment in time, meaning that the on-board weighting equipment is not widely deployed. Secondly, the European Standard Organizations CEN and ETSI, consulted by the Commission, shared that, while being technically possible, communication between tolling-related on-board equipment and on-board weighting equipment is not covered by current standards and not supported by all such devices currently on the market.

The Member States' transport ministries expressed concerns with respect to enforcement. In this respect, the proposal amends Article 7j to require a driver or, if appropriate, the transport operator or the European Electronic Toll Service (EETS) provider to provide evidence of the trailer characteristics to enforcement officers. A potential complication linked to aerodynamic devices is that these devices can be relatively easily removed from a trailer. To ensure that the efficiency of trailers is the same as the type-approved vehicle and that it is not different because of changes in the aerodynamic devices, trailers will be equipped with a label on their front, which includes a list of aerodynamic devices equipped on that very trailer, in accordance with Points 1.8 and 1.9 of Appendix 3 to Annex V to Commission Implementing Regulation (EU) 2022/1362.

- **Collection and use of expertise**

For the quantitative assessment of the economic, social, and environmental impacts, the Impact Assessment referred to below has built on analysis from the PRIMES and JRC DIONE model as well as analysis performed by an external contractor.

Monitoring data on greenhouse gas emissions and other characteristics of the new heavy-duty vehicle fleet was sourced from the annual monitoring data as reported by Member States and manufacturers and collected by the European Environment Agency (EEA) under Regulation (EU) 2018/956.

⁷ Council Directive 96/53/EC of 25 July 1996 laying down for certain road vehicles circulating within the Community the maximum authorized dimensions in national and international traffic and the maximum authorized weights in international traffic (OJ L 235, 17.9.1996, p. 59)

- **Impact assessment**

The initiative is supported by the Impact Assessment performed for the revision of Regulation (EU) 2019/1242 of the European Parliament and of the Council⁸, which has received a positive opinion, following a resubmission, from the Regulatory Scrutiny Board on 6 December 2022. The Impact Assessment has concluded that the energy efficiency of trailers has a significant potential for improvement and such measures would make a cost-efficient contribution to the reduction of CO₂ emissions from heavy-duty vehicles. In economic terms, the net economic savings over the vehicle lifetime from a societal perspective range from nearly EUR 11 500 in the case of reefer drawbar trailers to over EUR 42 500 for an average semi-trailer with box body.

Therefore, this revision will provide for a mandatory energy efficiency improvement target for the fleet of new trailers, which, being addressed to manufacturers, is a supply-oriented measure. As it is the case for motor vehicles, such supply-oriented measure would be strongly supported by a complementary demand-oriented measure. The reduction of road charges and therefore operational costs of vehicle combinations using more energy-efficient trailers has an effect on the demand of these vehicles in that it supports purchases of more energy efficient and, therefore, more expensive trailers. This effect was also considered in the cost/benefit analysis of the revision of the heavy-duty vehicles CO₂ standards legislation.

The amendments to Directive 1999/62/EC as proposed by this act are closely related to the proposal for an amendment of Regulation (EU) 2019/1242. However, Directive 1999/62/EC can only be amended by another Directive, hence two separate acts are required.

- **Regulatory fitness and simplification**

The differentiation of road charges introduced in this proposal applies only to more efficient trailers. This means that road operators, toll service providers, and toll chargers do not need to register the relevant information of other trailers. The definition of trailer classes is meant to simplify implementation for those undertakings with a significant number of trailers.

The initiative is expected to have a minor positive impact on competitiveness due to differentiated charging, leading to slightly higher uptake of more efficient trailers, driving innovation.

This initiative clarifies the provisions laying down the obligation to variate infrastructure and user charges according to the CO₂ emissions of motor vehicles.

- **Fundamental rights**

The proposal respects the fundamental rights and observes the principles recognised in particular by the Charter of Fundamental Rights of the European Union.

4. BUDGETARY IMPLICATIONS

The proposal has no budgetary implications for the Union.

⁸ Commission Staff Working Document Impact Assessment Report Accompanying the document Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EU) 2019/1242 as regards strengthening the CO₂ emission performance standards for new heavy-duty vehicles and integrating reporting obligations, and repealing Regulation (EU) 2018/956, SWD(2023) 88 final

5. OTHER ELEMENTS

• **Implementation plans and monitoring, evaluation and reporting arrangements**

The proposal includes specific reporting requirements for Member States related to the variation of infrastructure or user charges according to the environmental performance of vehicles.

• **Explanatory documents**

Considering the scope of the proposal it does not seem justified or proportional to require explanatory documents.

• **Detailed explanation of the specific provisions of the proposal**

(a) The proposal to amend Directive 1999/62/EC contains the following elements:

Article 1(1): Article 2 – Definitions

In point (a) of the definition of ‘zero-emission vehicle’, the reference to the definition of zero-emission heavy-duty vehicle in Regulation (EU) 2019/1242 is amended so as to exclusively refer to zero-emission heavy-duty motor vehicles in the proposed new definition, and not to trailers. This amendment ensures that the meaning of the current definition is preserved and that the classification of heavy-duty vehicle combinations to CO₂ emission class 5, in accordance with Article 7ga(2), is based exclusively on the motor vehicle.

In the definition of ‘low-emission vehicle’, point (b) is amended so as to specify the concerned vehicle groups by referring to those covered by implementing acts adopted pursuant to Article 7ga(7). This amendment ensures that the meaning of the current definition is preserved and reflects the new proposed structure of Regulation (EU) 2019/1242. Indeed, based on the proposal submitted in parallel by the Commission, Article 2(1) of that Regulation will no longer define the vehicle sub-groups covered by the Regulation.

The definition of ‘emission reduction trajectory’ is amended so as to:

- harmonise the terminology with the terminology used in the proposed new point 5.1 of Annex I to Regulation (EU) 2019/1242;
- ensure its applicability after 2030 based on the CO₂ emissions reduction targets that will be set out in Regulation (EU) 2019/1242 (once amended in accordance with the parallel Commission’s proposal);
- ensure that the reference to reference CO₂ emissions of a sub-group applies as defined in point 38;
- move the last section, concerning possible adjustments to the reference CO₂ values, to Article 7ga(1), to ensure the same time of applicability for all CO₂ emission classes.

This amendment ensures that the meaning of the current definition is preserved as well as its applicability after 2030.

The definition of ‘reference CO₂ emissions of a vehicle group’ is amended so as to define ‘reference CO₂ emissions’, referring to both vehicle sub-groups and groups, to clarify in point (a) that vehicles covered by Regulation (EU) 2019/1242 are grouped in sub-groups, and to specify the concerned vehicle groups in point (b) by referring to those covered by

implementing acts adopted pursuant to Article 7ga(7). This amendment ensures that the meaning of the current definition is preserved.

The definitions of ‘trailer’ and ‘semi-trailer’ are added to provide legal clarity as regards these specific terms and to better specify the scope of the relevant provisions.

Article 1(2): Article 7ga – Variation of charges for heavy duty vehicles

In paragraph 1 of Article 7ga, the second and fourth sub-paragraphs are respectively amended and deleted so as to:

- refer in the second sub-paragraph to the variation of infrastructure charges and user charges for all CO₂ emission classes for all vehicle sub-groups covered by Regulation (EU) 2019/1242, and therefore include in that subparagraph the reference to sub-groups that will be covered once the proposed amendments to that Regulation will enter into force and which are currently referred to in the fourth sub-paragraph;
- merge the current fourth sub-paragraph with the current second sub-paragraph;
- preserve the time of applicability of the variation for vehicle sub-groups currently covered by Regulation (EU) 2019/1242 by explicitly referring to those vehicle sub-groups and by specifying 13 May 2023 as the end of the two-year period following the publication of the reference CO₂ emissions in the implementing act adopted pursuant to Article 11(1) of that Regulation, namely Commission Implementing Decision (EU) 2021/781⁹;
- preserve the time of applicability of the variation for vehicle sub-groups that will be covered by Regulation (EU) 2019/1242 once the amendments to that Regulation enter into force, as set out in the current fourth sub-paragraph and in the current second sentence of the third sub-paragraph;
- ensure that the time of applicability of possible adjustments to reference CO₂ values pursuant to Article 11(2) of Regulation (EU) 2019/1242 is the same for CO₂ emission classes 2, 3 and 4, as set out in the current definition of ‘emission reduction trajectory’, taking into account the proposed changes to Article 11(2).

In paragraph 1, the third sub-paragraph is amended so as to:

- specify the concerned vehicle groups by referring to those covered by implementing acts adopted pursuant to Article 7ga(7);
- preserve the time of applicability of the reference CO₂ emissions of vehicle sub-groups that will be covered by Regulation (EU) 2019/1242 once the amendments to that Regulation enter into force;
- clarify that, following the extension of the scope of Regulation (EU) 2019/1242 to other heavy-duty vehicles, the variation applies to all CO₂ emission classes.

Paragraph 7 is amended so as to maintain the concerned vehicle sub-groups by explicitly referring to the vehicle sub-groups currently covered by Regulation (EU) 2019/1242.

⁹ Commission Implementing Decision (EU) 2021/781 of 10 May 2021 on the publication of a list indicating certain CO₂ emissions values per manufacturer as well as average specific CO₂ emissions of all new heavy-duty vehicles registered in the Union and reference CO₂ emissions pursuant to Regulation (EU) 2019/1242 of the European Parliament and of the Council for the reporting period of the year 2019 (OJ L 167, 12.5.2021, p. 47)

Article 1(3): Article 7gc – Effect of trailers on the determination of reduction of road charges

New Article 7gc specifies the modalities for the determination of the variation of road charges of vehicle combinations according to the effect of trailers on the CO2 emissions of heavy goods vehicle combinations. The differentiation is based on the efficiency ratio of trailers, as specified in Annex VIII. This provision should incentivise the use of more efficient trailers. The article defines the empowerment of the Commission to define thresholds values for the efficiency of trailers and a methodology for older trailers, to which an efficiency ratio is not assigned.

Article 1(4): Article 7j – Collection and payment of tolls and user charges

Paragraph 2a is amended to ensure that all possible charge elements are collected and paid in a coherent manner.

Article 1(5): Article 9d – Commission empowerment to adopt delegated acts

Article 9d is amended to amend the new annex VIII to determine the efficiency ratio thresholds or to adjust them to scientific and technical progress.

Article 1(6): Article 11 – Reporting

The existing point (c) of paragraph 2 is amended to include information on Article 7gc.

Article 1(7)

New Annex VIII is linked to proposed Article 7gc, regarding the determination of the variation of road charges of vehicle combinations.

(b) The proposal to amend Directive (EU) 2019/520¹⁰ contains the following element:

Article 2

Annex I is amended to add trailer-related information to facilitate cross-border exchange of information on the failure to pay road fees in the Union.

(c) The proposal to amend Council Directive 1999/37/EC¹¹ contains the following element:

Article 3

Annex I is amended to give the possibility to Member State to add the efficiency ratio of trailers and their trailer class to the vehicle registration certificate.

¹⁰ Directive (EU) 2019/520 of the European Parliament and of the Council of 19 March 2019 on the interoperability of electronic road toll systems and facilitating cross-border exchange of information on the failure to pay road fees in the Union (OJ L 91, 29.3.2019, p. 45).

¹¹ Council Directive 1999/37/EC of 29 April 1999 on the registration documents for vehicles (OJ L 138, 1.6.1999, p. 57)

Proposal for a

DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

amending Directive 1999/62/EC, Council Directive 1999/37/EC and Directive (EU) 2019/520 as regards the CO₂ emission class of heavy-duty vehicles with trailers

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 91(1) 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 Committee¹,

Having regard to the opinion of the Committee of the Regions²,

Acting in accordance with the ordinary legislative procedure,

Whereas:

- (1) The adoption of Directive (EU) 2022/362 of the European Parliament and of the Council³ strengthened the ‘polluter pays’ and ‘user pays’ principles through the introduction of mandatory charging on the basis of CO₂ emissions, either by varying the infrastructure and user charges according to vehicles’ CO₂ emissions or by applying an external-cost charge for CO₂ emissions. Currently, road charges of vehicle combinations comprising a motor vehicle and a trailer are varied on the basis of the CO₂ emissions of the motor vehicle, irrespective of the characteristics of the linked trailer, notably of its effect on the CO₂ emissions of the vehicle combination.
- (2) Although a trailer does not consume energy by itself, it requires energy from the towing motor vehicle to be moved. The optimization of the energy efficiency of trailers leads to the reduction of the CO₂ emissions of conventional vehicles and to the increase in vehicles’ autonomy. Such optimization of trailers derives from the improvements of aerodynamic performance, rolling resistance and weight of trailers. The energy efficiency potential is around 7,5% for drawbar trailers and 15% for semi-trailers as compared to a reference trailer of the year 2020. Therefore, trailers could play an important role in the decarbonisation of the road freight transport sector. However, the market uptake of more efficient trailers is hampered by their higher prices and by the fact that until now buyers of trailers have not been able to compare different trailers in terms of their energy efficiency. This leads to a limited availability

¹ OJ C [...], [...], p. [...].

² OJ C [...], [...], p. [...].

³ Directive (EU) 2022/362 of the European Parliament and of the Council of 24 February 2022 amending Directives 1999/62/EC, 1999/37/EC and (EU) 2019/520, as regards the charging of vehicles for the use of certain infrastructures (OJ L 69, 4.3.2022, p. 1)

of energy efficient trailers on the market. Aerodynamic devices are already available on the market and will become more available in the future, but they are not commonly used in the current Union fleet.

- (3) Commission Implementing Regulation (EU) 2022/1362⁴ set out legally certified values for the effect of trailers on the CO₂ emissions of heavy goods vehicle combinations. To further reduce the operational cost of more efficient trailers, the rules to include the effect of trailers on the CO₂ emissions of heavy goods vehicle combinations in road charging schemes based on CO₂ differentiation should be laid down. Since motor vehicles can be linked to different trailers, the inclusion of trailers in road charging schemes based on CO₂ differentiation should be based on the trailer actually used.
- (4) The extension of charging on the basis of CO₂ emissions to trailers should apply to trailers to which Implementing Regulation (EU) 2022/1362 applies. Performance of trailers may vary depending on their technical parameters. To evaluate the performance of trailers in terms of energy efficiency, the performance in terms of CO₂ reduction potential of a specific trailer is compared with the performance of a reference trailer, which is similar in terms of axle configuration, maximum permissible axle load and chassis configuration. The ratio between the value of the specific trailer and that of the reference trailer is defined in Implementing Regulation (EU) 2022/1362 as efficiency ratio. More efficient trailers have an efficiency ratio value lower than 1.
- (5) The calculation of the efficiency ratio can be based on kilometre, ton-kilometres or m³-kilometre. For all trailers except volume-oriented ones, the ton- kilometre based efficiency ratio should be used. Volume-oriented trailers are those that are primarily designed for the transport of voluminous goods. The ton-kilometre based efficiency ratio cannot be used for volume-oriented trailers because these trailers have higher rolling resistance and mass than their traditional counterparts. For volume-oriented trailers, the efficiency ratio – m³-kilometre based should be used instead.
- (6) The CO₂ emission class of a vehicle combination with a more efficient trailer should be higher than the CO₂ emission class of the motor vehicle alone, therefore granting access to a higher reduction of road charges. The effect of the CO₂ emission reduction potential of a trailer on the CO₂ emission class of a vehicle combination should be based on the comparison between the efficiency ratio of the specific trailer with the efficiency ratio thresholds referred to in this Directive. Different thresholds are foreseen for semi-trailers and for other trailers as their potential to reduce CO₂ emissions in a cost-efficient way is different.
- (7) Where the Member State includes the effect of trailers on the CO₂ emissions of heavy goods vehicle combinations in road charging schemes on its territory and imposes specific charges on vehicle combinations deviating from the maximum weights and/or dimensions laid down in Council Directive 96/53/EC⁵, that Member State should be

⁴ Commission Implementing Regulation (EU) 2022/1362 of 1 August 2022 implementing Regulation (EC) No 595/2009 of the European Parliament and of the Council as regards the performance of heavy-duty trailers with regard to their influence on the CO₂ emissions, fuel consumption, energy consumption and zero emission driving range of motor vehicles and amending Implementing Regulation (EU) 2020/683 (OJ L 205, 5.8.2022, p. 145)

⁵ Council Directive 96/53/EC of 25 July 1996 laying down for certain road vehicles circulating within the Community the maximum authorized dimensions in national and international traffic and the maximum authorized weights in international traffic (OJ L 235, 17.9.1996, p. 59)

allowed to apply the reduction of road charges to such vehicle combinations that employ at least one more efficient trailer.

- (8) The Commission should be empowered to amend Annex VIII to Directive 1999/62/EC, by means of delegated acts, to define or adjust the efficiency ratio thresholds set out therein, and to define a methodology for the allocation to trailer classes of trailers that have undergone a retrofitting process, especially those to which an efficiency ratio was not assigned in accordance with Implementing Regulation (EU) 2022/1362. The definition of the efficiency ratio thresholds should be made as soon as data on the efficiency of trailers is collected for at least one year pursuant to Regulation (EU) 2018/956 of the European Parliament and of the Council⁶. The efficiency ratio thresholds should be based on the average efficiency of the trailer fleet when reference CO₂ emissions for such vehicles are published, and on the potential that trailers have to generate efficiency improvements. They should then be adjusted to reflect technical progress and an increasing penetration of new technologies, such as trailers with driven axles. The definition of a methodology for retrofitted trailers should consider the installation of equipment improving their energy, such as aerodynamic devices, that can be verified during the periodic roadworthiness test and that should be reported on the roadworthiness certificate, as referred to in Directive 2014/45/EU of the European Parliament and of the Council⁷.
- (9) In order to ensure that drivers correctly declare the performance of the trailer connected to the motor vehicle when making use of the reduction of charges based on CO₂ emissions, it is necessary that enforcement officers are provided, upon request, with evidence of the emission class of the vehicle combination, that is including evidence attesting the performance of the trailer. If such evidence is not provided, a Member State would be entitled to apply charges on the basis of the emission class of the motor vehicle only.
- (10) In order to ensure the coherent application of road charges variation according to CO₂ emissions, it is necessary to amend Council Directive 1999/37/EC⁸ to require, where available on their certificate of conformity or on the individual vehicle approval certificate, that the efficiency ratio of trailers be indicated on their registration certificate. It is important to ensure that data relating to the efficiency of trailers are available for the exchange of information between Member States, as set out in Directive (EU) 2019/520 of the European Parliament and of the Council⁹.
- (11) Additionally, it is appropriate to amend Directive 1999/62/EC for the purpose of reflecting the new structure of Regulation (EU) 2019/1242, as amended by [*add reference once known*]. The necessary changes aim at preserving the current meaning of the definitions of zero-emission vehicle, low-emission vehicle, reference CO₂ emissions and emission reduction trajectory, and should update the latter one so as to

⁶ Regulation (EU) 2018/956 of the European Parliament and of the Council of 28 June 2018 on the monitoring and reporting of CO₂ emissions from and fuel consumption of new heavy-duty vehicles (OJ L 173, 9.7.2018, p. 1)

⁷ Directive 2014/45/EU of the European Parliament and of the Council of 3 April 2014 on periodic roadworthiness tests for motor vehicles and their trailers (OJ L 127, 29.4.2014, p. 51)

⁸ Council Directive 1999/37/EC of 29 April 1999 on the registration documents for vehicles (OJ L 138, 1.6.1999, p. 57)

⁹ Directive (EU) 2019/520 of the European Parliament and of the Council of 19 March 2019 on the interoperability of electronic road toll systems and facilitating cross-border exchange of information on the failure to pay road fees in the Union (OJ L 91, 29.3.2019, p. 45).

harmonise its applicability with the abovementioned Regulation after 2030. These changes should also preserve the obligation to variate infrastructure and user charges and the time from which this obligation applies. As regards vehicle sub-groups already covered by the Regulation, these changes should in particular clarify that this obligation applies from 13 May 2023, namely two years after the date of publication of Commission Implementing Decision (EU) 2021/781¹⁰, which specifies reference CO₂ emissions for those vehicle sub-groups. To ensure the timely adoption of these changes in respect to the date of entry into force of the amendments to Regulation (EU) 2019/1242, a one-year deadline for transposition into national legislation should be established.

- (12) Directives 1999/62/EC, 1999/37/EC and (EU) 2019/520 should therefore be amended accordingly,

HAVE ADOPTED THIS DIRECTIVE:

Article 1

Amendments to Directive 1999/62/EC

Directive 1999/62/EC is amended as follows:

- (1) Article 2 (1) is amended as follows:

- (a) In point 29, point (a) is replaced by the following:

‘(a) a heavy-duty motor vehicle referred to in Article 3, point 11, subpoints (a) and (b), of Regulation (EU) 2019/1242 of the European Parliament and of the Council (*); or’

- (b) In point 30, point (b) is replaced by the following:

‘(b) a heavy-duty vehicle from a vehicle group covered by an implementing act adopted pursuant to Article 7ga(7), with CO₂ emissions lower than 50 % of the reference CO₂ emissions of its vehicle group, other than a zero-emission vehicle;’;

- (c) Point 37 is replaced by the following:

‘(37) ‘emission reduction trajectory’, for vehicle sub-group (sg) and the reporting period of a year (Y), namely $ET_{sg,Y}$, means the product of the annual CO₂ emissions reduction factor ($RET_{sg,Y}$) times the reference CO₂ emissions (rCO_{2sg}) of the sub-group (sg), namely $ET_{sg,Y} = RET_{sg,Y} \times rCO_{2sg}$; $RET_{sg,Y}$ is determined in accordance with point 5.1 of Annex I to Regulation (EU) 2019/1242;’;

- (d) Point 38 is replaced by the following:

‘(38) ‘reference CO₂ emissions’ means:

¹⁰ Commission Implementing Decision (EU) 2021/781 of 10 May 2021 on the publication of a list indicating certain CO₂ emissions values per manufacturer as well as average specific CO₂ emissions of all new heavy-duty vehicles registered in the Union and reference CO₂ emissions pursuant to Regulation (EU) 2019/1242 of the European Parliament and of the Council for the reporting period of the year 2019 (OJ L 167, 12.5.2021, p. 47).

(a) for vehicles sub-groups covered by Regulation (EU) 2019/1242, the amount calculated in accordance with the formula in point 3 of Annex I to that Regulation;

(b) for a vehicle group covered by an implementing act adopted pursuant to Article 7ga(7), the reference CO₂ emissions specified therein, corresponding to the average value of all CO₂ emissions of vehicles in that vehicle group, reported in accordance with Regulation (EU) 2018/956 of the European Parliament and of the Council ⁽⁶⁾ for the first reporting period, which will start after the date on which the registration, sale or entry into service of vehicles in that vehicle group, that do not comply with the obligations referred to in Article 9 of Regulation (EU) 2017/2400, is prohibited in accordance with Article 24 of Regulation (EU) 2017/2400⁷;

(e) the following points are added:

‘(42) ‘trailer’ means a trailer as defined in Article 3, point 17 of Regulation (EU) 2018/858 and falling within the scope of Commission Implementing Regulation (EU) 2022/1362^{**};

(43) ‘semi-trailer’ means a trailer which fulfils the definition of a semi-trailer in Article 3, point 33 of Regulation (EU) 2018/858 and falling within the scope of Commission Implementing Regulation (EU) 2022/1362.’

* Regulation (EU) 2019/1242 of the European Parliament and of the Council of 20 June 2019 setting CO₂ emission performance standards for new heavy-duty vehicles and amending Regulations (EC) No 595/2009 and (EU) No 2018/956 of the European Parliament and of the Council and Council Directive 96/53/EC (OJ L 198, 25.7.2019, p. 202).

** Commission Implementing Regulation (EU) 2022/1362 of 1 August 2022 implementing Regulation (EC) No 595/2009 of the European Parliament and of the Council as regards the performance of heavy-duty trailers with regard to their influence on the CO₂ emissions, fuel consumption, energy consumption and zero emission driving range of motor vehicles and amending Implementing Regulation (EU) 2020/683 (OJ L 205, 5.8.2022, p. 145)”;

(2) Article 7ga is amended as follow:

(a) In paragraph 1, the second, third, and fourth subparagraphs are replaced by the following:

‘Member States shall apply that variation to the vehicles sub-groups covered by Regulation (EU) 2019/1242 on the basis of the reference CO₂ emissions published in accordance with Article 11(1) of that Regulation. However, for vehicle sub-groups 4-UD, 4-RD, 4-LH, 5-RD, 5-LH, 9-RD, 9-LH, 10-RD, 10-LH, Member States shall apply that variation at the latest on 13 May 2023. Where the reference CO₂ emissions are adjusted pursuant to Article 11(2) of Regulation (EU) 2019/1242, those reference CO₂ emissions shall apply as of the start of the following reporting period.

By derogation from the second subparagraph, for CO₂ emission classes 1, 4 and 5, referred to in paragraph 2 of this Article, that variation shall apply to vehicle groups covered by implementing acts adopted pursuant to paragraph 7 at the latest two years following the adoption of those implementing acts. The variation shall be based on the reference CO₂ emissions specified therein and it shall apply until reference CO₂ emissions for the vehicle sub-groups concerned are published in accordance with Article 11(1) of Regulation (EU) 2019/1242. As of the publication of reference CO₂ emissions in accordance with Article 11(1) of Regulation (EU) 2019/1242, Member States shall apply those reference CO₂

emissions instead of the ones specified pursuant to paragraph 7 and the variation for the vehicles sub-groups concerned shall be applied for all emission classes.’;

(b) In paragraph 7, the first sub-paragraph is replaced by the following:

‘The Commission shall adopt implementing acts to specify the reference CO₂ emissions for the vehicle groups other than sub-groups 4-UD, 4-RD, 4-LH, 5-RD, 5-LH, 9-RD, 9-LH, 10-RD, 10-LH.’.

(3) the following Article is inserted:

‘Article 7gc

1. Until 30 June 2030, Member States may take into account the effect of trailers on the CO₂ emissions of its combination with a motor vehicle when applying Article 7ga. From 1 July 2030 they shall take into account that effect.

Where a Member State applies the first subparagraph, the CO₂ emission class of the vehicle combination referred in Article 7ga (2) shall be affected by the trailer class of the towed trailer in accordance with Annex VIII.

2. Where a Member State applies the first paragraph and, in accordance with Article 9(1), point (a), imposes specific charges on vehicle combinations deviating from the maximum weights and/or dimensions laid down in Annex I to Council Directive 96/53/EC*, in accordance with Article 4(4) of that Directive, it may apply a reduction of road charges to such vehicle combinations that employ at least one trailer to which a trailer class is assigned in accordance with Annex VIII to this Directive.

The amount of the reduction of the road charge may correspond to the reduction granted to vehicle combinations not deviating from the maximum weights and/or dimensions.

3. The Commission is empowered to adopt a delegated act in accordance with Article 9d in order to amend Annex VIII to determine the efficiency ratio thresholds laid down therein, or to adjust them to reflect technical progress. Their first determination shall be based on the average efficiency of the trailer fleet when reference CO₂ emissions for these vehicles are published, and on the potential that trailers have to generate efficiency improvements, taking into consideration the different potential between semi-trailers and other trailers.

For trailer classes 1 and 2 as identified in the table in Annex VIII, the Commission shall adopt a delegated act determining the efficiency ratio thresholds at the latest one year after the publication of reference CO₂ emissions for trailers according to Article 11(1) of Regulation (EU) 2019/1242.

For trailer class 3 as identified in the table in Annex VIII, applicable to trailers equipped with a device that actively supports their propulsion and has no internal combustion engine or has an internal combustion engine emitting less than 5 g CO₂ /kWh, the Commission shall adopt a delegated act determining the efficiency ratio thresholds after legally certified values for those trailers are available.

The Commission is empowered to adopt a delegated act in accordance with Article 9d in order to amend Annex VIII to lay down a methodology for determining the allocation to a trailer class of trailers which are retrofitted with equipment improving their energy efficiency, especially those that were registered, sold or to enter into service before the date of application of Implementing Regulation (EU) 2022/1362.

4. For the purpose of recording the equipment referred to in paragraph 3, fourth subparagraph, Member States shall make use of item 10 (other information) of Annex II to Directive 2014/45/EU**.

* Council Directive 96/53/EC of 25 July 1996 laying down for certain road vehicles circulating within the Community the maximum authorized dimensions in national and international traffic and the maximum authorized weights in international traffic (OJ L 235, 17.9.1996, p. 59)

** Directive 2014/45/EU of the European Parliament and of the Council of 3 April 2014 on periodic roadworthiness tests for motor vehicles and their trailers (OJ L 127, 29.4.2014, p. 51)';

(4) In Article 7j (2a), the first subparagraph is replaced by the following:

‘Where a driver or, where applicable, the transport operator or the European Electronic Toll Service (EETS) provider, is unable to provide evidence of the emission class of the vehicle for the purposes of Article 7g(2), Article 7ga and Article 7gb, Member States may apply tolls or user charges up to the highest level chargeable. Where a driver or, where applicable, the transport operator or the European Electronic Toll Service (EETS) provider, is unable to provide evidence of the emission class of the vehicle combination for the purposes of Article 7gc, Member States may apply tolls or user charges on the basis of the emission class of the motor vehicle.’;

(5) In Article 9d, the first subparagraph is replaced by the following:

‘The Commission is empowered to adopt delegated acts in accordance with Article 9e to amend this Directive in respect of Annex 0, the formulas in points 4.1 and 4.2 of Annex IIIa, the amounts indicated in the tables of Annexes IIIb and IIIc in order to adapt them to scientific and technical progress, and the efficiency ratio thresholds indicated in table in Annex VIII in order to determine them or to adjust them to reflect technical progress.’;

(6) In Article 11, point c is replaced by the following:

‘(c) the variation of infrastructure charges or user charges according to the environmental performance of vehicles, pursuant to Article 7g, 7ga, 7gb or 7gc;’;

(7) the text in the Annex to this Directive is added as Annex VIII.

Article 2

Amendment to Directive (EU) 2019/520

In Annex I to Directive (EU) 2019/520, Part I is replaced by the following:

‘Part I. Data relating to vehicles

Item	M/O⁽¹⁾	Remarks
Registration number	M	
Chassis number/Vehicle identification number (VIN)	M	
Member State of registration	M	
Make	M	(D.1 ⁽²⁾) e.g. Ford, Opel, Renault

Commercial type of the vehicle	M	(D.3) e.g. Focus, Astra, Megane
EU Category Code	M	(J) e.g. mopeds, motorbikes, cars
Euro emissions class	M	e.g. Euro 4, Euro 6
CO ₂ emission class	O	applicable to heavy-duty vehicles
Date of reclassification	O	applicable to heavy-duty vehicles
CO ₂ in g/tkm	O	applicable to heavy-duty vehicles
Volume orientation: yes/no	O	applicable to trailers
Efficiency ratio – ton-kilometre based (-)...	O	applicable to trailers
Efficiency ratio – m ³ -kilometre based (-)...	O	applicable to trailers
Technically permissible maximum laden mass of the vehicle	M	
(1) M = mandatory when available in national register, O = optional. (2) Harmonised Union code, see Directive 1999/37/EC.		

Article 3

Amendment to Directive 1999/37/EC

In Annex I to Directive 1999/37/EC, in point (V) exhaust emissions, the following points are added:

‘(V.11) Efficiency ratio:

- For non-volume-oriented trailers, efficiency ratio – ton-kilometre where indicated at position 49.11.2 of the certificate of conformity defined in the Appendix to Annex VIII to Commission Implementing Regulation (EU) 2020/683* or at position 49.11.2 of the individual vehicle approval certificate defined in Appendix 1 to Annex III to that Regulation.
- For volume-oriented trailers, efficiency ratio – m³-kilometre based where indicated at position 49.11.3 of the certificate of conformity defined in the Appendix to Annex VIII to Commission Implementing Regulation (EU) 2020/683 or at position 49.11.3 of the individual vehicle approval certificate defined in Appendix 1 to Annex III to that Regulation.

The volume orientation is indicated at position 49.10 of the certificate of conformity of heavy-duty trailers defined in the Appendix to Annex VIII to Commission Implementing Regulation (EU) 2020/683 or at position 49.10 of the individual vehicle approval certificate defined in Appendix 1 to Annex III to that Regulation,

(V.12) Trailer class determined in accordance with Article 7gc of Directive 1999/62/EC of the European Parliament and of the Council;

* Commission Implementing Regulation (EU) 2020/683 of 15 April 2020 implementing Regulation (EU) 2018/858 of the European Parliament and of the Council with regards to the administrative requirements for the approval and market surveillance of motor vehicles and

their trailers, and of systems, components and separate technical units intended for such vehicles (OJ L 163, 26.5.2020, p. 1)'.

Article 4

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by [one year from the entry into force of this Directive] at the latest. They shall forthwith communicate to the Commission the text of those provisions.

When Member States adopt those provisions, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. Member States shall determine how such reference is to be made.

2. Member States shall communicate to the Commission the text of the main provisions of national law which they adopt in the field covered by this Directive.

Article 5

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

Article 6

This Directive is addressed to the Member States.

Done at Brussels,

For the European Parliament
The President

For the Council
The President



Brussels, 4.5.2023
COM(2023) 189 final

ANNEX

ANNEX

To the

**proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE
COUNCIL**

**amending Directive 1999/62/EC, Council Directive 1999/37/EC and Directive (EU)
2019/520 as regards the CO₂ emission class of heavy-duty vehicles with trailers**

ANNEX

“ANNEX VIII

TRAILERS CLASSIFICATION CRITERIA

This Annex specifies the variation criteria according to which CO₂ emission classes of vehicle combinations shall be differentiated in accordance with Article 7gc.

Type of towed vehicle	Efficiency ratio		CO ₂ emission class of motor vehicle in accordance with Article 7ga without taking into account the effect of the trailer	CO ₂ emission class assigned to vehicle combination, considering the effect of the trailer	Trailer class
	Less than	Not less than			
Semi-trailer	ST1	ST2	1	2	1
			2	3	
Trailer, other than semi-trailer	T1	T2	1	2	
			2	3	
Semi-trailer	ST2	ST3	1 or 2	3	2
Trailer, other than semi-trailer	T2	T3			
Semi-trailer	ST3	ST4	1, or 2, or 3	4	3
Trailer, other than semi-trailer	T3	T4			

¹ The efficiency ratio of a trailer is:

1) For non-volume-oriented trailers, the efficiency ratio – ton-kilometre based, where indicated at position 49.11.2 of the certificate of conformity as defined in the Appendix to Annex VIII to Commission Implementing Regulation (EU) 2020/683^{*1} or at position 49.11.2 of the individual vehicle approval certificate defined in Appendix 1 to Annex III to that Regulation.

2) For volume-oriented trailers, the efficiency ratio – m3-kilometre based, where indicated at position 49.11.3 of the certificate of conformity of vehicles defined in the Appendix to Annex VIII to Commission Implementing Regulation (EU) 2020/683 or at position 49.11.3 of the individual vehicle

approval certificate defined in Appendix 1 to Annex III to that Regulation.

The volume orientation of the vehicle is indicated at position 49.10 of the certificate of conformity defined in the Appendix to Annex VIII to Commission Implementing Regulation (EU) 2020/683 or at position 49.10 of the individual vehicle approval certificate defined in Appendix 1 to Annex III to that Regulation.

*1 Commission Implementing Regulation (EU) 2020/683 of 15 April 2020 implementing Regulation (EU) 2018/858 of the European Parliament and of the Council with regards to the administrative requirements for the approval and market surveillance of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles (OJ L 163, 26.5.2020, p. 1)

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