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NOTE

From:	General Secretariat of the Council
To:	Delegations
Subject:	Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Regulation (EU) 2019/1242 as regards strengthening the CO ₂ emission performance standards for new heavy-duty vehicles and integrating reporting obligations, and repealing Regulation (EU) 2018/956 – Examination of a partial Presidency compromise text

With a view to the meeting of the Working Party on the Environment (WPE) on 5 September 2023, delegations will find attached a first partial Presidency compromise text on the abovementioned proposal, prepared by the Presidency to improve the text, its readability and to review the technical errors from the original Commission proposal.

The changes suggested by the Presidency to the Commission proposal are marked as **bold** **underlined** (added text) or strikethrough (deletions). The explanations for the technical changes can be found as footnotes in the revised text.

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

(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 192(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 OJ C [...], [...], p. [...].

² OJ C [...], [...], p. [...].

- (1) Tackling climate and environmental-related challenges and reaching the objectives of the Paris Agreement, adopted in December 2015 under the United Nations Framework Convention on Climate Change (UNFCCC), are at the core of the Communication on the “European Green Deal”, adopted by the Commission on 11 December 2019³. The necessity and value of the European Green Deal have only grown in light of the very severe effects of the COVID-19 pandemic on the health and economic well-being of the Union’s citizens.
- (2) The European Green Deal combines a comprehensive set of mutually reinforcing measures and initiatives aimed at achieving climate neutrality in the Union by 2050, and sets out a new growth strategy that aims to transform the Union into a fair and prosperous society with a modern, resource-efficient and competitive economy, where economic growth is decoupled from resource use. It also aims to protect, conserve and enhance the Union's natural capital, and protect the health and well-being of citizens from environment-related risks and impacts. At the same time, this transition affects women and men differently and has a particular impact on some disadvantaged groups, such as older people, persons with disabilities and persons with a minority racial or ethnic background. It must therefore be ensured that the transition is just and inclusive, leaving no one behind.
- (3) The Union committed to reducing the Union’s economy-wide net greenhouse gas emissions by at least 55 % by 2030 below 1990 levels in the updated nationally determined contribution submitted to the UNFCCC Secretariat on 17 December 2020.
- (4) In Regulation (EU) 2021/1119 of the European Parliament and of the Council⁴, the Union has enshrined the target of economy-wide climate neutrality by 2050 in legislation. That Regulation also establishes a binding Union domestic reduction commitment of net greenhouse gas emissions (emissions after deduction of removals) of at least 55 % below 1990 levels by 2030.
- (5) All sectors of the economy are expected to contribute to achieving those emission reductions, including the road transport sector.

³ Commission Communication of 11 December 2019 on the European Green Deal, COM (2019) 640 final.

⁴ Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 (‘European Climate Law’) (OJ L 243, 9.7.2021, p. 1).

- (6) The “Fit for 55” legislative package, adopted by the European Commission in 2021, aims to implement the 2030 greenhouse gas emissions reduction target. It covers a range of policy areas. The revision of Regulation (EU) 2019/1242 of the European Parliament and of the Council⁵ is an integral part of that package.
- (7) The REPowerEU Communication⁶ outlined a plan to make the Union independent from Russian fossil fuels well before the end of this decade. The Communication highlights the importance, among others, of further increasing the efficiency and reducing fossil consumption in the transport sector, where electrification can be combined with the use of fossil-free hydrogen to replace fossil fuels.
- (8) In order to contribute to the reduction in net greenhouse gas emissions of at least 55 % by 2030 compared to 1990 and in conformity with the energy efficiency first principle, it is necessary to strengthen the reduction requirements set out in Regulation (EU) 2019/1242 for heavy-duty vehicles. A clear pathway also needs to be set for further reductions beyond 2030 to contribute to achieving the climate neutrality objective by 2050.
- (9) The strengthened CO₂ emission reduction requirements should incentivise an increasing share of zero-emission vehicles being deployed on the Union market whilst providing benefits to users and citizens in terms of air quality and energy savings, as well as ensuring that innovation in the automotive value chain can be maintained. Zero-emission vehicles currently include battery electric vehicles, fuel-cell and other hydrogen-powered vehicles, and technological innovations are continuing.
- (10) Against that background, new strengthened CO₂ emission reduction targets should be set for new heavy-duty vehicles for the period 2030 onwards. Those targets should be set at a level that will deliver a strong signal to accelerate the uptake of zero-emission vehicles on the Union market and to stimulate innovation in zero-emission technologies in a cost-efficient way.

⁵ 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) 2018/956 of the European Parliament and of the Council and Council Directive 96/53/EC (OJ L 198, 25.7.2019, p. 202).

⁶ 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 of 18.5.2022.

- (11) The updated New Industrial Strategy⁷ foresees the co-creation of green and digital transition pathways in partnership with industry, public authorities, social partners and other stakeholders. In this context, a transition pathway is being developed for the mobility ecosystem to accompany the transition of the automotive value chain. The pathway takes particular heed of small and medium-sized enterprises in the automotive supply chain, of the consultation of social partners including by Member States, and also build on the European Skills Agenda with initiatives like the Pact for Skills to mobilise the private sector and other stakeholders to up-skill and re-skill Europe's workforce in view of the green and digital transitions and on the Talent Booster Mechanism in the framework of the Harnessing Talents in EU regions initiative. The appropriate actions and incentives at the European and national level to boost the affordability of zero-emission vehicles are also being addressed in the pathway. This could, for example, include the possibility for Member States to use the proposed Social Climate Fund to assist micro-enterprises in the purchasing of zero-emission trucks and lorries.

The Green Deal Industrial Plan⁸ will enhance the competitiveness of Europe's net-zero industry and support the fast transition to climate neutrality. Such plan aims to provide a more supportive environment for the scaling up of the EU's manufacturing capacity for the net-zero technologies and products required to meet Europe's ambitious climate targets.

- (12) The Union fleet-wide targets are to be complemented by the necessary roll-out of recharging and refuelling infrastructure as set out in the Commission Proposal for a regulation on the deployment of alternative fuel infrastructure⁹.
- (13) The transition to climate neutrality requires significant investments in the electricity grids including enhanced capacity, resilience and storage, as well as additional connections. Concerning the heavy-duty vehicles, with the target levels proposed in Article 3a for the year 2030 the share of zero emission vehicles in the total fleet of vehicles circulating on the

⁷ Commission Communication on Updating the 2020 New Industrial Strategy: Building a stronger Single Market for Europe's recovery, COM(2021) 350 final of 5 May 2021.

⁸ COM(2023) 62 final

⁹ Proposal for a Regulation of the European Parliament and of the Council on the deployment of alternative fuels infrastructure, and repealing Directive 2014/94/EU of the European Parliament and of the Council, 14.7.2021, COM/2021/559 final.

road as well as the electricity consumption in the sector will remain limited. Therefore the related impact on the electricity grid will remain limited as well.

- (14) Manufacturers should be provided with sufficient flexibility in adapting their fleets over time in order to manage the transition towards zero-emission vehicles in a cost-efficient manner, and it is therefore appropriate to maintain the approach of decreasing target levels in five-year steps.
- (15) Due to the heterogeneous structure of the total truck fleet, it is not possible to fully predict whether for all niche uses, technological developments will be quick enough to ensure that zero-emission tailpipe technology is a viable choice. This may include uses such as long-haul heavy-duty vehicles in specific territorial morphology and meteorological circumstances, coaches and lorries for critical security and safety applications that cannot be fulfilled by zero-emission tailpipe technologies. The vehicles in question should constitute a limited share of the entire heavy-duty vehicle fleet. In view of such considerations, some margin in the 2040 target should be left to accommodate developments in technology yet to occur.
- (16) Contracting authorities or contracting entities should consider, when basing the award of contracts for the purchase or the use of vehicles referred to in point 4.2 of Annex I, the resilience of supply, including by considering the “Guidance on the participation of third country bidders and goods in the EU procurement market” (C(2019) 5494 final).
- (17) With the stricter Union fleet-wide targets from 2030 onwards, manufacturers will have to deploy significantly more zero-emission vehicles on the Union market. In that context, the incentive mechanism for zero- and low-emission vehicles (‘ZLEV’) would no longer serve its original purpose and would risk undermining the effectiveness of Regulation (EU) 2019/1242. The ZLEV incentive mechanism should therefore be removed as of 2030.
- (18) The possibility of assigning the revenue from the excess emission premiums to a specific fund or relevant programme has been evaluated as required pursuant to Article 15(4) of Regulation (EU) 2019/1242, with the conclusion that this would significantly increase the administrative burden, while not directly benefit the automotive sector in its transition. Revenue from the excess emission premiums should therefore continue to be considered as revenue for the general budget of the Union in accordance with Article 8(4) of Regulation (EU) 2019/1242.

- (19) The subject matter should be enlarged to also cover the monitoring and reporting obligations which are integrated into Regulation (EU) 2019/1242 by means of this Regulation.
- (20) Regulation (EU) 2019/1242 should be amended in order to cover the same scope as Regulation (EU) 2018/956 of the European Parliament and of the Council¹⁰.
- (21) For vehicles, which are not in the scope of the automotive type-approval legislation, such as agricultural and forestry tractors, vehicles designed and constructed for the use by armed forces and track-laying vehicles, the CO₂ emissions are not determined and therefore these vehicles do not have to meet the CO₂ targets set in this Regulation.

Vehicles designed and constructed or adapted for use by civil protection, fire services and forces responsible for maintaining public order, or urgent medical care that are voluntarily type-approved should also be exempted from having to meet the CO₂ targets of this Regulation in order not to create an incentive to no longer type-approve such vehicles voluntarily, which would have negative safety and environmental implications, unless the manufacturer asks for including these vehicles.

Member States should also be entitled to indicate an exemption from having to meet the targets for vehicles, not specifically designed, but registered, for use by civil protection, fire services, forces responsible for maintaining the public order, armed services or urgent medical care, such as normal coaches used for the transport of police or army forces, by confirming that such exemption responds to the public interest.

As for certain vehicle groups, which are type-approved, CO₂ emissions are not determined yet for technical reasons, these vehicles do not have to meet the CO₂ targets set by this Regulation. These are for example special purpose vehicles, such as mobile cranes, carriers of hydraulic multi-equipment or exceptional load transport vehicles, off-road vehicles, such as certain vehicles used for mining, forestry and agricultural purposes, as well as other vehicles with non-standard axle configurations such as vehicles with more than 4 axles or more than 2 driven axles, small buses with a maximum mass lower than 7,5 t, and small lorries with a maximum mass lower than 5t.

¹⁰ 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).

Vocational vehicles, such as garbage trucks, tippers or concrete mixers, should continue to be exempted from the calculation of average specific CO₂ emissions of manufacturers.

- (22) Certain definitions should be introduced in order to harmonize the terminology with that of the vehicle type-approval legislation of the Union, in particular Regulation (EU) 2018/858 of the European Parliament and of the Council¹¹ and Commission Regulation (EU) 2017/2400¹².
- (23) For the purposes of the newly introduced transfer of vehicles between manufacturers and of establishing an exemption for manufacturers producing only few vehicles, a definition of the term of 'group of connected entities' should be added to Regulation (EU) 2019/1242, in substance following the terminology used in Regulation (EU) 2019/631 of the European Parliament and of the Council¹³ for light-duty vehicles.
- (24) For defining the obligations of individual manufacturers, Union fleet-wide CO₂ reduction targets for the new heavy-duty vehicle fleet should be translated into specific reduction targets for subgroups that should be defined by the technical characteristics of the vehicles they comprise.
- (25) Since the CO₂ emissions related to trailers have a strong impact on the overall CO₂ emissions and energy consumption of motor vehicles, respective targets for the trailers should also be defined.
- (26) Due to the technical readiness of the sub-sector and the need to improve air quality in cities, a mandatory minimum share of new zero-emission urban buses should be set.

¹¹ Regulation (EU) 2018/858 of the European Parliament and of the Council of 30 May 2018 on the approval and market surveillance of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles, amending Regulations (EC) No 715/2007 and (EC) No 595/2009 and repealing Directive 2007/46/EC.

¹² Commission Regulation (EU) 2017/2400 of 12 December 2017 implementing Regulation (EC) No 595/2009 of the European Parliament and of the Council as regards the determination of the CO₂ emissions and fuel consumption of heavy-duty vehicles and amending Directive 2007/46/EC of the European Parliament and of the Council and Commission Regulation (EU) No 582/2011 (OJ L 349, 29.12.2017, p. 1).

¹³ Regulation (EU) 2019/631 of the European Parliament and of the Council of 17 April 2019 setting CO₂ emission performance standards for new passenger cars and for new light commercial vehicles, and repealing Regulations (EC) No 443/2009 and (EU) No 510/2011 (OJ L 111, 25.4.2019, p. 13).

- (27) A mandatory minimum share of zero-emission urban buses should reflect the societal need for affordable public transport, including in rural areas. The increased supply of zero-emission urban buses that result from such a mandatory minimum share should have a positive effect on purchasing cost, both in terms of upfront purchase price and the total cost of ownership of zero-emission urban buses, reflecting fossil fuel savings resulting from their operation. Joint procurement of urban buses building on the Clean Bus Platform can bring the purchasing cost of such buses further down, and the proposed Social Climate Fund could be used by Member States to support vulnerable citizens with reduced or free public transport tickets or subscriptions. Finally, regional and long-distance buses and coaches, including for transport in rural areas, remain subject to the targets for heavy duty vehicles. Support from the Social Climate Fund could address specific needs of rural areas and prevent transport poverty¹⁴ by securing access to affordable public transport.
- (28) The zero- and low-emission factor should last be applied for the reporting period of the year 2029, because it is no longer considered necessary after that time as an incentive to promote the market entrance of zero-emission vehicles.
- (29) As commercial rather than legal entities should be considered for compliance, economically connected manufacturers should, within certain limits, be allowed to transfer vehicles between them for the purposes of accounting these vehicles under Regulation (EU) 2019/1242.
- (30) Furthermore, in order to strengthen the development of new zero-emission technologies in specialized small- and medium-sized companies, it should also be possible to transfer zero-emission vehicles between non-connected entities.
- (31) In order to avoid disproportionately high costs of compliance and in order to reduce the administrative burden, manufacturers producing few vehicles fulfilling certain legal requirements should be exempted from compliance with CO₂-emission targets. As they are required to comply with the reporting obligations of Regulation (EU) 2019/1242, there is an appropriate control mechanism for those manufacturers.

¹⁴ In line with the definition in the Social Climate Fund regulation, article 2(2a)

- (32) The existing system of multi-annual emission credits and emission debts should be extended to 2039 as reduction targets keep strengthening beyond 2030 until 2040 and require forward-looking technical developments of manufacturers during that period.
- (33) Regulation (EU) 2019/1242 should for each vehicle category clearly stipulate who is the manufacturer to whom a vehicle should be attributed, thereby specifically taking account of the different constellations for vehicles of category M.
- (34) The rules on the verification of the monitoring data should also cover possible ex post corrections of errors in such reported data and how the Commission should handle such corrections for implementing the CO₂-emission fleet targets.
- (35) The assessment of the reference CO₂ emissions should be amended to also cover the vehicle subgroups newly included in the scope of Regulation 2019/1242.
- (36) Monitoring and reporting by manufacturers and Member States is an essential precondition for the implementation of Regulation (EU) 2019/1242. Merging Regulation (EU) 2018/956 into Regulation (EU) 2019/1242 should produce synergies and allow for interpretation of the provisions taking into account the objectives of both Regulations.
- (37) On the occasion of merging monitoring and reporting provisions into Regulation (EU) 2019/1242, the opportunity should be seized to slightly modify those provisions in light of the experiences gained from the first two reporting cycles under Regulation (EU) 2018/956.
- (38) Taking account of the fact that the determination will no longer be carried out by manufacturers alone, reporting of CO₂ emissions and other technical data of the vehicles should be extended beyond manufacturers to those entities which perform the determination of the vehicles under Regulation (EU) 2017/2400 and Commission Implementing Regulation (EU) 2022/1362¹⁵. The data to be reported should comprise the manufacturer's record file.

¹⁵ 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).

- (39) The Commission should be enabled to take into account technical progress, the evolution of freight transport logistics, necessary adjustments based on the application of this Regulation and amendments of the underlying type-approval legislation and to ensure that the data requirements and the monitoring and reporting procedure remain relevant over time for assessing the heavy-duty vehicle fleet's contribution to CO₂ emissions, to ensure the availability of data on new and advanced CO₂ reducing technologies and on the results of on-road verification test and to ensure that the air drag value ranges remain relevant for information and comparability purposes, as well as to supplement the provisions on administrative fines.
- (40) For these reasons, 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 amending the criteria defining vehicles sub-groups, defining vocational vehicles, for the operational ranges of different powertrain technologies, the list and weight of mission profiles, the payloads, passenger numbers, passenger masses, technically permissible maximum payloads, technically permissible maximum passenger number and cargo volumes of vehicle sub-groups and annual mileages values, amending the data requirements and the monitoring and reporting procedure laid down in Annexes to this Regulation, of specifying the data to be reported by the Member States for the monitoring of the results of on-road verification tests, of amending the air drag value ranges, and of defining the criteria, the calculation and the method of collection of administrative fines imposed on manufacturers. 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 on Better Law-Making of 13 April 2016. In particular, to ensure equal participation in the preparation of delegated acts, the European Parliament and the 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.
- (41) Regulation (EU) 2018/956 should be repealed with a timeline allowing the reporting period ongoing at the moment of entry into force of this Regulation be concluded under the rules applicable at the beginning of that reporting period, including all after-processing of the data collected. Accordingly, this Regulation should be applied from the beginning of the following reporting period.

(42) Regulation (EU) 2019/1242 should therefore be amended accordingly,

HAVE ADOPTED THIS REGULATION:

Article 1

Amendments to Regulation (EU) 2019/1242

Regulation (EU) 2019/1242 is amended as follows:

(1) Article 1 is replaced by the following:

‘Article 1

Subject matter and objective

1. This Regulation establishes CO₂ emissions performance requirements for new heavy-duty vehicles that contribute to achieving the Union's target of reducing its greenhouse gas emissions, as laid down in Regulation (EU) 2018/842¹⁶, and the objectives of the Paris Agreement¹⁷ and to ensure the proper functioning of the internal market.

2. This Regulation also lays down the requirements for the reporting of CO₂ emissions from and fuel consumption of new heavy-duty vehicles registered in the Union.’;

(2) Article 2 is amended as follows:

(a) paragraph 1 is replaced by the following:

‘1. This Regulation shall apply to new **heavy duty** vehicles, which have either been type-approved or approved individually under Regulation (EU) 2018/858 or **are referred to** ~~do not require type-approval under~~ **in** Article 2(3) of the same Regulation, **and that belonging** to the following **vehicle** categories¹⁸:

¹⁶ Regulation (EU) 2018/842 of the European Parliament and of the Council of 30 May 2018 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement and amending Regulation (EU) No 525/2013 (OJ L 16, 19.6.2018, p. 26).

¹⁷ OJ L 282, 19.10.2016, p.4.

¹⁸ **Linguistic clarification.**

(a) M₂ and M₃;

(b) N₁, which do not fall under Regulation (EU) 2019/631, N₂ and N₃;

(c) O₃ and O₄.

For the purposes of this Regulation, those vehicles shall be referred to as heavy-duty vehicles. Vehicles falling under points (a) and (b) shall be referred to as heavy-duty motor vehicles.

The vehicle categories referred to in this Regulation refer to the vehicle categories as defined in Article 4 of Regulation (EU) 2018/858 and Annex I thereto.’;

(b) paragraph 2 is amended as follows:

(i) the first subparagraph is replaced by the following ‘2. The vehicles referred to in paragraph 1 shall, for the purposes of this Regulation, be considered as new heavy-duty vehicles in a given reporting period, if they are registered in the Union for the first time in that period and have not been previously registered outside the Union.’;

(ii) the following subparagraph is added:

‘Paragraph 1 shall not apply to vehicles first registered for a period not exceeding one month and registered for the sole purpose of transition to a country outside of the Union.’;

(c)¹⁹ ~~The following paragraphs 4, 5 and 6 are added:~~

~~‘4. Notwithstanding Article 2(3) of Regulation (EU) 2017/2400, approved vehicles falling under Article 2(3), point (b), of Regulation (EU) 2018/858 shall not be subject to the CO₂ emission targets set out in Article 3a of this Regulation, unless the manufacturer chooses to include those vehicles in the calculation of its specific CO₂ emissions and targets when reporting the vehicle in accordance with Part B of Annex IV to this Regulation.~~

¹⁹ **Proposed paragraphs 4 and 5 moved unchanged to Article 3a as they concern the targets. Paragraph 6 becomes redundant.**

- ~~5. Vehicles other than those referred to in paragraph 4 registered for use by civil protection, fire services, forces responsible for maintaining the public order, armed services or urgent medical care shall not be subject to the CO₂ emission targets under Article 3a, if a Member State so indicates in the registration and reporting process, thereby confirming in the data reported in accordance with Part A of Annex IV that the purpose of the vehicle cannot be equally served by a ZEV and it is thus in the public interest to register a vehicle with a combustion engine to fulfil that purpose.~~
- ~~6. The reporting obligations laid down in Articles 13a to 13f shall also apply to the vehicles that are not subject to CO₂ emission targets in accordance with paragraphs 4 and 5 of this Article.²~~

(3) Article 3 is amended as follows:

(a) point (1) is replaced by the following:

‘(1) ‘reference CO₂ emissions’ means the average of the specific CO₂ emissions in the reference period of all new heavy-duty vehicles in each of the vehicle sub-groups, determined in accordance with point 3 of Annex I;’;

(b) the following points (3a) and (3b) are inserted:

‘(3a) ‘reporting period’ means the period of a given year from 1 July to 30 June of the following year;

(3b) ‘reference period’ means the reporting period of a certain year with respect to which the regulatory reduction obligations for a certain vehicle sub-group are specified under this Regulation;’;

(c) point (5) is replaced by the following:

‘(5) ‘specific CO₂ emissions target’ means the CO₂ emissions target of an individual manufacturer determined annually for the preceding reporting period in accordance with point 4 of Annex I;’;

- (d) point (9) is replaced by the following:

‘(9) ‘vocational vehicle’ means a heavy-duty vehicle intended to be used for specific duties, which according to the information in its certificate of conformity, as reported by Member States, fulfills the criteria laid out in point 1.2. of Annex I;’;

- (e) point (10) is deleted;

- (f) the following points (10a) and (10b) are inserted:

‘(10a) ‘reporter’ means an entity which is responsible for the reporting of data to the Commission;

~~‘(10b) ‘determination of a heavy-duty vehicle’ means the determination of its CO₂ emissions or input parameters according to Article 9 of Regulation (EU) 2017/2400 or the assessment of its performance with regard to its influence on CO₂ emissions and fuel consumption according to Article 8 of Commission Implementing Regulation (EU) 2022/1362;²⁰’~~

- (g) point (11) is replaced by the following:

‘(11) ‘zero-emission vehicle’ means the following vehicles:

- (a) a heavy-duty motor vehicle with not more than 5 g/(t·km) or 5 g/(p·km) of CO₂ emissions as determined in accordance with Article 9 of Regulation (EU) 2017/2400;
- (b) a heavy-duty motor vehicle **without a combustion engine or with a combustion engine emitting not more than 5 g/kWh of CO₂ as determined in accordance with Regulation (EC) No 595/2009 and its implementing measures or emitting not more than 5 g/km of CO₂ as determined in accordance with Regulation (EC) No 715/2007 of the European Parliament and of the Council and its implementing measures** ~~fulfilling the conditions of point 1.1.4 of~~

²⁰ **Definition is redundant. See Article 13b.**

~~Annex I to this Regulation~~²¹ if no CO₂ emissions have been determined according to Regulation (EU) 2017/2400;

- (c) a trailer equipped with a device that actively supports its propulsion and has no internal combustion engine or has an internal combustion engine emitting less than 5 g CO₂/kWh as determined in accordance with Regulation (EC) No 595/2009 of the European Parliament and of the Council and its implementing measures or UNECE Regulation (EC) No 49.

- (h) point (12) is replaced by the following:

‘(12) ‘low-emission heavy-duty vehicle’ means a heavy-duty vehicle, other than a zero-emission heavy-duty vehicle, with specific CO₂ emissions of less than half of the reference CO₂ emissions of all vehicles in the vehicle sub-group to which the heavy-duty vehicle belongs, as determined in accordance with point 2.3.4 of Annex I;’;

- (i) the following points (16~~5~~) to (23) are added:

‘(15) “primary vehicle” means a primary vehicle as defined in Article 3, point (22), of Regulation (EU) 2017/2400²²;

(16) ‘primary vehicle of a heavy-duty vehicle’ means a primary vehicle ~~as defined in Article 3, point (22), of Regulation (EU) 2017/2400,~~²³ for the simulation of which a generic body is allocated that corresponds to the actual body of the heavy-duty vehicle with regard to its floor (low/high) deck (single/double) configurations and any other parameters as applicable;

(17) ‘completed vehicle’ means a completed vehicle as defined in Article 3, point (26), of Regulation (EU) 2018/858;

(18) ‘complete vehicle’ means a complete vehicle as defined in Article 3, point (27), of Regulation (EU) 2018/858;

²¹ **Error correction to the Commission proposal.**

²² **Standalone reference to ‘primary vehicle’ definition was included for drafting clarity.**

²³ **See footnote 22.**

(19) ‘off-road vehicle’ means an off-road vehicle as defined in Part A, point 2.1., of Annex I to Regulation (EU) 2018/858;

(20) ‘special purpose vehicle’ means a special purpose vehicle as defined in Article 3, point (31), of Regulation (EU) 2018/858;

(21) ‘off road special purpose vehicle’ means an off road special purpose vehicle as specified in Part A, point 2.3.1., of Annex I to Regulation (EU) 2018/858;

(22) ‘certificate of conformity’ means a certificate of conformity as defined in Article 3, point (5), of Regulation (EU) 2018/858;

(23) ‘public contract’, in the context of public procurement procedures and unless otherwise specified, means a public contract as defined in Article 2(1), point (5) of Directive 2014/24/EU, ‘contracts’ as defined in Article 2, point (1) of Directive 2014/25/EU, as well as ‘concessions’ as defined in Article 5, point (1) of Directive 2014/23/EU’;

(j) the following paragraph is added:

‘For the purposes of this Regulation, ‘a group of connected manufacturers’ means a manufacturer and its connected undertakings.

‘Connected undertaking’ means:

(a) undertakings in which the manufacturer has, directly or indirectly:

(i) the power to exercise more than half the voting rights; or

(ii) the power to appoint more than half the members of the supervisory board, board of management or bodies legally representing the undertaking;
or

(iii) the right to manage the undertaking’s affairs;

(b) undertakings which directly or indirectly have, over the manufacturer, the rights or powers referred to in point (a);

(c) undertakings in which an undertaking referred to in point (b) has, directly or indirectly, the rights or powers referred to in point (a);

(d) undertakings in which the manufacturer together with one or more of the undertakings referred to in point (a), (b) or (c), or in which two or more of the latter undertakings, jointly have the rights or powers referred to in point (a);

(e) undertakings in which the rights or the powers referred to in point (a) are jointly held by the manufacturer or one or more of its connected undertakings referred to in points (a) to (d) and one or more third parties.’;

(4) the following Articles 3a to 3c are inserted:

‘Article 3a

CO₂ emission reduction²⁴ targets

1. The average CO₂ emissions of the Union fleet of new heavy-duty motor vehicles, other than special purpose, off-road, off-road special purpose, and vocational vehicles shall be reduced by the following percentages compared to the average CO₂ emissions of the reporting period of the year 2019:

(a) for vehicle sub-groups 4-UD, 4-RD, 4-LH, 5-RD, 5-LH, 9-RD, 9-LH, 10-RD, 10-LH for the reporting periods of the years 2025 to 2029 by 15 %,

(b) for all vehicle sub-groups for the reporting periods of the years 2030 to 2034 by 45 %,

(c) for all vehicle sub-groups for the reporting periods of the years 2035 to 2039 by 65 %,

(d) for all vehicle sub-groups for the reporting periods of the years 2040 onwards by 90%.

2. To these CO₂ emission reduction²⁵ targets, the vehicle sub-groups have to contribute as laid down in point 4.3. of Annex I.

²⁴ **Linguistic clarification (to ensure consistency of this operative part with ‘reduction’ references in recitals 8, 9 and 10 in particular).**

3. The CO₂ emissions related to the Union fleet of new trailers shall be ~~improved~~ **reduced**²⁶ in accordance with point 4.3 of Annex I.

4. **Notwithstanding Article 2(3) of Regulation (EU) 2017/2400, approved vehicles falling under Article 2(3), point (b), of Regulation (EU) 2018/858 shall not be subject to the CO₂ emission targets set out in Article 3a of this Regulation, unless the manufacturer chooses to include those vehicles in the calculation of its specific CO₂ emissions and targets when reporting the vehicle in accordance with Part B of Annex IV to this Regulation.**

5. **Vehicles other than those referred to in paragraph 4 registered for use by civil protection, fire services, forces responsible for maintaining the public order, armed services or urgent medical care shall not be subject to the CO₂ emission targets under Article 3a, if a Member State so indicates in the registration and reporting process, thereby confirming in the data reported in accordance with Part A of Annex IV that the purpose of the vehicle cannot be equally served by a ZEV and it is thus in the public interest to register a vehicle with a combustion engine to fulfil that purpose.**²⁷

Article 3b

Zero-emission vehicle target for urban buses

1. For vehicles referred to ~~in the fourth column of the table in~~ **in the fourth column** in point 4.2 of Annex I **(urban buses)**, manufacturers shall comply with the **100%** minimum shares of zero-emission vehicles in their fleet of new heavy-duty vehicles as laid down in point 4.3.2 of Annex I. ~~For new urban buses the share of zero-emissions vehicles shall be 100% as from the reporting period of the year 2030.~~²⁸

2. Member States may decide to exclude from the obligation under this Article a limited share of the urban buses registered in each reporting period, confirming that the

²⁵ **Linguistic clarification (see footnote 24).**

²⁶ **Linguistic clarification (see footnote 24).**

²⁷ **Paragraphs 4 and 5 are moved from Article 2 since they refer to targets (see footnote 19).**

²⁸ **Linguistic clarifications. Deleted sentence is redundant given that a specific reference to point 4.3.2 of Annex I is made in the previous sentence. Also see footnotes 65 and 67.**

purpose of the vehicle cannot be equally served by a zero-emission vehicle and it is thus in the public interest to register a non-zero emission vehicle to fulfil that purpose, due to socio-economic cost-benefit in view of specific territorial morphology or meteorological circumstances.

The Commission is empowered to adopt delegated acts in accordance with Article 17 to define the maximum share of vehicles that a Member State can exclude, and the socio-economic cost-benefit in view of territorial morphology and meteorological circumstance justifying the exclusion referred to in the previous paragraph.

3. Regarding the use of vehicles referred to in this Article, the Commission shall be empowered to adopt delegated acts in accordance with Article 17 to provide with common technical specifications, including standards, regarding:

(a) the technical and open interoperability between the recharging and refuelling infrastructure and the vehicles, in terms of physical connections and communication exchange.

(b) the safe and secure sharing and use of the data generated.

Article 3c

Public procurement procedures

1. Contracting authorities or contracting entities shall base the award of public contracts for the purchase or the use of vehicles referred to in Article 3b on the most economically advantageous tender which shall include the best price-quality ratio and the security of supply contribution of the tender, in compliance with relevant international law.

2. The tender's contribution to the security of supply shall be assessed, inter alia, based on :

(a) the proportion of the products or tenders originating in third countries, as determined in accordance with Regulation (EU) No 952/2013 of the European Parliament and of the Council;

- (b) the introduction by third countries of a restrictive or distortive measure on such vehicles or on the technical and open interoperability between the recharging and refuelling infrastructure and the vehicles;
- (c) the availability of essential spare parts for the functioning of the equipment subject to the tender;
- (d) a commitment by the tenderer that possible changes in its supply chain during the execution of the contract will not affect adversely the execution of the contract;
- (e) a certification or documentation demonstrating that the organisation of the tenderer's supply chain will allow it to comply with the security of supply requirement.

3. In accordance with Article 3b, the tender's contribution to security of supply shall be given a weighting of between 15 to 40% of the award criteria. ';

(5) in Article 4, first paragraph, point (a) is replaced by the following:

‘(a) the data reported for the manufacturer's new heavy-duty vehicles registered in the preceding reporting period; and’;

(6) Article 5 is amended as follows:

(a) paragraph 1 is replaced by the following:

‘1. Starting from 1 July 2020 and for each subsequent reporting period until the reporting period of the year 2029, the Commission shall determine for each manufacturer the zero- and low-emission factor for the preceding reporting period.

The zero-emission and low-emission factor shall take into account the number and the CO₂ emissions of all zero- and low-emission heavy-duty vehicles in the manufacturer's fleet.’;

(b) paragraph 3 is replaced by the following:

‘3. For the reporting periods from 2025 to 2029 the zero- and low-emission factor shall be determined on the basis of a 2 % benchmark in accordance with point 2.3.2 of Annex I.’;

(c) paragraph 4 is replaced by the following:

‘4. The zero-emission and low-emission factor shall reduce the average specific CO₂ emissions of a manufacturer by a maximum of 3 %. The contribution to that factor of the zero-emission vehicles of category N, other than those in vehicles sub-groups 4-UD, 4-RD, 4-LH, 5-RD, 5-LH, 9-RD, 9-LH, 10-RD, 10-LH, shall reduce the average specific CO₂ emissions of a manufacturer by a maximum of 1,5 %.’;

- (7) Article 6 is replaced by the following:

‘Article 6

Specific CO₂ emissions targets of a manufacturer

For the reporting period of the year 2025 and for each subsequent reporting period, the Commission shall determine for each manufacturer a specific CO₂ emissions target for the preceding reporting period. That target shall be determined in accordance with point 4.1 of Annex I.’;

- (8) the following Articles 6a and 6b are inserted:

‘Article 6a

Transfer of vehicles between manufacturers

1. For the purpose of calculating the average specific CO₂ emissions of manufacturers in accordance with Article 4 and point 2.2 of Annex I, individual vehicles may be transferred between manufacturers, subject to the following conditions:
 - (a) for all transfers: the request must be jointly submitted by the transferring and the receiving manufacturer;
 - (b) for the transfer of vehicles other than zero-emission vehicles, the transferring and the receiving manufacturer ~~must~~ **shall**²⁹ belong to a group of connected manufacturers;
 - (c) for transfers of zero-emission vehicles between manufacturers not belonging to a group of connected manufacturers: the number of zero-emissions vehicles transferred

²⁹ **Linguistic clarification.**

to a manufacturer ~~must~~ **shall**³⁰ not exceed 5 % of all its new heavy-duty vehicles registered in a given reporting period.

The manufacturers shall communicate the transfer requests to the Commission using the electronic tools provided by the Commission.

2. Where the Commission considers that the conditions of a transfer are fulfilled, it shall not take the transferred vehicle into account for the calculation of relevant values for the transferring manufacturer, but will take them into account for the calculation of relevant values for the receiving manufacturer.

Article 6b

Exemption for manufacturers producing few vehicles

1. If less than 100 new heavy-duty vehicles of a manufacturer were registered in a given reporting period, the average specific CO₂ emissions as provided for in Article 4 and point 2.7 of Annex I and the specific CO₂ emissions targets as provided for in Article 6 and point 4.1 of Annex I shall be set to “0” in the respective reporting period.
2. The values of the average specific CO₂ emissions and specific CO₂ emissions **targets** shall not be included in the publication **of data** under Article 11 for the manufacturers and reporting periods concerned³¹.
3. The exemption laid down in paragraph 1 shall not ~~be applied~~ **apply**³² in a given reporting period in any of the following cases:
 - (a) upon request of the manufacturer;
 - (b) if the manufacturer requests a transfer of vehicles in accordance with Article 6a;
 - (c) if the manufacturer is part of a group of connected manufacturers that collectively registered more than 100 vehicles in that reporting period or **is part of a group of**

³⁰ **Linguistic clarification.**

³¹ **Linguistic clarification.**

³² **Linguistic clarification.**

connected manufacturers³³ with another manufacturer to which the exemption of paragraph 1 does not points (a) or (b)³⁴ apply.

4. Manufacturers, who are not³⁵ part of a group in the meaning of paragraph 3, point (c), shall inform the Commission if they registered less than 100 vehicles in a given reporting period.
5. Manufacturers, to which the exemption laid down in paragraph 1 does not apply, shall inform the Commission in each reporting period about all their connected undertakings that fulfil the conditions of the exemption laid down in paragraph 1.
6. The manufacturers shall communicate the necessary information to the Commission using the electronic tools provided by the Commission.’;

(9) Article 7 is amended as follows:

- (a) in paragraph 1, first subparagraph, the introductory wording is replaced by the following:

‘For the purpose of determining a manufacturer’s compliance with its specific CO₂ emissions targets in the reporting periods of the years 2025 to 2039, account shall be taken of its emission credits or emission debts determined in accordance with point 5 of Annex I, which correspond to the number of new heavy-duty vehicles of the manufacturer in a reporting period, multiplied by:’;

- (b) in paragraph 1, second subparagraph, ‘2029’ is replaced by ‘2039’;

- (c) in paragraph 1, the third subparagraph is replaced by the following:

‘Emission debts shall be acquired in the reporting periods of the years 2025 to 2039. However, the total emission debt of a manufacturer shall not exceed 5 % of the manufacturer’s specific CO₂ emissions target multiplied by the number of heavy-duty vehicles of the manufacturer in that period (‘emission debt limit’).’;

³³ Linguistic clarification.

³⁴ Error correction to the Commission proposal.

³⁵ Error correction to the Commission proposal.

- (d) in paragraph 1, the fourth subparagraph is replaced by the following:

‘Emission credits and emission debts acquired in the reporting periods of the years 2025 to 2039 shall, where applicable, be carried over from one reporting period to the next reporting period. However, any remaining emission debts shall be cleared in the reporting periods of the year 2029, 2034 and 2039.’;

- (e) paragraph 2 is replaced by the following:

‘2. The CO₂ emissions reduction trajectories shall be set for each manufacturer in accordance with point 5.1. of Annex I, based on the following linear trajectories:

(a) between the reference CO₂ emissions and the CO₂ emissions target for the reporting period of the years 2025 or 2030 as specified in Article 3a(1), points (a) and (b),

(b) between the CO₂ emissions target for the reporting period of the year 2025 and the CO₂ emissions target for the reporting period of the year 2030 as specified in Article 3a(1), point (b),

(c) between the CO₂ emissions target for the reporting period of the year 2030 and the CO₂ emissions target for the reporting period of the year 2035 as specified in Article 3a(1), point (c), and

(d) between the CO₂ emissions target for the reporting period of the year 2035 and the CO₂ emissions target for the reporting period of the year 2040 as specified in Article 3a(1), point (d).’;

(10) the following Articles 7a and 7b are inserted:

‘Article 7a

Attribution of vehicles to a manufacturer

When calculating the average specific CO₂ emissions in Article 4 and the specific CO₂ emissions targets in Article 6, the vehicles registered in a given reporting period shall be attributed to the following manufacturers:

- (a) for vehicles of category N, to the vehicle manufacturer as defined in Article 3, point (4a), of Regulation (EU) 2017/2400;
- (b) for vehicles of category M, to the primary vehicle manufacturer as defined in Article 3, point (29), of Regulation (EU) 2017/2400;
- (c) for vehicles of category O, to the vehicle manufacturer as defined in Article 2, point (5), of Implementing Regulation (EU) 2022/1362.

Article 7b

Calculation of average specific CO₂ emissions of heavy duty³⁶ vehicles of category M

For vehicles of category M, the following shall apply:

- (a) for the calculation of the average specific CO₂ emissions in a vehicle³⁷ sub-group of a manufacturer, a new heavy-duty vehicle of category M shall be considered with its specific CO₂ emissions as complete or completed vehicle in point 2.2.2 of Annex I and shall not be taken into account in point 2.2.3 of Annex I.
- (b) however, upon request of the manufacturer as referred to in Article 7a, point (b), and subject to the condition set out in ~~paragraph 3~~ **point (c)**³⁸, a new heavy-duty vehicle of category M shall be considered with the specific CO₂ emissions of its primary vehicle in point 2.2.3 of Annex I and shall not be considered in point 2.2.2 of Annex I.

³⁶ **Linguistic clarification.**

³⁷ **Linguistic clarification.**

³⁸ **Error correction to the Commission proposal.**

(c) a request referred to in point (b) for a new heavy-duty vehicle of category M shall not be admissible if its manufacturer as defined in Article 7a, point (b), and the manufacturer of its complete or completed vehicle as defined in Article 3(4a) of Regulation (EU) 2017/2400 are connected undertakings or the same legal entity. By making such a request, a manufacturer declares that this condition holds and shall provide supporting information to the Commission upon demand.

(d) the Commission, with support of the **European Environment**³⁹ Agency, shall make available in due time in electronic format the tools and procedural guidance necessary for manufacturers to communicate the requests referred to in point (b).’;

(11) Article 8 is amended as follows:

- (a) in point (a) of paragraph 1, “to 2029” is replaced by “onwards”;
- (b) point (b) of paragraph 1 is deleted;
- (c) paragraph 2 is replaced by the following:

‘2. A manufacturer shall be deemed to have excess CO₂ emissions in any of the following cases:

- (a) where, in any of the reporting periods of the years 2025 to 2028, 2030 to 2033, 2035 to 2038 the sum of the emission debts reduced by the sum of the emission credits exceeds the emission debt limit referred to in Article 7(1), third subparagraph;
- (b) where, in the reporting period of the years 2029, 2034, 2039 and 2040 the sum of the emission debts reduced by the sum of the emission credits is positive;
- (c) where, from the reporting period of the year 2041 onwards, the manufacturer’s average specific CO₂ emissions exceed its specific CO₂ emissions target.’;

(12) Article 9 is amended as follows:

- (a) paragraph 1 is replaced by the following:

³⁹ **Linguistic clarification.**

‘1. Type-approval authorities and manufacturers shall, without delay, report to the Commission any of the following deviations from the data reported:

(a) where the CO₂ emission values of heavy-duty vehicles in service as a result of verifications performed in accordance with the procedure referred to in Article 13 of this Regulation deviate from the values that are indicated in certificates of conformity or in the customer information file referred to in Article 9(4) of Regulation (EU) 2017/2400;

(b) where errors due to wrong input data or other causes in the execution of the CO₂ determination were identified;

(c) where errors in the execution of the CO₂ monitoring and reporting were identified;

(d) any other deviations than those mentioned in points (a), (b) and (c).’;

(b) paragraph 2 is replaced by the following:

‘2. The Commission shall take the deviations referred to in paragraph 1 into account for the purpose of calculating the average specific CO₂ emissions of a manufacturer and the reference CO₂ emissions and consider modifying the ~~decisions taken~~ **list** in accordance with Article 11 **(1)**. ~~accordingly.~~⁴⁰ The Commission is not obliged to take deviations into account if the recalculation of the average specific CO₂ emissions of a manufacturer or the reference CO₂ emissions results in a deviation of less than 0,1 %.’;

(13) Article 10 is replaced by the following:

‘Article 10

Assessment of reference CO₂ emissions

1. In order to ensure the robustness and representativeness of the reference CO₂ emissions of vehicle sub-groups, to which a reporting period of the year 2024 or later applies as reference period according to point 3.2 of Annex I, the Commission shall assess the application of the conditions under which the reference CO₂

⁴⁰ **Error correction to the Commission proposal.**

emissions have been determined and determine whether those emissions have been unduly increased and, if so, how they are to be corrected.

2. If the Commission concludes that all or some of the reference emissions shall be corrected, it shall adopt an implementing act in accordance with the examination procedure referred to in Article 16(2) performing these corrections.’;

(14) Article 11 is amended as follows:

- (a) in paragraph 1, the second subparagraph is replaced by the following:

‘The list to be published by 30 April of the year following a year in which a reference period has ended, shall include the reference CO₂ emissions determined in that reference period.

Those implementing acts shall be adopted in accordance with the examination procedure set out in Article 16(2) of this Regulation⁴¹

- (b) paragraph 2 is replaced by the following:

‘2. The Commission shall ~~amend~~ **adopt** implementing acts **to amend the list adopted under set out in** paragraph 1⁴²:

- (a) where the type-approval procedures referred to in Regulation (EC) No 595/2009 are amended, other than the amendments related to the payload and passenger number values used for the determination of CO₂ emissions, in such a way that the level of the CO₂ emissions of the representative vehicles specified pursuant to this **paragraph 3 of this Article**⁴³ increase or decrease by more than 5 g CO₂ /km:

- (i) adjusted reference emissions shall be calculated in accordance with point 1 of Annex II;

⁴¹ **Standard provision // linguistic clarification.**
⁴² **Standard provision // linguistic clarification.**
⁴³ **Error correction to the Commission proposal.**

- (ii) the new values shall be published as a complement to previous values, indicating the reporting period when they apply the first time;
- (b) where the Annexes have been amended in accordance with Article 14 (1), points (a) to (f):
- (i) previously published reference CO₂ emissions shall be recalculated in accordance with Annex I, taking into account the parameters amended according to one of the points of Article 14 (1), point (a) to (f);
- (ii) the recalculated set of reference CO₂ emissions shall be published and shall replace the previous set of reference emissions as from the reporting period in which the amended parameters according to one of the points of Article 14 (1), point (a) to (f), apply for the first time.

Those implementing acts shall be adopted in accordance with the examination procedure set out in Article 16(2) of this Regulation⁴⁴

- (c) the following paragraph is added:

‘3. In case of amendments of the type-approval procedures referred to in paragraph 2(a), the ~~amending~~⁴⁵ implementing act shall either specify or establish a methodology for defining one or more representative vehicles of a vehicle sub-group, including their statistical weightings and the payload and passenger number values to be used for the determination of CO₂ emissions, on the basis of which the adjustment referred to in paragraph 2(a) shall be determined, taking into account the monitoring data reported pursuant to this Regulation and the technical characteristics of the vehicles listed in Article 12(1) of Regulation (EU) 2017/2400. Those implementing acts shall be adopted in accordance with the examination procedure set out in Article 16(2) of this Regulation.’;

⁴⁴ **Standard provision // linguistic clarification.**

⁴⁵ **Linguistic clarification.**

(15) in Article 13, paragraph 3, the following sentence is added:

‘Where the data in the customer information files, the certificates of conformity and the individual approval certificates may not be corrected under Regulation (EU) 2018/858, the responsible type-approval authority shall issue a statement of correction with the corrected data and transmit that statement to the Commission and the parties concerned.’;

(16) the following Articles 13a to 13f are inserted:

‘Article 13a

Monitoring and reporting by Member States

1. Starting from the reporting period of the year [*PO: please insert year: if entry into force is before 1st July, insert the year of entry into force of the Regulation minus 1; if entry into force is after 30th of June, insert the following year*], Member States shall monitor the data specified in Annex IV, Part A relating to new heavy-duty vehicles registered for the first time in the Union.

By 30 September each year, starting in 2020, the competent authorities of the Member States shall report those data of the previous reporting period of 1 July to 30 June to the Commission in accordance with the reporting procedure set out in Annex V.

2. The competent authorities responsible for the monitoring and reporting of data in accordance with this Regulation shall be those designated by the Member States in accordance with Article 7(6) of Regulation (EU) 2019/631.

3. Vehicles designed and constructed or adapted for the use by civil protection, fire services and forces responsible for maintaining public order shall be subject to the obligation under this Article, ~~unless they are exempted on the basis of other provisions.~~

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4. Vehicles registered for the use by civil protection, fire services, medical urgency care and forces responsible for maintaining public order and vehicles registered for the use by the armed services shall be subject to the obligation under this Article, regardless of

being exempted from Article 3a, ~~unless they are exempted on the basis of other provisions.~~⁴⁷

Article 13b

Reporting by manufacturers or other entities responsible for the determination of a heavy-duty vehicle CO₂ emissions

1. Manufacturers or other entities responsible for the determination of a heavy-duty vehicle to which the obligations of Article 9 of Regulation (EU) 2017/2400 or Article 8 of Implementing Regulation (EU) 2022/1362 are addressed shall report the data of the new heavy-duty vehicle according to the provisions set out in part B of Annex IV.

By 30 September of each year, they shall report those data for each new heavy-duty vehicle with a date of determination or assessment falling within the reporting period ending on 30 June to the Commission in accordance with the reporting procedure set out in Annex V.

This paragraph shall not apply to manufacturers or other entities exempted in accordance with Article 6b.

2. Each manufacturer or other entity in the meaning of paragraph 1 shall appoint a contact point for the purpose of reporting data in accordance with this Regulation.

3. The reporting obligation under Article 13a, paragraphs 3 and 4 shall apply to manufacturers and other entities in the meaning of paragraph 1.

Article 13c

Central register for data on heavy-duty vehicles

1. The Commission shall keep a central register for the data on heavy-duty vehicles ('the register') reported in accordance with Articles 13a and 13b.

The register shall be publicly available with the exception of data entries listed in point 3.2.2~~2~~ of Annex V⁴⁸.

⁴⁷ **Linguistic clarification.**

⁴⁸ **Error correction to the Commission proposal.**

⁴⁹ ~~With regard to data entry 23 specified in Part B, point 2 of Annex IV, t~~ **The air drag value** shall be made publicly available in a range format as set out in Part C of Annex IV.

2. The register shall be managed by the Agency on behalf of the Commission.

Article 13d

Monitoring of the results of on-road verification tests

1. The Commission shall monitor, where available, the results of on-road tests performed within the framework of Regulation (EC) No 595/2009 to verify the CO₂ emissions and fuel consumption of new heavy-duty vehicles.
2. The Commission is empowered to adopt delegated acts in accordance with Article 17 in order to supplement this Regulation by specifying the data to be reported by the competent authorities of the Member States for the purposes of paragraph 1 of this Article.

Article 13e

Data quality

1. The competent authorities and manufacturers shall be responsible for the correctness and quality of the data they report pursuant to Articles 13a and 13b. They shall inform the Commission without delay of any errors detected in the data reported.
2. The Commission shall carry out its own verification of the quality of the data reported pursuant to Articles 13a and 13b.
3. Where the Commission is informed of errors in the data or finds, pursuant to its own verification, discrepancies in the dataset, it shall, where appropriate, take the necessary measures to correct the data published in the register referred to in Article 13c.
4. The Commission may, by means of implementing acts, determine the verification and correction measures referred to in paragraphs 2 and 3 of this Article. Those

⁴⁹ **Error correction to the Commission proposal.**

implementing acts shall be adopted in accordance with the examination procedure referred to in Article 16.

Article 13f

Administrative fines

1. The Commission may impose an administrative fine in each of the following cases:

(a) where it finds that the data reported by the manufacturer pursuant to Article 5 of this Regulation deviate from the data resulting from the manufacturer's records file or the engine type-approval certificate issued within the framework of Regulation (EC) No 595/2009, and the deviation is intentional or due to serious negligence;

(b) where the data are not submitted within the deadline applicable pursuant to Article 5(1) and the delay cannot be duly justified.

The Commission shall, for the purposes of verifying the data referred to in point (a), consult with the relevant approval authorities.

The administrative fines shall be effective, proportional and dissuasive and shall not exceed EUR 30 000 per heavy-duty vehicle concerned by deviating or delayed data as referred to in points (a) and (b).

2. The Commission shall on the basis of the principles set out in paragraph 3 of this Article, adopt delegated acts in accordance with Article 17 to supplement this Regulation by laying down the procedure, methods for the calculation and collection of the administrative fines referred to in paragraph 1 of this Article.

3. The delegated acts referred to in paragraph 2 shall respect the following principles:

(a) the procedure established by the Commission shall respect the right to good administration, and in particular the right to be heard and the right to have access to the file, while respecting the legitimate interests of confidentiality and of commercial secrets;

(b) in calculating the appropriate administrative fine, the Commission shall be guided by the principles of effectiveness, proportionality and dissuasiveness, taking into consideration, where relevant, the seriousness and effects of the deviation or delay, the number of heavy-duty vehicles concerned by the deviating or delayed data, the good faith

of the manufacturer, the degree of diligence and cooperation of the manufacturer, the repetition, frequency or duration of the deviation or the delay as well as prior sanctions imposed on the same manufacturer;

(c) administrative fines shall be collected without undue delay by fixing deadlines for the payment and, as appropriate, including the possibility of splitting payments into several instalments and phases.

4. The amounts of the administrative fines shall be considered as revenue for the general budget of the Union.’

(17) Article 14 is replaced by the following:

‘Article 14

Amendments to the Annexes

1. The Commission is empowered to adopt delegated acts in accordance with Article 17 with a view to amending the following elements in Annex I to take into account technical progress, the evolution of freight transport logistics, necessary adjustments based on the application of this Regulation and amendments of the underlying type-approval legislation, in particular Regulations (EU) 2018/858 and (EU) 595/2009:

- (a) the criteria defining vehicle sub-groups set out in point 1.1;
- (b) the criteria defining vocational vehicles set out in point 1.2;
- (c) the criteria for the operational ranges of different powertrain technologies set out in point 1.3;
- (d) the list of mission profiles set out in point 1.4;
- (e) the weight of mission profiles set out in point 2.1;
- (f) the payloads, passenger numbers, passenger masses, technically permissible maximum payloads, technically permissible maximum passenger number and cargo volumes of vehicle sub-groups *sg* set out in point 2.5;
- (g) the annual mileage values set out in point 2.6.

2. The Commission is empowered to adopt delegated acts in accordance with Article 17 with a view to amending the following element in Annex IV:
- (a) the data requirements specified in Part A and Part B to take into account technical progress, necessary adjustments based on the application of this Regulation and amendments of the underlying type-approval legislation, in particular Regulations (EU) 2018/858 and (EU) 595/2009;
 - (b) updating or adjusting the ranges set out in Part C to take into account changes in heavy-duty vehicle design and ensure that the ranges remain relevant for information and comparability purposes;
3. The Commission is empowered to adopt delegated acts in accordance with Article 17 with a view to amending the following elements in Annex V:
- (a) adjusting the ~~monitoring and~~⁵⁰ reporting procedure set out in Annex V in order to take into account the experience gained from the application of this Regulation and in order to adapt it to technical progress;
 - (b) amending point 3.2 by adding data entries which have been newly added to the register.’

(18) Article 15 is replaced by the following:

‘Article 15

Review

The Commission shall, in 2028, review the effectiveness and impact of this Regulation and submit a report to the European Parliament and to the Council with the result of the review.

The report shall, where appropriate, be accompanied by a proposal for amending this Regulation.’

⁵⁰ **Linguistic clarification.**

(19) ⁵¹Article 17 is amended as follows:

(a) in paragraph 2, the first sentence is replaced by the following:

‘The power to adopt delegated acts referred to in **Article 3b**, ~~Article 11(2)~~, Article 13(4) second subparagraph, ~~Article 13e(3)~~, Article 13d(2), ~~Article 13e(4)~~, Article 13f(2) and Article 14(1) shall be conferred on the Commission for a period of five years from [*OP, please insert the date of entry into force of this Regulation*].’;

(b) in paragraph 3, the first sentence is replaced by the following:

‘The delegation of power referred to in ~~Article 11(2)~~, Article 13(4) second subparagraph, ~~Article 13e(3)~~, Article 13d(2), ~~Article 13e(4)~~, Article 13f(2) and Article 14(1) may be revoked at any time by the European Parliament or by the Council.’;

(c) in paragraph (6), “Article 11(2), the second subparagraph of Article 13(4) and Article 14(1)” is replaced by the following: “Article 13(4) second subparagraph, , Article 13d(2), Article 13f(2) and Article 14(1)”;

(20) Annexes I **and** II ~~and III~~ ⁵²to Regulation (EU) 2019/1242 are replaced by the text in Annex I to this Regulation;

(21) the text in Annex II to this Regulation is added as Annexes **III**,⁵³ IV, V and VI to Regulation (EU) 2019/1242;

⁵¹ **Error correction to the Commission proposal. NB: If empowerment for DA stays in Article 3b, reference to Article 3b needs to be added to paragraphs 3 and 6. If empowerment for DA is removed from Article 3b, the reference to Article 3b needs to be deleted from paragraph 2.**

⁵² **Correction of errors in Commission proposal (existing annexes are replaced in Annex I, new annexes are added in Annex II).**

⁵³ **Correction of errors in Commission proposal (existing annexes are replaced in Annex I, new annexes are added in Annex II).**

Article 2

Repeal of Regulation (EU) 2018/956

Regulation (EU) 2018/956 is repealed with effect from [*OP, please insert date of application*].

References to Regulation (EU) 2018/956 shall be construed as references to this Regulation and be read in accordance with the correlation table set out in Annex VI **included in Annex II**⁵⁴ to this Regulation.

Article 3

Transitional provisions

~~However,~~ **Notwithstanding Article 2, in respect of reporting periods prior to [*OP please insert the date = date of application*], Regulation (EU) 2019/1242 as applicable on 30 June [*OP please insert the calendar year = year of the 1st of July following the entry into force of this Act*] and Regulation (EU) 2018/956 as applicable on 30 June [*OP please insert the calendar year = year of the 1st of July following the entry into force of this Act*] shall continue to apply.**⁵⁵

Article 4

Entry into force

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

It shall apply from 1 July [*OP please insert the calendar year = year of the 1st of July following the entry into force of this Act*].

~~However, in respect of reporting periods prior to [*OP please insert the date = date of application*], Regulation (EU) 2019/1242 as applicable on 30 June [*OP please insert the calendar year = year of*~~

⁵⁴ **Correction of error in the Commission proposal.**

⁵⁵ **Text moved into separate Article on transitional provisions.**

~~the 1st of July following the entry into force of this Act]~~ and Regulation (EU) 2018/956 as applicable on 30 June [~~OP please insert the calendar year = year of the 1st of July following the entry into force of this Act]~~ shall continue to apply.⁵⁶

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

Done at Strasbourg,

For the European Parliament
The President

For the Council
The President

⁵⁶ Text moved into separate Article on transitional provisions.

ANNEX I⁵⁷

'ANNEX I

Average specific emissions, average specific emission targets and excess emissions

1. VEHICLE SUB-GROUPS, MISSION PROFILES AND RELATED PARAMETERS⁵⁸

1.1. For the purposes of this Regulation a sub-group *sg* is defined for each new heavy-duty vehicle.

1.1.1. For vehicles of category N the sub-group *sg* is defined as follows:

Vehicle group according to Annex I to Regulation (EU) 2017/2400	Vocational vehicle according to Article 3(9) of this Regulation	Cab type	Engine power	Operational range (OR)	Vehicle sub-group (sg) attributed for the purposes of this Regulation
53	No	All			53
54	No	All			54
1s	No	All			1s
1	No	All			1
2	No	All			2
3	No	All			3
4	No	All	<170 kW	All	4-UD
	No	Day cab	≥170 kW	All	4-RD
	No	Sleeper cab	≥170 kW and <265		

⁵⁷ See footnotes 52 and 53 (existing annexes are replaced in Annex I, new annexes are added in Annex II).

⁵⁸ Error correction to the Commission proposal

			kW		
			≥ 265 kW	< 350 km	
	No	Sleeper cab	≥ 265 kW	≥ 350 km	4-LH
9	No	Day cab	All	All	9-RD
	No	Sleeper cab	All	< 350 km	
	No	Sleeper cab	All	≥ 350 km	9-LH
5	No	Day cab	All	All	5-RD
	No	Sleeper cab	< 265 kW		
	No	Sleeper cab	≥ 265 kW	< 350 km	5-LH
	No	Sleeper cab	≥ 265 kW	≥ 350 km	
10	No	Day cab	All	All	10-RD
	No	Sleeper cab	All	< 350 km	
	No	Sleeper cab	All	≥ 350 km	10-LH
11	No	All			11
12	No	All			12
16	No	All			16

‘Sleeper cab’ means a type of cab that has a compartment behind the driver's seat intended to be used for sleeping as reported in accordance with Articles 13a and 13b.

‘Day cab’ means a type of cab that is not a sleeper cab.

Where a new heavy-duty vehicle is attributed to sub-group 4-UD, but data on the CO₂ emissions in g/km are not available for the UDL or UDR mission profiles as defined in

point 2.1. ~~Table 2~~ **1.4**.⁵⁹ the new heavy-duty vehicle shall be attributed to the sub-group 4-RD

'Operational range' means the distance a vehicle can travel under long haul transport conditions without being re-charged or re-filled, as provided for in point 1.3.

1.1.2. For vehicles of category M the sub-group *sg* is defined as follows:

Vehicle group pursuant to Annex I to Regulation (EU) 2017/2400	Vehicle sub-group (sg) attributed for the purposes of this Regulation
31a, 31d	31-LF
31b1	31-L1
31b2	31-L2
31c, 31e	31-DD
32a, 32b	32-C2
32c, 32d	32-C3
32e, 32f	32-DD
33a, 33d, 37a, 37d	33-LF
33b1, 37b1	33-L1
33b2, 37b2	33-L2
33c, 33e, 37c, 37e	33-DD
34a, 34b, 36a, 36b, 38a, 38b, 40a, 40b	34-C2
34c, 34d, 36c, 36d, 38c, 38d, 40c, 40d	34-C3
34e, 34f, 36e, 36f, 38e, 38f, 40e, 40f	34-DD

⁵⁹ Error correction to the Commission proposal.

35a, 35b1, 35b2, 35c	35-FE
39a, 39b1, 39b2, 35e, <u>39c</u> ⁶⁰	39-FE

1.1.3. For vehicles of category O the sub-group *sg* is defined as follows:

Vehicle groups defined in Annex I of Regulation (EU) 2022/1362	Vehicle sub-group (sg) attributed for the purposes of this Regulation
All groups provided in Table 1 with 1, 2, 3 axles	Same as provided in column “vehicle group” of the tables in Annex I to Regulation (EU) 2022/1362.
All groups provided in Table 4 with 1, 2 <u>or</u> ⁶¹ 3 axles	
All groups provided in Table 6	

1.2. Vocational vehicles are defined by the following criteria:

Vehicle category	Chassis configuration	Criteria for vocational vehicles
N	Rigid	One of the following digits, as listed in Appendix 2 of Annex I to Regulation (EU) 2018/858, is used to supplement the code for bodywork indicated in entry 38 of the certificate of conformity: 09, 10, 15, 16, 18, 19, 20, 23, 24, 25, 26, 27, 28, 31;
	Tractor	Maximum speed not exceeding 79 km/h

⁶⁰ Error correction the Commission proposal.

⁶¹ Error correction to the Commission proposal.

1.3. Operational ranges for the purposes of this Regulation are set as follows:

Powertrain technology	Operational range (OR)
Vehicles drawing energy for the purpose of mechanical propulsion only from an electrical energy or power storage device	OR = actual charge depleting range as provided for by point 2.4.1 of part I of Annex IV to Regulation (EU) 2017/2400 for the LHR mission profile
Other technologies	OR > 350 km

1.4. Definitions of mission profiles

RDL	Regional delivery payload low
RDR	Regional delivery payload representative
LHL	Long haul payload low
LHR	Long haul payload representative
UDL	Urban delivery payload low
UDR	Urban delivery payload representative
REL	Regional delivery (EMS) payload low
RER	Regional delivery (EMS) payload representative
LEL	Long haul (EMS) payload low
LER	Long haul (EMS) payload representative
MUL	Municipal utility payload low
MUR	Municipal utility payload representative
COL	Construction payload low
COR	Construction payload representative
HPL	Heavy urban, person transport, low load
HPR	Heavy urban, person transport, representative load
UPL	Urban, person transport, low load
UPR	Urban, person transport, representative load

SPL	Sub-urban, person transport, low load
SPR	Sub-urban, person transport, representative load
IPL	Inter-urban, person transport, low load
IPR	Inter-urban, person transport, representative load
CPL	Coach, person transport, low load
CPR	Coach, person transport, representative load

2. CALCULATION OF THE AVERAGE SPECIFIC EMISSIONS OF A MANUFACTURER

2.1. Calculation of the specific CO₂ emissions of a new heavy-duty vehicle

The specific emissions in g/km of a new heavy-duty vehicle v attributed to a sub-group sg or of its primary vehicle shall be calculated in accordance with the following formula:

$$CO2_v = \sum_{mp} W_{sg,mp} \times CO2_{v,mp}$$

$$CO2p_v = \sum_{mp} W_{sg,mp} \times CO2p_{v,mp}$$

Where,

\sum_{mp} is the sum over all mission profiles mp listed in **Table 2 point 1.4**.⁶²;

sg is the sub-group to which the new heavy-duty vehicle v has been attributed according to Section 1 of this Annex;

$W_{sg,mp}$ is the mission profile weight specified in points 2.1.1 to 2.1.3;

⁶² **Error correction the Commission proposal.**

$CO2_{v,mp}$ is the CO_2 emissions in g/km of the new heavy-duty vehicle v determined for a mission profile mp , reported in accordance with Articles 13a and 13b and normalised pursuant to Annex III;

$CO2p_{v,mp}$ is the CO_2 emissions in g/km of the primary vehicle of the new heavy-duty vehicle v , determined for a mission profile mp , reported in accordance with Articles 13a and 13b;

For zero-emissions motor vehicles the values of $CO2_{v,mp}$ and $CO2p_{v,mp}$ shall be set to 0.

2.1.1. Mission profile weights ($W_{sg,mp}$) for vehicles of category N

Vehicle sub-group (sg)*	Mission profile (mp)**										
	RDL	RDR	LHL	LHR	UDL	UDR	REL, RER, LEL, LER	MUL	MUR	COL	COR
53	0,25	0,25	0	0	0,25	0,25	0	0	0	0	0
54	0,25	0,25	0	0	0,25	0,25	0	0	0	0	0
1s	0,1	0,3	0	0	0,18	0,42	0	0	0	0	0
1	0,1	0,3	0	0	0,18	0,42	0	0	0	0	0
2	0,125	0,375	0	0	0,15	0,35	0	0	0	0	0
3	0,125	0,375	0	0	0,15	0,35	0	0	0	0	0
4-UD	0	0	0	0	0,5	0,5	0	0	0	0	0
4-RD	0,45	0,45	0,05	0,05	0	0	0	0	0	0	0
4-LH	0,05	0,05	0,45	0,45	0	0	0	0	0	0	0
4v	0	0	0	0	0	0	0	0,25	0,25	0,25	0,25
5-RD	0,27	0,63	0,03	0,07	0	0	0	0	0	0	0
5-LH	0,03	0,07	0,27	0,63	0	0	0	0	0	0	0
5v	0	0	0	0	0	0	0	0	0	0,5	0,5
9-RD	0,27	0,63	0,03	0,07	0	0	0	0	0	0	0

9-LH	0,03	0,07	0,27	0,63	0	0	0	0	0	0	0
9v	0	0	0	0	0	0	0	0,25	0,25	0,25	0,25
10-RD	0,27	0,63	0,03	0,07	0	0	0	0	0	0	0
10-LH	0,03	0,07	0,27	0,63	0	0	0	0	0	0	0
10v	0	0	0	0	0	0	0	0	0	0,5	0,5
11	0,15	0,35	0	0	0	0	0	0	0	0,15	0,35
12	0,21	0,49	0	0	0	0	0	0	0	0,09	0,21
16	0	0	0	0	0	0	0	0	0	0,3	0,7

* See definitions in point 1.1

** See definitions in point 1.4

2.1.2. Mission profile weights (Wsg,mp) for vehicles of category M

Vehicle sub-group (sg)*	Mission profile (mp)**									
	HPL	HPR	UPL	UPR	SPL	SPR	IPL	IPR	CPL	CPR
31-LF	0,27	0,23	0,15	0,13	0,11	0,11	0	0	0	0
31-L1	0,05	0,05	0,16	0,14	0,32	0,28	0	0	0	0
31-L2	0,05	0,05	0,09	0,08	0,15	0,13	0,24	0,21	0	0
31-DD	0,20	0,31	0,12	0,18	0,07	0,12	0	0	0	0
32-C2	0	0	0	0	0	0	0,47	0,43	0,04	0,06
32-C3	0	0	0	0	0	0	0,05	0,05	0,30	0,60
32-DD	0	0	0	0	0	0	0,05	0,05	0,35	0,55
33-LF	0,27	0,23	0,15	0,13	0,11	0,11	0	0	0	0
33-L1	0,05	0,05	0,16	0,14	0,32	0,28	0	0	0	0
33-L2	0,05	0,05	0,09	0,08	0,15	0,13	0,24	0,21	0	0
33-DD	0,20	0,31	0,12	0,18	0,07	0,12	0	0	0	0
34-C2	0	0	0	0	0	0	0,47	0,43	0,04	0,06
34-C3	0	0	0	0	0	0	0,05	0,05	0,30	0,60

34-DD	0	0	0	0	0	0	0,05	0,05	0,35	0,55
35-FE	0,27	0,23	0,15	0,13	0,11	0,11	0	0	0	0
39-FE	0,27	0,23	0,15	0,13	0,11	0,11	0	0	0	0

* See definitions in point 1.1

** See definitions in point 1.4

2.1.3. Mission profile weights (Wsg,mp) for vehicles of category O

Vehicle sub-group (sg)*	Mission profile (mp)**						
	RDL	RDR	LHL	LHR	UDL	UDR	REL, RER, LEL, LER
111, 111V, 112, 112V, 113	0,27	0,63	0,03	0,07	0	0	0
121, 121V, 122, 122V, 123, 123V, 124, 124V, 125, 126	0,03	0,07	0,27	0,63	0	0	0
131, 131v, 132, 132v, 133	0,03	0,07	0,27	0,63	0	0	0
421, 421v, 422, 422v, 423	0,03	0,07	0,27	0,63	0	0	0
431, 431v, 432, 432v, 433	0,03	0,07	0,27	0,63	0	0	0
611, 612	0,27	0,63	0,03	0,07	0	0	0
611v, 612v	0,03	0,07	0,27	0,63	0	0	0
621, 623	0,27	0,63	0,03	0,07	0	0	0
621V, 622, 622V, 623V, 624, 624V, 625	0,03	0,07	0,27	0,63	0	0	0

631, 631v, 632, 632v, 633	0,03	0,07	0,27	0,63	0	0	0
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* See definitions in point 1.1

** See definitions in point 1.4

2.2. Average specific CO₂ emissions of all new heavy-duty vehicles in a sub-group for a manufacturer

For each manufacturer and each **reporting period**, the average specific CO₂ emissions $avgCO2_{sg}$ of all new heavy-duty vehicles in a sub-group sg or their primary vehicles, if applicable, shall be calculated as follows:

2.2.1. For category N and O vehicles:

$$avgCO2_{sg} = \frac{\sum_v CO2_v}{V_{sg} \times PL_{sg}} \quad (\text{in g/tkm})$$

2.2.2. For category M complete or completed vehicles:

$$avgCO2_{sg} = \frac{\sum_v CO2_v}{(V_{sg} - V_{pv_{sg}}) \times PN_{sg}} \quad (\text{in g/pkm})^{63}$$

2.2.3. For category M primary vehicles of heavy-duty vehicles:

$$avgCO2p_{sg} = \frac{\sum_v CO2p_v}{V_{pv_{sg}} \times PN_{sg}} \quad (\text{in g/pkm})$$

Where,

\sum_v is the sum over all new heavy-duty vehicles of the manufacturer in the sub-group sg , subject to the provisions of Article 7b;

$CO2_v$ is the specific CO₂ emissions of the new heavy-duty vehicle v determined in accordance with point 2.1;

$CO2p_v$ is the specific CO₂ emissions of the primary vehicle of the new heavy-duty vehicle v determined in accordance with point 2.1;

⁶³ **Error correction to the Commission proposal ("i" was missing)**

V_{sg}	is the number of new heavy-duty vehicles of the manufacturer in subgroup sg ;
V_{pvsg}	the number of new heavy-duty vehicles within the sub-group sg , which pursuant to Article 7b shall be accounted for with the CO ₂ emissions of their primary vehicles in the calculation of the average specific CO ₂ emissions of point 2.2.3.;
PL_{sg}	is the average payload of vehicles in the sub-group sg as determined in point 2.5.
PN_{sg}	is the average passenger number of vehicles in the sub-group sg as determined in point 2.5.

2.3. Calculation of the zero- and low-emission factor as referred to in Article 5

2.3.1 Reporting periods 2019 to 2024

For each manufacturer and reporting period from 2019 to 2024, the zero- and low-emission factor (ZLEV) referred to in Article 5 shall be calculated as follows:

$$ZLEV = V_{all} / (V_{conv} + V_{zlev}) \quad \text{with a minimum of 0,97}$$

where:

V_{all} is the number of new heavy-duty vehicles of the manufacturer in the sub-groups $sg = 4\text{-UD}, 4\text{-RD}, 4\text{-LH}, 5\text{-RD}, 5\text{-LH}, 9\text{-RD}, 9\text{-LH}, 10\text{-RD}, 10\text{-LH}$;

V_{conv} is the number of new heavy-duty vehicles of the manufacturer in the sub-groups $sg = 4\text{-UD}, 4\text{-RD}, 4\text{-LH}, 5\text{-RD}, 5\text{-LH}, 9\text{-RD}, 9\text{-LH}, 10\text{-RD}, 10\text{-LH}$ excluding zero- and low-emission heavy-duty vehicles;

V_{zlev} is the sum of V_{in} and V_{out} ,

where,

$$V_{in} \quad \text{is } \sum_v (1 + (1 - CO2_v / LET_{sg}))$$

with \sum_v being the sum over all new zero- and low-emission heavy-duty vehicles in the sub-groups $sg = 4\text{-UD}, 4\text{-RD}, 4\text{-LH}, 5\text{-RD}, 5\text{-LH}, 9\text{-RD}, 9\text{-LH}, 10\text{-RD}, 10\text{-LH}$;

$CO2_v$ is the specific CO_2 emissions in g/km of a zero- and low-emission heavy-duty vehicle v determined in accordance with point 2.1.;

LET_{sg} is the low-emission threshold of the sub-group sg to which the vehicle v belongs as defined in point 2.3.4;

V_{out} is the total number of zero-emission heavy-duty vehicles, which are not in the sub-groups referred to by the definition of V_{in} , and with a maximum of 1,5% of V_{conv} .

2.3.2 Reporting periods from 2025 to 2029

For each manufacturer and **reporting period**, the zero- and low-emission factor (ZLEV) referred to in Article 5 shall be calculated as follows:

$$ZLEV = 1 - (y - x) \quad \text{unless this sum is larger than 1 or lower than 0.97 in which case the ZLEV factor shall be set to 1 or 0.97 respectively}$$

Where:

x is 0,02

y is the sum of V_{in} and V_{out} , divided by V_{total} , where:

V_{in} is the total number of newly registered low- and zero-emission heavy-duty vehicles in the sub-groups $sg = 4\text{-UD}, 4\text{-RD}, 4\text{-LH}, 5\text{-RD}, 5\text{-LH}, 9\text{-RD}, 9\text{-LH}, 10\text{-RD}, 10\text{-LH}$, where each of them is counted as $ZLEV_{specific}$ in accordance with the formula below:

$$ZLEV_{specific} = 1 - (CO2_v / LET_{sg})$$

Where:

CO_{2v} is the specific CO₂ emissions in g/km of a zero- and low-emission heavy-duty vehicle v determined in accordance with point 2.1,

LET_{sg} is the low-emission threshold of the sub-group sg to which the vehicle v belongs as defined in point 2.3.4;

V_{out} is the total number of newly registered zero-emission heavy-duty vehicles, which are not in the sub-groups referred to by the definition of V_{in}, and with a maximum of 0,035 of V_{total};

V_{total} is the total number of newly registered heavy-duty vehicles of the manufacturer in that reporting period.

Where V_{in}/V_{total} is lower than 0,0075, the ZLEV factor shall be set to 1.

2.3.3 Reporting periods as from 2030

$$ZLEV = 1$$

2.3.4 Calculation of the low-emission threshold

The low-emission threshold LET_{sg} of the sub-group sg is defined as follows:

$$LET_{sg} = (rCO_{2sg} \times PL_{sg}) / 2$$

Where:

rCO_{2sg} is the reference CO₂ emissions of the sub-group sg, as determined in point 3;

PL_{sg} is the average payload of vehicles in the sub-group sg as determined in point 2.5.

2.4. Calculation of vehicle shares

For each manufacturer and each **reporting period**, the share of new heavy-duty vehicles in a sub-group $share_{sg}$ shall be calculated as follows:

$$share_{sg} = \frac{V_{sg}}{V}$$

For each manufacturer and each **reporting period**, the share of new zero-emissions heavy-duty vehicles in a sub-group zev_{sg} shall be calculated as follows:

$$zev_{sg} = \frac{Vzev_{sg}}{V_{sg}}$$

For each manufacturer and each **reporting period**, the share of new heavy-duty vehicles within the sub-group sg , which pursuant to Article 7b shall be accounted for with the CO₂ emissions of their primary vehicles in the calculation of the average specific CO₂ emissions of point 2.2., shall be calculated as follows:

$$pv_{sg} = \frac{Vpv_{sg}}{V_{sg}}$$

Where,

$Vzev_{sg}$ is the number of new zero-emissions heavy-duty vehicles of the manufacturer in a subgroup sg ;

Vpv_{sg} the number of new heavy-duty vehicles within the sub-group sg , which pursuant to Article 7b shall be accounted for with the CO₂ emissions of their primary vehicles in the calculation of the average specific CO₂ emissions of point 2.2.;

V_{sg} is the number of new heavy-duty vehicles of the manufacturer in a subgroup sg ;

V is the number of new heavy-duty vehicles of the manufacturer.

2.5. Payload values, passenger numbers and cargo volumes

The average payload value PL_{sg} of a vehicle of category N or O in a sub-group sg shall be calculated as follows:

$$PL_{sg} = \sum_{mp} W_{sg,mp} \times PL_{sg,mp}$$

The average passenger number PN_{sg} of a vehicle of category M in a sub-group sg shall be calculated as follows:

$$PN_{sg} = \sum_{mp} W_{sg,mp} \times PN_{sg,mp}$$

Where,

\sum_{mp} is the sum over all mission profiles mp

$W_{sg,mp}$ is the mission profile weight specified in points 2.1.1 to 2.1.3

$PL_{sg,mp}$ is the payload value attributed to the vehicles of category N and O in the sub-group sg for the mission profile mp , as defined in points 2.5.1 and 2.5.3.

$PN_{sg,mp}$ is the passenger number attributed to the vehicles of category M in the sub-group sg for the mission profile mp , as defined in point 2.5.2.

2.5.1. Vehicles of category N.

Payload values $PL_{sg,mp}$ (in tons) are determined as follows:

Vehicle sub-group <i>sg</i> *	Mission profile <i>mp</i> **														
	RDL	RDR	LHL	LHR	UDL	UDR	REL	RER	LEL	LER	MUL	MUR	COL	COR	
53	As determined in point 3.1.1		Not applicable		As determined in point 3.1.1	Not applicable									
54															
1s															
1															
2															
3			As determined in point 3.1.1												
4-UD	0,9	4,4	1,9	14	0,9	4,4	3,5	17,5	3,5	26,5	0,6	3,0	0,9	4,4	
4-RD															
4-LH															
4v															
5-RD	2,6	12,9	2,6	19,3	2,6	12,9	3,5	17,5	3,5	26,5	n.a.	n.a.	2,6	12,9	

5-LH														
5v														
9-RD	1,4	7,1	2,6	19,3	1,4	7,1	3,5	17,5	3,5	26,5	1,2	6,0	1,4	7,1
9-LH														
9v														
10-RD	2,6	12,9	2,6	19,3	2,6	12,9	3,5	17,5	3,5	26,5	n.a.	n.a.	2,6	12,9
10-LH														
10v														
11	1,4	7,1	2,6	19,3	1,4	7,1	3,5	17,5	3,5	26,5	1,2	6,0	1,4	7,1
12	2,6	12,9	2,6	19,3	2,6	12,9	3,5	17,5	3,5	26,5	n.a.	n.a.	2,6	12,9
16	Not applicable												2,6	12,9

* See definitions in point 1.1

** See definitions in point 1.4

Technically permissible maximum payload values $maxPL_{sg}$ and cargo volumes CV_{sg} are determined according to point 3.1.1.

2.5.2. Vehicles of category M.

Passenger numbers $PN_{sg,mp}$, passenger masses $PM_{sg,mp}$ and technically permissible maximum passenger numbers $maxPN_{sg}$ for sub-group sg and mission profile mp are determined according to point 3.1.1.

2.5.3. Vehicles of category O.

Payload values $PL_{sg, mp}$ (in tons) are determined as follows:

Vehicle sub-group (sg)*	Mission profile (mp)**						
	RDL	RDR	LHL	LHR	UDL	UDR	REL, RER, LEL, LER
111, 111V,112, 112V, 113	1,5	7,5	1,5	11,2	n.a.	n.a.	n.a.
121, 121V, 123, 123V, , 125	2,2	11,2	2,2	16,8	n.a.	n.a.	n.a.
122, 122V, 124, 124V, 126	2,4	12,2	2,4	18,3	n.a.	n.a.	n.a.

131, 131v, 132, 132v, 133	2,6	12,9	2,6	19,3	n.a.	n.a.	n.a.
421, 421v, 422, 422v, 423	2,6	12,9	2,6	19,3	n.a.	n.a.	n.a.
431, 431v, 432, 432v, 433	2,6	12,9	2,6	19,3	n.a.	n.a.	n.a.
611, 612	1,2	6,1	1,2	9,2	n.a.	n.a.	n.a.
611v, 612v	1,2	6,1	1,2	9,2	n.a.	n.a.	n.a.
621, 621v, 623, 623v	1,3	6,3	1,3	9,5	n.a.	n.a.	n.a.
622, 622V, 624, 624V, 625	2,6	12,9	2,6	19,3	n.a.	n.a.	n.a.
631, 631v, 632, 632v, 633	2,6	12,9	2,6	19,3	n.a.	n.a.	n.a.

* See definitions in point 1.1

** See definitions in point 1.4

Technically permissible maximum payload values $maxPL_{sg}$ and cargo volumes CV_{sg} are determined according to point 3.1.1.

2.6. Calculation of the mileage and payload or passenger-number weighting factor

The mileage and payload (passenger) weighting factor (MPW_{sg}) of a sub-group sg is defined as the product of the annual mileage specified in point 2.6.1 and the payload and passenger-number values for the sub-group specified in points 2.5.1, 2.5.2 and 2.5.3 for vehicle categories N, M and O, respectively, normalised to the respective value for sub-group 5-LH, and shall be calculated as follows:

$$MPW_{sg} = \frac{(AM_{sg} \times PL_{sg})}{(AM_{5-LH} \times PL_{5-LH})} \quad (\text{for category N and O vehicles})$$

$$MPW_{sg} = \frac{(AM_{sg} \times PN_{sg})}{(AM_{5-LH} \times PL_{5-LH})} \quad (\text{for category M vehicles})$$

Where,

AM_{sg} is the annual mileage specified in point 2.6.1, 2.6.2 and 2.6.3 for the vehicles in the respective sub-group;

AM_{5-LH} is the annual mileage specified for the sub-group 5-LH in 2.6.1;

PL_{sg} is as determined in points 2.5.1 and 2.5.3;

PN_{sg} is as determined in point 2.5.2;

PL_{5-LH} is the average payload value for the sub-group 5-LH as determined in point 2.5.1.

2.6.1. Annual mileages for vehicles of category N

Vehicle sub-group (sg)*	Annual mileage AM_{sg} (in km)
53	58 000
54	58 000
1s	58 000
1	58 000
2	60 000
3	60 000
4-UD	60 000
4-RD	78 000
4-LH	98 000
4v	60 000
5-RD	78 000
5-LH	116 000
5v	60 000
9-RD	73 000
9-LH	108 000
9v	60 000
10-RD	68 000
10-LH	107 000
10v	60 000
11	65 000
12	67 000
16	60 000

* See definitions in point 1.1

2.6.2. Annual mileages for vehicles of category M

Vehicle sub-group (sg)*	Annual mileage AM _{sg} (in km)
31-LF	60 000
31-L1	60 000
31-L2	60 000
31-DD	60 000
32-C2	96 000
32-C3	96 000
32-DD	96 000
33-LF	60 000
33-L1	60 000
33-L2	60 000
33-DD	60 000
34-C2	96 000
34-C3	96 000
34-DD	96 000
35-FE	60 000
39-FE	60 000

* See definitions in point 1.1

2.6.3. Annual mileages for vehicles of category O

Vehicle sub-group (sg)*	Annual mileage AM _{sg} (in km)
----------------------------	--

111, 111V,112, 112V, 113	52 000
121, 121V, 122, 122V, 123, 123V, 124, 124V, 125, 126, 131, 131v, 132, 132v, 133	77 000
421, 421v, 422, 422v, 423, 431, 431v, 432, 432v, 433	68 000
611, 612, 611v, 612v, 621, 623, 621v, 623v	40 000
622, 622V, 624, 624V, 625, 631, 631v, 632, 632v, 633	68 000

* See definitions in point 1.1

Europe-Table

2.7. Average specific CO₂ emissions of manufacturers, as referred to in Article 4

For each manufacturer the following average specific CO₂ emissions shall be calculated:

2.7.1. For the reporting periods 2019 to 2029:

$$CO_2(2025) = ZLEV \times \sum_{sg} share_{sg} \times MPW_{sg} \times avgCO_{2sg}$$

2.7.2. For the reporting periods as from 2025:

$$CO_2(NO) = \sum_{sg} share_{sg} \times MPW_{sg} \times avgCO_{2sg}$$

$$CO_2(MCO_2) = \sum_{sg} share_{sg} \times MPW_{sg} \times [avgCO_{2sg} \times (1 - pv_{sg}) + avgCO_2p_{sg} \times pv_{sg}]$$

$$CO_2(MZE) = \sum_{sg} share_{sg} \times MPW_{sg} \times (1 - zev_{sg}) \times rCO_{2sg}$$

$$CO_2(M) = CO_2(MCO_2) + CO_2(MZE)$$

Where,

\sum_{sg}	is the sum is over those sub-groups that are included in the calculation of the particular average specific CO ₂ emissions according to point 4.2;
$ZLEV$	is as determined in point 2.3;
$share_{sg}$	is as determined in point 2.4;
zev_{sg}	is as determined in point 2.4;
pv_{sg}	is as determined in point 2.4;
MPW_{sg}	is as determined in point 2.6;
$avgCO2_{sg}$	is as determined in point 2.2;
$avgCO2p_{sg}$	is as determined in point 2.2;
$rCO2_{sg}$	is as determined in point 3.1.2.

3. CALCULATION OF THE REFERENCE VALUES

3.1. Reference values

The following reference values shall be calculated on the basis of all new heavy-duty vehicles of all manufacturers for the reference period applicable to the sub-group sg according to point 3.2.

- 3.1.1. For each vehicle sub-group sg , payload $PL_{sg,mp}$, passenger number $PN_{sg,mp}$, passenger mass $PM_{sg,mp}$, technically permissible maximum payload $maxPL_{sg}$, technically permissible maximum passenger number $maxPN_{sg}$ and cargo volume CV_{sg} values shall be calculated as follows:

$$PL_{sg,mp} = \frac{\sum_v PL_{v,mp}}{rV_{sg}} \quad (\text{for vehicles of category N})^*$$

$$PN_{sg,mp} = \frac{\sum_v PN_{v,mp}}{rV_{sg}} \quad (\text{for vehicles of category M})^*$$

$$PM_{sg,mp} = \frac{\sum_v PM_{v,mp}}{rV_{sg}} \quad (\text{for vehicles of category M})^*$$

$$maxPL_{sg} = \frac{\sum_v maxPL_v}{rV_{sg}} \quad (\text{for vehicles of category N})$$

$$maxPN_{sg} = \frac{\sum_v maxPN_v}{rV_{sg}} \quad (\text{for vehicles of category M})$$

$$CV_{sg} = \frac{\sum_v CV_v}{rV_{sg}} \quad (\text{for vehicles of category O})$$

(*only for vehicle sub-groups, for which no explicit values for $PL_{sg,mp}$ or $PN_{sg,mp}$ are provided in point 2.5)

3.1.2. Reference CO₂ emissions $rCO2_{sg}$ referred to in Article 3 shall be calculated as follows:

$$rCO2_{sg} = \frac{\sum_v(CO2_v/PL_{sg})}{rV_{sg}} \text{ (for vehicles of category N and O)}$$

$$rCO2_{sg} = \frac{\sum_v(CO2_v/PN_{sg})}{rV_{sg}} \text{ (for vehicles of category M)}$$

$$rCO2p_{sg} = \frac{\sum_v(CO2p_v/PN_{sg})}{rV_{sg}} \text{ (for vehicles of category M)}$$

Where,

Σ_v is the sum over all new heavy-duty vehicles in the sub-group sg registered in the reference period applicable to sg according to point 3.2;

$CO2_v$ are the specific CO₂ emissions of the new heavy-duty vehicle v as determined in accordance with point 2.1, if applicable adjusted pursuant to Annex II;

$CO2p_v$ are the specific CO₂ emissions of the primary vehicle of the new-heavy duty vehicle v as determined in accordance with point 2.1, if applicable adjusted pursuant to Annex II;;

rV_{sg} is the number of all new heavy-duty vehicles in the sub-group sg registered in the reference period applicable to sg according to point 3.2;

PL_{sg} is the average payload of vehicles in the sub-group sg as determined in point 2.5;

PN_{sg} is the average passenger number of vehicles in the sub-group sg as determined in point 2.5;

$PL_{v,mp}$ is the payload of vehicle v in the mission profile mp , as determined from the data reported according to Articles 13a and 13b ;

$PN_{v,mp}$	is the passenger number of vehicle v in the mission profile mp as determined from the data reported according to Articles 13a and 13b;
$PM_{v,mp}$	is the passenger mass of vehicle v in the mission profile mp as determined from the data reported according to Articles 13a and 13b;
$maxPL_v$	is the technically permissible maximum payload of vehicle v as determined from the data reported according to Articles 13a and 13b;
$maxPN_v$	is the technically permissible maximum passenger number of vehicle v as determined from the data reported according to Articles 13a and 13b;
CV_v	is the cargo volume of vehicle v as determined from the data reported according to Articles 13a and 13b.

3.2. Reference periods applicable to sub-groups

The following reporting periods shall be applied as reference periods to vehicle sub-groups:

Vehicle sub-group sg	Reporting period of the year applicable as reference period
4-UD, 4-RD, 4-LH, 5-RD, 5-LH, 9-RD, 9-LH, 10-RD, 10-LH	2019
All others	2025

3.2.1. If in the reference period as specified in point 3.2 in a sub-group sg the number of new heavy-duty vehicles of all manufacturers is less than 50 the following rules shall apply:

The average specific CO₂ emissions $avgCO2_{sg}$ and $avgCO2p_{sg}$ as provided for in point 2.2 and the reference CO₂ emissions $rCO2_{sg}$ and $rCO2p_{sg}$ as provided for in point 3.1.2 shall be set to “0” for all manufacturers in the sub-group sg for the purpose of calculating the average specific CO₂ emissions according to point 2.7 and the specific CO₂ emissions targets according to point 4.1 for the reporting periods of the years $< Y + 5$. Here Y is the year of the first reporting period in which the number of new heavy-duty vehicles of all manufacturers in the sub-group sg is at least 50.

To obtain the reference CO2 emissions $rCO2_{sg}$ and $rCO2p_{sg}$ for the purpose of calculating the specific emissions target according to point 4, first the corresponding ~~entities~~ **values**⁶⁴ provided for in point 3.1.2 shall be calculated for the reporting period of the year Y instead of for the reference period applicable to the sub-group sg according to point 3.2.

The resulting values shall then be divided by

- the target factor $RET_{sg,Y}$, as defined in point 5.1.1, for obtaining reference CO2 emissions $rCO2_{sg}$,
- the target factor $RETP_{sg,Y}$, as defined in point 5.1.1, for obtaining reference CO2 emissions $rCO2p_{sg}$.

4. CALCULATION OF THE SPECIFIC EMISSION TARGET OF A MANUFACTURER REFERRED TO IN ARTICLE 6

4.1. Specific emission targets

For each manufacturer the following specific emission targets T shall be calculated as follows:

4.1.1. For the reporting periods of the years from 2025 to 2029:

$$T(2025) = \sum_{sg} share_{sg} \times MPW_{sg} \times (1 - rf_{sg}) \times rCO2_{sg}$$

4.1.2. For the reporting periods of the years as from 2030:

$$T(NO) = \sum_{sg} share_{sg} \times MPW_{sg} \times (1 - rf_{sg}) \times rCO2_{sg}$$

$$T(MCO2) = \sum_{sg} share_{sg} \times MPW_{sg} \times [(1 - pv_{sg}) \times (1 - rf_{sg}) \times rCO2_{sg} + pv_{sg} \times (1 - rfp_{sg}) \times rCO2p_{sg}]$$

$$T(MZE) = \sum_{sg} share_{sg} \times MPW_{sg} \times (1 - zevM_{sg}) \times rCO2_{sg}$$

$$T(M) = T(MCO2) + T(MZE)$$

Where,

\sum_{sg} is the sum over those sub-groups that are included in the calculation of the particular specific emissions target according to point 4.2;

$share_{sg}$ is as determined in point 2.4;

MPW_{sg} is as determined point 2.6;

⁶⁴ Error correction to the Commission proposal.

rf_{sg}	is the CO ₂ reduction target <i>applicable in</i> the specific <i>reporting period</i> to new heavy duty vehicles in sub-group sg as provided for in point 4.3;
rfp_{sg}	is the CO ₂ reduction target <i>applicable in</i> the specific <i>reporting period</i> to primary vehicles of new heavy-duty vehicles in sub-group sg as provided for in point 4.3;
$zevM_{sg}$	is the zero-emission vehicles mandate <i>applicable in</i> the specific <i>reporting period</i> to vehicles in sub-group sg as provided for in point 4.3;
$rCO2_{sg}$	is as determined in point 3.1.2;
$rCO2p_{sg}$	is as determined in point 3.1.2;
pV_{sg}	is as determined in point 2.4.

4.2. Vehicle sub-groups included in the calculation of average specific CO₂ emissions and specific emissions targets of manufacturers

The following sub-groups sg shall be included in the calculation of the specific CO₂ emissions $CO2(X)$, specific emissions targets $T(X)$ and CO₂ emissions trajectory $ET(X)_Y$:

X = 2025	X= NO	X = MCO2	X= MZE
vehicle sub-groups, subject to CO₂ emissions targets according to Article 3a paragraph 1 (a)	sub-groups of transport of goods vehicles, subject to CO₂ emissions targets according to Article 3a paragraphs 1(b), 1(c) and 1(d) and paragraph 3	sub-groups of transport of persons vehicles, subject to CO₂ emissions targets according to Article 3a paragraphs 1(b), 1(c) and 1(d)	sub-groups of transport of persons vehicles, subject to zero-emissions vehicle targets according to Article 3b <u>(Urban buses)⁶⁵</u>
4-UD, 4-RD, 4-LH, 5-RD, 5-LH, 9-RD, 9-LH, 10-RD, 10-LH	All vehicle sub-groups referred to in points 1.1.1 and 1.1.3.	32-C2, 32-C3, 32-DD, 34-C2, 34-C3, 34-DD,	31-LF, 31-L1, 31-L2, 31-DD, 33-LF, 33-L1, 33-L2, 33-DD, 35-FE, 39-FE

⁶⁵ **Linguistic clarification (also see footnote 28).**

4.3. CO₂ reduction targets and zero-emissions vehicle mandates

4.3.1. The following CO₂ emissions reduction targets rf_{sg} and rfp_{sg} pursuant to Article 3a shall apply to vehicles in the sub-group sg for different reporting periods:

CO ₂ reduction targets rf_{sg} and rfp_{sg}					
Sub-groups sg		Reporting period of the years			
		2025 – 2029	2030 – 2034	2035 – 2039	As from 2040
Medium lorries	53, 54	0	43%	64%	90%
Heavy lorries > 7,4t	1s, 1, 2, 3	0	43%	64%	90%
Heavy lorries > 16 t with 4x2 and 6x4 <u>6x2</u> ⁶⁶ axle configurations	4-UD, 4-RD, 4-LH, 5-RD, 5-LH, 9-RD, 9-LH, 10-RD, 10-LH	15%	43%	64%	90%
Heavy lorries > 16 t with special axle configurations	11, 12, 16	0	43%	64%	90%
Coaches (rf_{sg})	32-C2, 32-C3, 32-DD, 34-C2, 34-C3, 34-DD	0	43%	64%	90%
Primary vehicles of coaches (rfp_{sg})	32-C2, 32-C3, 32-DD, 34-C2, 34-C3, 34-DD	0	43%	64%	90%
Trailers		0	7,5%	7,5%	7,5%
Semi-trailers		0	15%	15%	15%

For reporting periods of the years before 2025, all CO₂ reduction targets rf_{sg} and rfp_{sg} shall be 0.

⁶⁶ Error correction to the Commission proposal

- 4.3.2. The following zero-emission vehicle targets $zevM_{sg}$ pursuant to Article 3b are applicable to vehicles in the sub-group sg for different reporting periods:

Zero-emission vehicle mandates $zevM_{sg}$					
Sub-groups sg		Reporting period of the years			
		before 2030	2030 – 2034	2035 – 2039	As from 2040
Urban heavy buses⁶⁷	31-LF, 31-L1, 31-DD, 33-LF, 33-L1, 33-DD, 35-FE, 39-FE, 31-L2, 33-L2	0	100%	100%	100%

5. EMISSION CREDITS AND DEBTS REFERRED TO IN ARTICLE 7

5.1. CO₂ emissions reduction trajectories

5.1.1. Target factors

For each vehicle sub-group sg and reporting period of a year Y target factors shall be defined as follows:

$$RET_{sg,Y} = (1 - rf_{sg,uY}) + (rf_{sg,uY} - rf_{sg,lY}) \times (uY - Y) / (uY - lY)$$

$$RETP_{sg,Y} = (1 - rfp_{sg,uY}) + (rfp_{sg,uY} - rfp_{sg,lY}) \times (uY - Y) / (uY - lY)$$

$$ZET_{sg,Y} = (1 - zevM_{sg,uY}) + (zevM_{sg,uY} - zevM_{sg,lY}) \times (uY - Y) / (uY - lY)$$

Where,

lY, uY are the values for the lower year and upper year in the set $\{rY, 2025, 2030, 2040\}$ defining the smallest intervall for which the condition $lY \leq Y < uY$ holds;

rY is the year of the reference period applicable to the vehicle sub-group sg according to point 3.2;

$rf_{sg,lY}, rf_{sg,uY}$ are the CO₂ reduction targets of the sub-group sg for new heavy duty vehicles of the years lY and uY according to point 4.3;

⁶⁷ **Linguistic clarification (also see footnote 28).**

$rfp_{sg,lY}$, $rfp_{sg,uY}$ are the CO₂ reduction targets of the sub-group sg for primary vehicles of new heavy duty vehicles of the years lY and uY according to point 4.3;

$zevM_{sg,lY}$, $zevM_{sg,uY}$ are the zero emissions vehicle mandates for new heavy duty vehicles of the years lY and uY according to point 4.3;

For reporting years $Y < rY$, the values of $RET_{sg,Y}$, $RETP_{sg,Y}$ and $ZET_{sg,Y}$ shall be set to 1 such that there is no contribution of the vehicle sub-group sg to the CO₂ emissions trajectory.

5.1.2. CO₂ emissions reduction trajectories

5.1.2.1. Then for each vehicle sub-group sg and reporting period of a year Y the following CO₂ emissions reduction trajectories shall be defined:

$$ET_{sg,Y} = RET_{sg,Y} \times rCO2_{sg}$$

$$ETp_{sg,Y} = RETp_{sg,Y} \times rCO2p_{sg}$$

$$ETz_{sg,Y} = ZET_{sg,Y} \times rCO2_{sg}$$

5.1.2.2. For each manufacturer and reporting periods of a year Y between 2019 and 2024 the following CO₂ emissions reduction trajectories shall be defined:

$$ET(2025)_Y = \sum_{sg} share_{sg} \times MPW_{sg} \times ET_{sg,Y}$$

5.1.2.3. For each manufacturer and reporting periods of a year Y between 2025 and 2040 the following CO₂ emissions reduction trajectories shall be defined:

$$ET(NO)_Y = \sum_{sg} share_{sg} \times MPW_{sg} \times ET_{sg,Y}$$

$$ET(MCO2)_Y = \sum_{sg} share_{sg} \times MPW_{sg} \times [(1 - pv_{sg}) \times ET_{sg,Y} + pv_{sg} \times ETp_{sg,Y}]$$

$$ET(MZE)_Y = \sum_{sg} share_{sg} \times MPW_{sg} \times ETz_{sg,Y}$$

$$ET(M)_Y = ET(MCO2)_Y + ET(MZE)_Y$$

Where,

\sum_{sg} is the sum over those sub-groups that are included in the calculation of the particular CO₂ emissions trajectory according to point 4.2;

$share_{sg}$ is the share of new heavy-duty vehicles of the manufacturer in the sub-group sg , as determined in point 2.4;

MPW_{sg} is as determined point 2.6;

$rCO2_{sg}$ is as determined in point 3.1.2;

$rCO2p_{sg}$ is as determined in point 3.1.2;

pv_{sg} is the share of new heavy-duty vehicles of the manufacturer within the sub-group sg , which pursuant to Article 7b shall be accounted for with the CO₂ emissions of their

primary vehicles in the calculation of the average specific CO₂ emissions of point 2.2

5.2. Calculation of the emission credits and debts in each reporting period

For each manufacturer and each reporting period of the years Y from 2019 to 2040 the emission credits $cCO_2(X)_Y$ and emission debts $dCO_2(X)_Y$, ($X = NO, M$), shall be the maximum of the following values and 0 (i.e. emission credits and debts cannot be negative):

	$2019 \leq Y < 2025$	$2025 \leq Y < 2030$	$2030 \leq Y < 2040$
$cCO_2(NO)_Y$	$[ET(2025)_Y - CO_2(2025)_Y] \times V_Y$	$[ET(NO)_Y - CO_2(NO)_Y] \times V_Y$	$[ET(NO)_Y - CO_2(NO)_Y] \times V_Y$
$dCO_2(NO)_Y$	0	$[CO_2(2025)_Y - T(2025)_Y] \times V_Y$	$[CO_2(NO)_Y - T(NO)_Y] \times V_Y$
$cCO_2(M)_Y$	0	$[ET(M)_Y - CO_2(M)_Y] \times V_Y$	$[ET(M)_Y - CO_2(M)_Y] \times V_Y$
$dCO_2(M)_Y$	0	0	$[CO_2(M)_Y - T(M)_Y] \times V_Y$

Where,

$ET(X)_Y$ is the manufacturer's emission trajectory in the **reporting period of the** year Y determined in accordance with point 5.1 ($X = 2025, NO, M$);

$CO_2(X)_Y$ is the manufacturer's average specific emissions in the **reporting period of the** year Y determined in accordance with point 2.7 ($X = 2025, NO, M$);

$T(X)_Y$ is the manufacturer's specific emission target in the **reporting period of the** year Y determined in accordance with point 4 ($X = 2025, NO, M$);

V_Y is the number of new heavy-duty vehicles of the manufacturer in the **reporting period of the** year Y .

5.3. Emission debt limit

For each manufacturer the emission debt limits $limCO_2(X)_Y$ in a reporting period of the year Y are defined as follows:

$limCO_2(NO)_Y = T(2025)_Y \times 0,05 \times V(2025)_Y$ for the reporting periods of the year $Y < 2030$;

$limCO_2(NO)_Y = T(NO)_Y \times 0,05 \times V(NO)_Y$ for the reporting periods of the year $Y \geq 2030$;

$\lim CO_2(M)_Y = T(M)_Y \times 0,05 \times V(M)_Y$ for the reporting periods of the year $Y \geq 2030$.

Where

$T(X)_Y$ is the manufacturer's specific emission target in the **reporting period of the** year Y determined in accordance with point 4 ($X = 2025, NO, M$);

$V(X)_Y$ is the number of new heavy-duty vehicles of the manufacturer in the **reporting period of the** year Y in the vehicle sub-groups, which are included in the calculation of the specific CO₂ emissions $CO_2(X)$ according to point 4.2 ($X = 2025, NO, M$).

5.4. Early emission credits

Emission debts acquired **for the reporting periods of the** year 2025 shall be reduced by an amount corresponding to the emission credits acquired prior to **this reporting period**, which is determined for each manufacturer as follows:

$$redCO_2 = \min(dCO_2(NO)_{2025}; \sum_{Y=2019}^{2024} cCO_2(NO)_Y)$$

Where,

\min is the minimum of the two values mentioned between the brackets;

$\sum_{Y=2019}^{2024}$ is the sum over the **reporting periods of the years Y from** 2019 to 2024;

$dCO_2(NO)_Y$ is the emission debts for **reporting period of the year Y** as determined in accordance with point 5.2;

$cCO_2(NO)_Y$ is the emission credits for the **reporting period of the** year Y as determined in accordance with point 5.2;.

6. DETERMINATION OF A MANUFACTURER'S EXCESS CO₂ EMISSIONS REFERRED TO IN ARTICLE 8(2)

For each manufacturer and each *reporting period* of the year Y from *the year* 2025 onwards the value of the vehicle category specific excess CO₂ emissions $exeCO_2(X)_Y$ shall be determined as follows. if the value is positive (X = NO, M). If the following calculations result in a negative value for $exeCO_2(X)_Y$, the latter shall be set to 0.

For the *reporting period of* the year 2025:

$$exeCO_2(NO)_{2025} = dCO_2(NO)_{2025} - \sum_{Y=2019}^{2024} cCO_2(NO)_Y - limCO_2(NO)_{2025}$$

For the reporting periods of the years Y from 2026 to 2028, from 2030 to 2033 and from 2035 to 2038:

$$exeCO_2(NO)_Y = \sum_{I=2025}^Y (dCO_2(NO)_I - cCO_2(NO)_I) -$$

$$\sum_{J=2025}^{Y-1} exeCO_2(NO)_J - redCO_2 - limCO_2(NO)_Y$$

For the reporting periods of the years Y from from 2030 to 2033 and from 2035 to 2038:

$$exeCO_2(M)_Y = \sum_{I=2025}^Y (dCO_2(M)_I - cCO_2(M)_I) -$$

$$\sum_{J=2030}^{Y-1} exeCO_2(M)_J - limCO_2(M)_Y$$

For the reporting period of the years Y = 2029, 2034 and 2039:

$$exeCO_2(NO)_Y = \sum_{I=2025}^Y (dCO_2(NO)_I - cCO_2(NO)_I) - \sum_{J=2025}^{Y-1} exeCO_2(NO)_J - redCO_2$$

For the reporting period of the years Y = 2034 and 2039:

$$exeCO_2(M)_Y = \sum_{I=2025}^Y (dCO_2(M)_I - cCO_2(M)_I) - \sum_{J=2030}^{Y-1} exeCO_2(M)_J$$

For the reporting periods of the year 2040:

$$exeCO_2(NO)_{2040} = (CO_2(NO)_{2040} - T(NO)_{2040}) \times V_{2040} +$$

$$\sum_{I=2025}^{2039} (dCO_2(NO)_I - cCO_2(NO)_I) - \sum_{J=2025}^{2039} exeCO_2(NO)_J - redCO$$

$$exeCO2(M)_{2040} = (CO2(M)_{2040} - T(M)_{2040}) \times V_{2040} +$$

$$\sum_{I=2025}^{2039} (dCO2(M)_I - cCO2(M)_I) - \sum_{J=2030}^{2039} exeCO2(M)_J$$

For the reporting periods of the years $Y > 2040$:

$$exeCO2(NO)_Y = (CO2(NO)_Y - T(NO)_Y) \times V_Y$$

$$exeCO2(M)_Y = (CO2(M)_Y - T(M)_Y) \times V_Y$$

Where,

$\sum_{Y=2019}^{2024}$ is the sum over the *reporting periods of the years Y from 2019 to 2024*;

$\sum_{I=2025}^Y$ is the sum over the *reporting periods of the years I from 2025 to the year Y*;

$\sum_{J=2025}^{Y-1}$ is the sum over the *reporting periods of the years J from 2025 to the year (Y-1)*;

$\sum_{I=2025}^{2039}$ is the sum over the *reporting periods of the years I from 2025 to 2039*;

$\sum_{J=2030}^{Y-1}$ is the sum over the reporting periods of the years J from 2030 to the year (Y-1);

$dCO2(X)_Y$ is the emission debts for the *reporting period of the year Y* as determined in accordance with point 5.2 (X = NO, M);

$cCO2(X)_Y$ is the emission credits for the *reporting period of the year Y* as determined in accordance with point 5.2 (X = NO, M);

$limCO2(X)_Y$ is the emission debt limit as determined in accordance with point 5.3 (X = NO, M);

$redCO2(X)$ is the reduction of emission debts of the *reporting period of the year 2025* as determined in accordance with 5.4 (X = NO, M).

In all other cases the value of the excess emissions $exeCO2(X)_Y$ shall be set to 0 (X = NO, M).

The excess CO2 emissions of the reporting period of the year Y as referred to in Article 8(2) shall be:

$$exeCO2_Y = exeCO2(NO)_Y + exeCO2(M)_Y$$

Adjustment procedures referred to in Article 11

1. ADJUSTMENT OF REFERENCE CO₂ EMISSIONS FOLLOWING AN AMENDMENT OF THE TYPE APPROVAL PROCEDURES REFERRED TO IN ARTICLE 11(2)

Following an amendment of the type approval procedures referred to in Article 11(2), the reference CO₂ emissions referred to in Point 3.1.2 of Annex I shall be recalculated.

For this purpose the CO₂ emissions in g/km of new heavy-duty vehicles v of the reference period and of their primary vehicles determined for a mission profile mp , as referred to in point 2.1 of Annex I, shall be adjusted as follows:

$$CO2_{v,mp} = CO2(RP)_{v,mp} \cdot (\sum_r s_{r,sg} \cdot CO2_{r,mp}) / (\sum_r s_{r,sg} \cdot CO2(RP)_{r,mp})$$

$$CO2p_{v,mp} = CO2p(RP)_{v,mp} \cdot (\sum_r s_{r,sg} \cdot CO2p_{r,mp}) / (\sum_r s_{r,sg} \cdot CO2p(RP)_{r,mp})$$

Where

\sum_r is the sum over all representative vehicles r for the sub-group sg ;

sg is the sub-group to which the vehicle v belongs;

$s_{r,sg}$ is the statistical weight of the representative vehicle r in the sub-group sg ;

$CO2(RP)_{v,mp}$ is the specific CO₂ emissions of vehicle v in g/km, as determined on mission profile mp and based on the monitoring data of the reference period;

$CO_2(RP)_{r,mp}$	is the specific CO ₂ emissions of the representative vehicle r in g/km, as determined on mission profile mp in accordance with Regulation (EC) No 595/2009 and its implementing measures as it was applied in the reference period;
$CO_{2r,mp}$	is the specific CO ₂ emissions of the representative vehicle r , as determined on mission profile mp in accordance with Regulation (EC) No 595/2009 and its implementing measures according to the amendments referred to in Article 11(3)(a);
$CO_{2p}(RP)_{v,mp}$	is the specific CO ₂ emissions of the primary vehicle of the heavy-duty vehicle v in g/km, as determined on mission profile mp and based on the monitoring data of the reference period;
$CO_{2p}(RP)_{r,mp}$	is the specific CO ₂ emissions of the primary vehicle of the representative vehicle r in g/km, as determined in accordance with Regulation (EC) No 595/2009 and its implementing measures as it was applied in the reference period;
$CO_{2pr,mp}$	is the specific CO ₂ emissions of the primary vehicle of the representative vehicle r , as determined on mission profile mp in accordance with Regulation (EC) No 595/2009 and its implementing measures according to the amendments referred to in Article 11(3)(a).

The specific CO₂ emissions shall be normalised pursuant to Annex III using those values for the parameters referred to in Article 14(1), point (f), that are applicable in the reporting period referred to in Article 11(2), point (a).

The representative vehicles shall be defined in accordance with the methodology referred to in Article 11(3).

2. APPLICATION OF THE ADJUSTED REFERENCE CO₂ EMISSIONS ACCORDING TO ARTICLE 11(2)

If in the reporting period of the year *Y* the specific CO₂ emissions of some new heavy-duty vehicles of a manufacturer have been determined with amendments referred to in Article 11(2), the reference CO₂ emissions rCO_{2sg} ⁶⁸ of the vehicle sub-group *sg* used in points 4 and 5.1 of Annex I shall be calculated as follows:

$$rCO_{2sg} = \sum_i V_{sg,i} / V_{sg} \times rCO_{2sg,i}$$

where:

\sum_i is the sum over

- for $i = 1$: the non-amended procedure for determining the CO₂ emissions, for which the initial reference CO₂ emissions without adjustments are applicable and
- for $i \geq 1$: all subsequent amendments referred to in Article 11(2).

V_{sg} is the number of new heavy-duty vehicles of the manufacturer in the reporting period of the year *Y* and the vehicle sub-group *sg*;

$V_{sg,i}$ is the number of new heavy-duty vehicles of the manufacturer in the reporting period of the year *Y* and in the vehicle sub-group *sg*, the specific CO₂ emissions of which have been determined with the amendment *i*;

$rCO_{2sg,i}$ are:

- for $i = 0$: the non-adjusted reference CO₂ emissions
- for $i \geq 1$: the reference CO₂ emissions that have been determined for the vehicle sub-group *sg* with the amendment *i*.

⁶⁸ **Error correction to the Commission proposal**

Normalisation of specific CO₂ emissions of new heavy-duty vehicles referred to in Article 4

1. NORMALISATION OF SPECIFIC CO₂ EMISSIONS

For the purposes of the calculation in point 2.1 of Annex I, the values of CO₂ emissions $CO2_{v,mp}$ of vehicles are normalised as follow:

$$CO2_{v,mp} = reportCO2_{v,mp} + \Delta CO2_{v,mp}(m) + \Delta CO2_{cv_{v,mp}}$$

$$m = PL_{sg,mp} - PL_{v,mp} + cCW_v \quad (\text{for vehicles of categories N and O})$$

$$m = PM_{sg,mp} - PM_{v,mp} + cCW_v \quad (\text{for vehicles of category M})$$

Where

$CO2_{v,mp}$ are the normalised CO₂ emissions of the vehicle v determined for a mission profile mp that are to be considered in the calculation of Annex I point 2.1;

$reportCO2_{v,mp}$ are the CO₂ emissions in g/km of the primary vehicle of a new heavy-duty vehicle v determined for a mission profile mp and reported in accordance with Articles 13a and 13b;

$\Delta CO2_{v,mp}(m)$ is to be determined in accordance with point 3;

$\Delta CO2_{cv_{v,mp}}$ is to be determined in accordance with point 4;

$PL_{v,mp}$ is the payload of vehicle v in the mission profile mp , as determined from the data reported according to Articles 13a and 13b ;

⁶⁹ **Error correction to the Commission proposal (see also footnotes 52, 53, 57).**

$PL_{sg,mp}$	is the payload for sub-group sg and mission profile mp as provided for in point 2.5 of Annex I;
$PM_{v,mp}$	is the passenger mass of vehicle v in the mission profile mp , as determined from the data reported according to Articles 13a and 13b;
$PM_{sg,mp}$	is the passenger mass for sub-group sg and mission profile mp as provided for in point 2.5 of Annex I;
cCW_v	is the correction of the curb weight of the vehicle v according to point 2.

2. CURB WEIGHT NORMALISATION

Since the transport utility of a vehicle increases with its technically permissible maximum payload or passenger number, but for technical reasons higher values for these parameters are correlated with higher curb weights and therefore higher CO₂ emissions, the following correction of the curb weight of a vehicle v in sub-group sg for the purpose of the normalisation of its specific CO₂ emissions according to point 1 shall be applied:

$$cCW_v = a_{sg} \cdot (maxPL_{sg} - maxPL_v) \quad \text{for vehicles of category N and O;}$$

$$cCW_v = a_{sg} \cdot (maxPN_{sg} - maxPN_v) \quad \text{for vehicles of category M;}$$

Where

a_{sg}	is a linear coefficient determined according to point 2.1 for the reporting period of the vehicle v ;
$maxPL_v$	is the technically permissible maximum payload of vehicle v as determined from the data reported according to Articles 13a and 13b;
$maxPN_v$	is the technically permissible maximum passenger number of vehicle v as determined from the data reported according to Articles 13a and 13b;

$maxPL_{sg}$	is the technically permissible maximum payload of vehicle sub-group sg determined according to point 2.5 of Annex I;
$maxPN_{sg}$	is the technically permissible maximum passenger number of vehicle sub-group sg determined according to point 2.5 of Annex I.

2.1. Determination of normalisation parameters

For each reporting period the parameters a_{sg} and b_{sg} shall be determined with a linear regression analysis of the correlation of the values of CW_v with the values of $maxPL_v$ (category N and O vehicles) and $maxPN_v$ (category M vehicles), considering all newly registered vehicles v in the sub-group sg :

$$CW_v \approx a_{sg} \cdot maxPL_v + b_{sg} \quad \text{for vehicles of category N and O;}$$

$$CW_v \approx a_{sg} \cdot maxPN_v + b_{sg} \quad \text{for vehicles of category M.}$$

Where

CW_v	is the curb weight of vehicle v , as determined from the data reported according to Articles 13a and 13b; if no precise value is available it may be approximated by the corrected actual mass of the vehicle v
$maxPL_v$	is the technically permissible maximum payload of vehicle v as determined from the data reported according to Articles 13a and 13b;
$maxPN_v$	is the technically permissible maximum passenger number of vehicle v as determined from the data reported according to Articles 13a and 13b;.

3. CHANGE OF CO₂ EMISSIONS FOR CHANGE IN TOTAL VEHICLE MASS

The ex-post change of CO₂ emissions of a vehicle v to be determined for a mission profile mp due to an ex-post change in the total mass to be attributed to the vehicle for the determination of CO₂ emissions is defined by the following linear approximation:

$$\Delta CO_{2v,mp}(m) = m \cdot (CO_{2v,r} - CO_{2v,l}) / (Mr - Ml)$$

Where:

m	is the change of total mass attributed to the vehicle v for the determination of its CO ₂ emissions;
$CO_{2v,r}$	are the CO ₂ emissions of the vehicle v in g/km, without the change of mass, determined for the same mission profile mp , representative loading conditions;
$CO_{2v,l}$	are the CO ₂ emissions of the vehicle v in g/km, without the change of mass, determined for the same mission profile mp , low loading conditions;
Mr	is the total vehicle mass in simulation, without the change of mass, for the same mission profile mp , representative loading conditions;
Ml	is the total vehicle mass in simulation, without the change of mass, for the same mission profile mp , low loading conditions.

4. NORMALISATION FOR DIFFERENT CARGO VOLUMES

Category O vehicles within the same sub-group have different cargo volumes. Since the transport utility of a vehicle increases with the cargo volume, but for technical reasons such increase is also correlated with higher CO₂ emissions, the following correction of the CO₂ emissions of a vehicle v in sub-group sg shall be applied:

$$\Delta CO2_{cv_{v,mp}} = a_{sg,mp} \cdot (CV_{sg} - CV_v)$$

Where

$a_{sg,mp}$ is a linear coefficient determined according to point 4.1 for the reporting period of the vehicle v ;

CV_v is the cargo volume of vehicle v as determined from the data reported according to Articles 13a and 13b;

CV_{sg} is the cargo volume of vehicle sub-group sg determined according to point 2.5 of Annex I.

For vehicle of categories N and M the correction of CO₂ emissions $\Delta CO2_{cv_{v,mp}}$ shall be 0.

4.1. Determination of normalisation parameters

For each reporting period and mission profile the parameters $a_{sg,mp}$ and $b_{sg,mp}$ shall be determined with a linear regression analysis of the correlation of the values of [$reportCO2_{v,mp} + \Delta CO2_{v,mp}(m)$] with the values of CV_v , considering all newly registered vehicles v in the sub-group sg :

$$reportCO2_{v,mp} + \Delta CO2_{v,mp}(m) \approx a_{sg,mp} \cdot CV_v + b_{sg,mp}$$

Where

CV_v is the cargo volume of vehicle v as determined from the data reported according to Articles 13a and 13b;

$reportCO2_{v,mp}$, $\Delta CO2_{v,mp}(m)$ are as defined in point 1.'

Europe-Table

Rules on data to be monitored and reported as referred to in Articles 13a and 13b

PART A: DATA TO BE MONITORED AND REPORTED BY MEMBER STATES

- (a) vehicle identification numbers of all new heavy-duty vehicles as referred to in Article 2 that are registered in the Member State territory;
- (b) manufacturer name;
- (c) make (trade name of manufacturer);
- (d) the code for the bodywork as specified in entry 38 of the certificate of conformity, including, where applicable, the supplementing digits referred to in Annex I Appendix 2 to Regulation (EU) 2018/858;
- (e) in the case of the heavy-duty vehicles referred to in Article 2, first paragraph, point (a) or (b), the information on the powerplant specified in entries 23, 23.1 and 26 of the certificate of conformity;
- (f) the maximum speed of the vehicle as specified in entry 29 of the certificate of conformity;
- (g) the stage of completion, as indicated in the chosen model of the certificate of conformity in accordance with Annex VIII, point 2 to Commission Implementing Regulation (EU) 2020/683;
- (h) the vehicle category as specified in entry 0.4 of the certificate of conformity;
- (i) the number of axles, as specified in entry 1 of the certificate of conformity;
- (j) the technically permissible maximum laden mass, as specified in entry 16.1 of the certificate of conformity;
- (k) the imprint of the cryptographic hash of the manufacturer's records file as specified in entry 49.1 of the certificate of conformity; for vehicles registered until 30 June 2025 Member States may report only the first 8 characters of the cryptographic hash;
- (l) the specific CO₂ emissions as specified in entry 49.5 of the certificate of conformity;
- (m) the average payload value as specified in entry 49.6 of the certificate of conformity;
- (n) the date of registration;
- (o) for special purpose vehicles their designation as specified in entry 51 of the certificate of conformity;

⁷⁰ **Correction of error to the Commission proposal (see also footnotes 52, 53, 57, 69).**

- (p) **the number of powered axles, as specified in entry 3 of the certificate of conformity**⁷¹
- (p q) for vehicles approved under Article 2(3)(b) of Regulation 2018/858, the information that the vehicle was designed and constructed or adapted for use by civil protection fire services and forces responsible for maintaining public order;
- (q-r) for vehicles registered for use by civil protection, fire services or forces responsible for maintaining public order or for use by the armed services, the confirmation that the vehicle is registered for use by civil protection, fire services or forces responsible for maintaining public order or for use by the armed services and that it fulfils the conditions set out in Article 2 paragraph 5 of this Regulation. For all vehicles including individually approved vehicles, the corresponding information shall be the information as to be provided in the EU certificate of conformity or EU individual vehicle approval certificate or the national individual approval certificate in accordance with the templates laid down in Commission Implementing Regulation (EU) 2020/683⁷² regardless of any national exemptions applicable under Article 45(1) of Regulation (EU) 2018/858.

PART B: DATA TO BE REPORTED BY MANUFACTURERS AND OTHER ENTITIES

In accordance with Article 13b, each reporter shall report the following data for those vehicles, for which it is obliged to produce a Manufacturer's Records File (MRF) or Vehicle Information File (VIF) according to the provisions of Regulations 2017/2400 (EU) and Commission Implementing Regulation (EU) 2022/1362⁷³.

For vehicles referred to in Part A, points (p) and (q) of Annex IV the manufacturer referred to in Article 7a shall also inform the Commission in accordance with Article 2(4) and (5), if the vehicle which would otherwise be exempted from the obligations laid down in Article 3a, shall not be exempted from those obligations.

⁷¹ **Correction of error to the Commission proposal; this entry was added to the existing Regulation 2018/956 with effect from 22.2.2022 and should have been taken over unchanged.**

⁷² 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 of 26.5.2020, p.1.

⁷³ 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.

Vehicle categories / sub-groups ⁷⁴	Reporters			
	Primary vehicle manufacturer ⁽¹⁾	Interim vehicle manufacturer ⁽²⁾	Vehicle manufacturer	Designated technical service ⁽⁸⁾
N / all	Not applicable	Not applicable	<ul style="list-style-type: none"> – MRF⁽⁴⁾ – Additional information* 	Not applicable
M / all	<ul style="list-style-type: none"> – VIF^{(4) (5)} – MRF^{(4) (6)} – Additional information* of the primary vehicle. 	Not applicable	<ul style="list-style-type: none"> – VIF^{(4) (7)} – MRF^{(4) (7)} – Additional information* of the complete or completed vehicle. 	Not applicable
O / all	Not applicable	Not applicable	<ul style="list-style-type: none"> – MRF⁽⁹⁾ – Additional information* 	<ul style="list-style-type: none"> – MRF⁽⁹⁾ – Additional information*

⁽¹⁾ Article 3(29) of Commission Regulation (EU) 2017/2400.

⁽²⁾ Article 3(31) of Commission Regulation (EU) 2017/2400

⁽³⁾ Article 3(4a) of Commission Regulation (EU) 2017/2400

⁽⁴⁾ Article 9(2) of Commission Regulation (EU) 2017/2400

⁽⁵⁾ Point 2.3 of Annex I to Commission Regulation (EU) 2017/2400

⁽⁶⁾ Point 2.4 of Annex I to Commission Regulation (EU) 2017/2400

⁽⁷⁾ Point 2.7.5 of Annex I to Commission Regulation (EU) 2017/2400

⁽⁸⁾ Article 8(6) of Commission Implementing Regulation (EU) 2022/1362

⁽⁹⁾ Article 8(7) of Commission Implementing Regulation (EU) 2022/1362

***Additional Information:**

No	Monitoring parameter	Source	Applicable to vehicles
15	Make (trade name of manufacturer)		All
24	Name and address of transmission manufacturer	Point 0.4 of the model of a certificate of a component, separate technical unit or system of Appendix 1 to Annex VI to Regulation (EU) 2017/2400	Category N; Category M: primary vehicle only;
25	Make (trade name of transmission manufacturer)	Point 0.1 of the model of a certificate of a component, separate technical unit or system of Appendix 1 to Annex VI to Regulation (EU) 2017/2400	Category N; Category M: primary vehicle only;
32	Name and address of axle manufacturer	Point 0.4 of the model of a certificate of a component, separate technical unit or system of Appendix 1 to Annex VII to Regulation (EU) 2017/2400	Category N; Category M: primary vehicle only; Category O;
33	Make (trade name of axle manufacturer)	Point 0.1 of the model of a certificate of a component, separate technical unit or system of Appendix 1 to Annex VII to Regulation (EU) 2017/2400	Category N; Category M: primary vehicle only; Category O;
39	Name and address of tyre manufacturer	Point 1 of the model of a certificate of a component, separate technical unit or system of Appendix 1 to Annex X to Regulation (EU) 2017/2400	Category N; Category M: primary vehicle only; Category O;
40	Make (trade name of tyre manufacturer)	Point 3 of the model of a certificate of a component, separate technical unit or system of Appendix 1 to Annex X to Regulation (EU) 2017/2400	Category N; Category M: primary vehicle only; Category O;
72	Number of license to operate the simulation tool		All
75	CO ₂ mass emission of the engine over WHTC (8) (g/kWh)	Point 1.4.2 of the addendum to Appendix 5, or point 1.4.2 of the addendum to Appendix 7, to Annex I to Regulation (EU) No 582/2011, whichever is applicable	Category N; Category M: primary vehicle only;
76	Fuel consumption of the engine over WHTC (g/kWh)	Point 1.4.2 of the addendum to Appendix 5, or point 1.4.2 of the addendum to Appendix 7, to Annex I to Regulation (EU) No 582/2011, whichever is applicable	Category N; Category M: primary vehicle only;

77	CO2 mass emission of the engine over WHSC (9) (g/kWh)	Point 1.4.1 of the addendum to Appendix 5, or point 1.4.1 of the addendum to Appendix 7, to Annex I to Regulation (EU) No 582/2011, whichever is applicable	Category N; Category M: primary vehicle only;
78	Fuel consumption of the engine over WHSC (g/kWh)	Point 1.4.1 of the addendum to Appendix 5, or point 1.4.1 of the addendum to Appendix 7, to Annex I to Regulation (EU) No 582/2011, whichever is applicable	Category N; Category M: primary vehicle only;
101	For vehicles with a date of simulation as of 1 July 2020, the type-approval number of the engine	Point 1.2.1. of addendum to Appendix 5, 6 or 7 to Annex I to Regulation (EU) No 582/ 2011, whichever is applicable	Category N; Category M: primary vehicle only;
102	For vehicles with a date of simulation as of 1 July 2021, the comma separated values file of the same name as the job file and with an extension.vsum comprising aggregated results per simulated mission profile and payload condition	File generated by the simulation tool referred to in Article 5(1)(a) of Regulation (EU) 2017/2400 in its graphical user interface (GUI) version	'sum-exec-data file all' ⁷⁵

PART C: AIR DRAG VALUE (CDxA) RANGES FOR THE PURPOSE OF PUBLICATION IN ACCORDANCE WITH ARTICLE 13c

For the purpose of making publicly available the CdxA value specified in data entry 23 in accordance with Article 13c, the Commission shall use the ranges defined in the following table containing the corresponding range for each CdxA value:

Range	CdxA value [m2]	
	Min CdxA (CdxA ≥ min CdxA)	Max CdxA (CdxA < MaxCdxA)
A1	0,00	3,00
A2	3,00	3,15
A3	3,15	3,31

⁷⁵ Correction of error to the Commission proposal.

A4	3,31	3,48
A5	3,48	3,65
A6	3,65	3,83
A7	3,83	4,02
A8	4,02	4,22
A9	4,22	4,43
A10	4,43	4,65
A11	4,65	4,88
A12	4,88	5,12
A13	5,12	5,38
A14	5,38	5,65
A15	5,65	5,93
A16	5,93	6,23
A17	6,23	6,54
A18	6,54	6,87
A19	6,87	7,21
A20	7,21	7,57
A21	7,57	7,95
A22	7,95	8,35
A23	8,35	8,77
A24	8,77	9,21

Europe-Table

Data reporting and management referred to in Articles 13a to 13c

1. REPORTING BY MEMBER STATES

- 1.1. The data specified in Part A of Annex IV shall be transmitted in accordance with Article 13a by the contact point of the competent authority via electronic data transfer to the Agency.

The contact point shall notify the Commission and the Agency when the data are transmitted by email to the following addresses:

EC-CO2-HDV-IMPLEMENTATION@ec.europa.eu

and

HDV-monitoring@eea.europa.eu

2. REPORTING BY MANUFACTURERS

- 2.1. Manufacturers shall notify the Commission without delay the following information:

- (a) the manufacturer name indicated in the certificate of conformity or individual approval certificate;
- (b) the World Manufacturer Identifier code (WMI code) as defined in Commission Regulation (EU) No 19/2011⁷⁶ to be used in the vehicle identification numbers of new heavy-duty vehicles to be placed on the market;
- (c) the contact point responsible for uploading the data to the Agency.

They shall notify the Commission without delay of any changes to that information.

The notifications shall be sent to the addresses referred to in point 1.1.

⁷⁶ Commission Regulation (EU) No 19/2011 of 11 January 2011 concerning type-approval requirements for the manufacturer's statutory plate and for the vehicle identification number of motor vehicles and their trailers and implementing Regulation (EC) No 661/2009 of the European Parliament and of the Council concerning type-approval requirements for the general safety of motor vehicles, their trailers and systems, components and separate technical units intended therefor (OJ L 8, 12.1.2011, p. 1).

- 2.2. The data specified in Part B, point 2 of Annex I shall be transmitted in accordance with Article 13b by the contact point of the manufacturer via electronic data transfer to the Agency.

The contact point shall notify the Commission and the Agency when the data are transmitted by email to the addresses referred to in point 1.1.

3. DATA PROCESSING

- 3.1. The Agency shall process the data transmitted in accordance with points 1.1 and 2.2 and shall record the processed data in the register.
- 3.2. The data relating to heavy-duty vehicles registered in the preceding reporting period and recorded in the register shall be made public by 30 April each year, with the exception of the following data entries:
- 3.2.1. vehicle identification number;
 - 3.2.2. name and address of the transmission manufacturer;
 - 3.2.3. make (trade name of transmission manufacturer;
 - 3.2.4. name and address of axle manufacturer;
 - 3.2.5. make (trade name of axle manufacturer;
 - 3.2.6. name and address of tyre manufacturer;
 - 3.2.7. make (trade name of tyre manufacturer;
 - 3.2.8. engine model;
 - 3.2.9. transmission model;
 - 3.2.10. retarder model;
 - 3.2.11. torque converter model;
 - 3.2.12. angle drive model;
 - 3.2.13. axel model;
 - 3.2.14. air drag model;
 - 3.2.15. comma separated values file of the same name as the job file and with an extension.vsum comprising aggregated results per simulated mission profile and payload condition.
- 3.3. Where a competent authority or manufacturers identify errors in the data submitted, they shall without delay notify those to the Commission and the Agency by submitting an error notification report to the Agency and by email sent to the addresses referred to in point 1.1.
- 3.4. The Commission shall with the support of the Agency verify the notified errors and, where appropriate, correct the data in the register.

3.5. The Commission, with the support of the Agency, shall make available electronic formats for the data transmissions referred to in points 1.1 and 2.2 in due time before the transmission deadlines.

Europe Table

ANNEX VI
CORRELATION TABLE

Regulation (EU) 2018/956

Regulation (EU) 2018/956	This Regulation
Article 1	Article 1(2)
Article 2	Article 2
Article 3	Article 3
Article 4	Article 13a
Article 5	Article 13b
Article 6	Article 13c
Article 7	Article 13d
Article 8	Article 13e
Article 9	Article 13f
Article 10	-
Article 11	Article 14
Article 12	Article 16
Article 13	Article 17
Article 14	-
Annex I	Annex IV
Annex II	Annex V'