



# Special Purpose Vehicles

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# Special Purpose Vehicles.

Issues today:

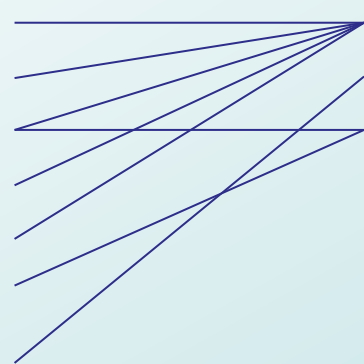


- Should an ambulance stop if AdBlue is empty?
- Why are police cars not treated like ambulances?
- Should I repeat an emission test, if e.g. daylight running lamps can be deactivated in police cars?

Today's exemptions:

in the context of emissions (definition list, see R.E.3)

- Special Purpose Vehicle
- Motor caravan
- Armoured vehicle
- Ambulance
- Hearse
- Wheelchair accessible vehicle
- Vehicles for rescue services, armed services, civil defence, ... (not defined in R.E.3)



- R83 exemption reference mass.
- R83 exemption driver inducement system.
- R51 different limits in noise regulation.
- ...

Non-exhaustive list of examples

Proposals to proceed:

1. Definition list of special purpose vehicles in R.E.3 to be completed and extended (e.g. wheelchair accessible vehicles, police cars).
2. Guidance: Exempt special purpose vehicles, if they cannot meet the requirement due to their special purpose, e.g. weight, safety...
3. Exemptions are spread over the regulations and could be simplified. But leave complexity where the special purpose needs it.



# Definition list of special purpose vehicles in R.E.3

R.E.3	Possible Amendment R.E.3	Justification / Motivation
<p><b>Paragraph 2.5.</b> 2.5. "Special purpose vehicle": A vehicle of category M, N or O for conveying passengers or goods and for performing a special function for which special body arrangements and/or equipment are necessary.</p> <p>2.5.1. "Motor caravan": A special purpose M1 category vehicle constructed to include accommodation space which contains at least the following equipment:</p> <ul style="list-style-type: none"><li>(a) Seats and table;</li><li>(b) Sleeping accommodation which may be converted from the seats;</li><li>(c) Cooking facilities; and</li><li>(d) Storage facilities.</li></ul> <p>This equipment shall be rigidly fixed to the living compartment; however, the table may be designed to be easily removable.</p> <p>2.5.2. "Armoured vehicle": Vehicle intended for the protection of conveyed passengers and/or goods and complying with armour plating anti-bullet requirements.</p> <p>2.5.3. "Ambulance": Motor vehicle of category M intended for the transport of sick or injured people and having special equipment for such purpose.</p> <p>2.5.4. "Hearse": Motor vehicle intended for the transport of deceased people and having special equipment for such purpose.</p>	<p><b>Paragraph 2.5.</b> 2.5. "Special purpose vehicle": A vehicle of category M, N or O for conveying passengers or goods and for performing a special function for which special body arrangements and/or equipment are necessary. <b>As follows:</b> [...]</p> <p>2.5.5. "Government and special services vehicle": Motor vehicle of category M, N or O designed and constructed for use by the rescue services, armed services, civil defence, fire services and forces responsible for maintaining public order. These vehicles are intended for rescue services, maintaining public order when the carriage of passengers is undertaken as a consequence of the tasks assigned to these services and having special equipment for such purpose.</p> <p>2.5.6. "Wheelchair accessible vehicle": A vehicle of category M<sub>1</sub> constructed or converted specifically so that they accommodate one or more persons seated in their wheelchairs when travelling on the road.</p> <p>2.5.7. "Special group": A special purpose vehicle that does not enter in any of the definitions mentioned in this Part.</p>	<p>The definition list in R.E.3 is incomplete. Therefore the EU legislation definitions of „Wheelchair accessible vehicles“, „Special group vehicles“, „Trailer caravan“, „Mobile crane“, „Converter dolly“, „Exceptional load transport trailer“, „Exceptional load transport motor vehicle“ and „Multi-equipment carrier“ are added.</p> <p>Moreover a definition of „Government and special services vehicles“ (refer to (EC) No 561/2006, art. 3 c)) is added as these vehicles are already addressed in the inducement exemption.</p>




# Definition list of special purpose vehicles in R.E.3

R.E.3	Possible Amendment R.E.3	Justification / Motivation
	<p>2.5.8. “Trailer caravan“: A vehicle of category O as defined in term 3.2.1.3 of international standard ISO 3833:1977.</p> <p>2.5.9. “Mobile crane“: A vehicle of category N<sub>3</sub>, not fitted for the carriage of goods, provided with a crane whose lifting moment is equal to or higher than 400 kNm.</p> <p>2.5.10. “Converter dolly“: A vehicle of category O equipped with a fifth-wheel coupling to support a semi-trailer with a view to converting the latter into a trailer.</p> <p>2.5.11. “Exceptional load transport trailer“: A vehicle of category O<sub>4</sub> intended for the transport of indivisible loads that is subject to speed and traffic restrictions because of its dimensions. Under this term are also included hydraulic modular trailers irrespective of the number of modules.</p> <p>2.5.12. “Exceptional load transport motor vehicle“: A road tractor or tractor unit for semi-trailer of category N<sub>3</sub> meeting all the following conditions:</p> <ul style="list-style-type: none"><li>(a) having more than two axles and at least half of the axles (two axles out of three in the case of a three axle vehicle and three axles out of five in the case of a five axle vehicle) designed to be driven simultaneously, irrespective of whether one powered axle can be disengaged;</li><li>(b) that is designed for towing and pushing exceptional load transport trailer of category O<sub>4</sub>;</li><li>(c) that has a minimum engine power of 350 kW; and</li><li>(d) that can be equipped with an additional front coupling device for heavy towable masses.</li></ul>	



# Definition list of special purpose vehicles in R.E.3

R.E.3	Possible Amendment R.E.3	Justification / Motivation
	<p>2.5.13. “Multi-equipment carrier”: An off-road vehicle of category N designed and constructed for pulling, pushing, carrying and actuating certain inter-changeable equipment:</p> <ul style="list-style-type: none"><li>(a) with not less than two mounting areas for this equipment;</li><li>(b) with standardised, mechanical, hydraulic and/or electrical interfaces (e.g. Power take off) for powering and actuating the inter- changeable equipment; and</li><li>(c) that fulfils the definition of international standard ISO 3833- 1977, paragraph 3.1.4 (special vehicle).</li></ul> <p>If the vehicle is equipped with an auxiliary load platform, its maximum length shall not exceed:</p> <ul style="list-style-type: none"><li>(a) 1,4 times of the front or rear track width of the vehicle, whichever is the larger in the case of two axle vehicles; or</li><li>(b) 2,0 times of the front or rear track width of the vehicle, whichever is the larger in the case of vehicles having more than two axles.</li></ul>	



# Requirement for Special Purpose Vehicles: Emissions to the greatest extent


R83 06/07 series	Pos. Amendment R83 06/07 series	Justification / Motivation
<p><b>1. Scope</b> [...] 1.1. [...] At the manufacturer's request, type approval granted under this Regulation may be extended from vehicles mentioned above to special purpose vehicles of categories M1, M2, N1 and N2 regardless of their reference mass. The manufacturer shall demonstrate to the Type Approval Authority which granted the type approval that the vehicle in question is a special purpose vehicle<sup>1</sup>.</p> <p><sup>1</sup>) As defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3.), document ECE/TRANS/WP.29/78/Rev.6, para. 2. - <a href="http://www.unece.org/trans/main/wp29/wp29wgs/wp29gen/wp29resolutions.html">www.unece.org/trans/main/wp29/wp29wgs/wp29gen/wp29resolutions.html</a>.</p>	<p><b>1. Scope</b> [...] 1.1. [...] At the manufacturer's request, type approval granted under this Regulation may be extended from vehicles mentioned above to special purpose vehicles of categories M1, M2, N1 and N2 regardless of their reference mass. The manufacturer shall demonstrate to the Type Approval Authority which granted the type approval that the vehicle in question is a special purpose vehicle<sup>1</sup>.</p> <p>The approval authority may only grant exemption(s) to special purpose vehicles <sup>1</sup>) if the manufacturer demonstrates that the vehicle cannot meet the emission requirements due to its special purpose. The exemptions granted are to be described on the vehicle type- approval certificate.</p>	<p>The aim of this proposal is to integrate exemptions to special purpose vehicles into the emission regulations. However special purpose vehicles shall comply with all emission regulations to the greatest extent, when not limited due to its special purpose. Definition has been taken out of regulation (EU) 2018/858 and amended with the word "emission" requirements to address only emission related requirements of special purpose vehicles.</p>





# Requirement for Special Purpose Vehicles: Exemption Driver Inducement System


R83 06/07 series	Pos. Amendment R83 06/07 series	Justification / Motivation
<p><b>APPENDIX 6 REQUIREMENTS FOR VEHICLES THAT USE A REAGENT FOR THE EXHAUST AFTER-TREATMENT SYSTEM</b></p> <p>8. Driver inducement system</p> <p>8.1. The vehicle shall include a driver inducement system to ensure that the vehicle operates with a functioning emissions control system at all times. The inducement system shall be designed so as to ensure that the vehicle cannot operate with an empty reagent tank.</p> <p>8.1.1. The requirement for a driver inducement system shall not apply to vehicles designed and constructed for use by the rescue services, armed services, civil defence, fire services and forces responsible for maintaining public order. Permanent deactivation of the driver inducement system for these vehicles shall only be done by the vehicle manufacturer.</p>	<p><b>APPENDIX 6 REQUIREMENTS FOR VEHICLES THAT USE A REAGENT FOR THE EXHAUST AFTER-TREATMENT SYSTEM</b></p> <p>8. Driver inducement system</p> <p>8.1. The vehicle shall include a driver inducement system to ensure that the vehicle operates with a functioning emissions control system at all times. The inducement system shall be designed so as to ensure that the vehicle cannot operate with an empty reagent tank.</p> <p>8.1.1. The requirement for a driver inducement system shall not apply to <del>vehicles designed and constructed for use by the rescue services, armed services, civil defence, fire services and forces responsible for maintaining public order</del> <b>Ambulances as well as Government and special service vehicles<sup>1)</sup></b>. Permanent deactivation of the driver inducement system for these vehicles shall only be done by the vehicle manufacturer.</p> <p><sup>1)</sup> As defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3.), document ECE/TRANS/WP.29/78/Rev.6, para. 2. - <a href="http://www.unece.org/trans/main/wp29/wp29wgs/wp29gen/wp29resolutions.html">www.unece.org/trans/main/wp29/wp29wgs/wp29gen/wp29resolutions.html</a>.</p>	<p>The definition of vehicles designed and constructed for use by the rescue services, armed services, civil defence, fire services and forces responsible for maintaining public is not yet integrated in R.E.3.</p> <p>If life is at stake, also ambulances shall operate even with an empty reagent tank.</p> <p>With the introduction of the definition “Government and special services vehicles” to R.E.3 the paragraph can be simplified.</p>



# Requirement for Special Purpose Vehicles: Exemption COP/In-service conformity

R83 07 series	Possible Amendment R83 07 series	Justification / Motivation
<p><b>8. CONFORMITY OF PRODUCTION (COP)</b> Every vehicle bearing an approval mark as prescribed under this Regulation shall conform, with regard to components affecting the emission of gaseous and particulate pollutants by the engine, emissions from the crankcase and evaporative emissions, to the vehicle type approved. The conformity of production procedures shall comply with those set out in the 1958 Agreement, Appendix 2 (E/ECE/324-E/ECE/TRANS/505/Rev.2), with the following requirements: [...]</p> <p><b>9. In-service conformity</b> 9.1. Introduction This paragraph sets out the tailpipe emissions and OBD (including IUPRM) in-service conformity requirements for vehicles type approved to this Regulation.</p>	<p><b>8. CONFORMITY OF PRODUCTION (COP)</b> Every vehicle bearing an approval mark [...], to the vehicle type approved. <a href="#">Special purpose vehicles<sup>1)</sup> of categories M1, M2, N1 and N2 shall not be subject to the provisions of this paragraph.</a> The conformity of production procedures shall comply with those set out in the 1958 Agreement, Appendix 2 (E/ECE/324-E/ECE/TRANS/505/Rev.2), with the following requirements: [...]</p> <p><b>9. In-service conformity</b> 9.1. Introduction This paragraph sets out the tailpipe emissions and OBD (including IUPRM) in-service conformity requirements for vehicles type approved to this Regulation. <a href="#">Special purpose vehicles<sup>1)</sup> shall not be subject to the provisions of this paragraph.</a></p> <p><sup>1)</sup> As defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3.), document ECE/TRANS/WP.29/78/Rev.6, para. 2. - <a href="http://www.unece.org/trans/main/wp29/wp29wgs/wp29gen/wp29resolutions.html">www.unece.org/trans/main/wp29/wp29wgs/wp29gen/wp29resolutions.html</a>.</p>	<p>Due to their special purpose, special purpose vehicles cannot comply with COP and In-service conformity requirements. E.g. an armoured vehicle with armoured plating anti-bullet equipment will not be able to comply with emission of particulate and gaseous pollutant requirements due to its high reference mass. However the exemption emission to the greatest extent will apply.</p> <p>Special purpose vehicles are hardly publicly available on the market, thus testing in-service conformity of special purpose vehicle does not make sense.</p>





# Requirement for Special Purpose Vehicles: Exemption COP/In-service conformity

R101 01 series	Pos. Amendment R101 01 series	Justification / Motivation
<p><b>9. CONFORMITY OF PRODUCTION</b> 9.1. Vehicles approved to this Regulation shall be so manufactured as to conform to the type approved vehicle.</p>	<p><b>9. CONFORMITY OF PRODUCTION</b> 9.1. Vehicles approved to this Regulation shall be so manufactured as to conform to the type approved vehicle. <a href="#">Special purpose vehicles<sup>1)</sup> of categories M1, M2, N1 and N2 shall not be subject to the provisions of this paragraph.</a></p> <p><sup>1)</sup> As defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3.), document ECE/TRANS/WP.29/78/Rev.6, para. 2. - <a href="http://www.unece.org/trans/main/wp29/wp29wgs/wp29gen/wp29resolutions.html">www.unece.org/trans/main/wp29/wp29wgs/wp29gen/wp29resolutions.html</a>.</p>	<p>Due to their special purpose, special purpose vehicles cannot comply with COP requirements. E.g. an armoured vehicle with armoured plating anti-bullet equipment will not be able to comply with emission of particulate and gaseous pollutant requirements due to its high reference mass. However the exemption emission to the greatest extent will apply.</p>



# Special Purpose Vehicles. Summary and open questions.

## **Summary**

Definition and exemptions for special purpose vehicles are necessary. Possible amendments have been shown for

- New definitions in R.E.3 and
- Requirement emission to the greatest extent,
- Exemptions for driver inducement system and COP/in-service conformity.

The topic of special purpose vehicles shall be considered during drafting of R83 08 series.

## **Open questions**

- Does GRPE share the need for revision of UN emission Regulation regarding special purpose vehicles?
- Is GRPE supporting the shown possible amendments?
- Are the shown possible amendments exhaustive or do further paragraphs need revision?