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European Union

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COVER NOTE

From: Secretary-General of the European Commission, signed by Ms Martine DEPREZ, Director

date of receipt: 21 June 2022

To: General Secretariat of the Council

No. Cion doc.: C(2022) 3823 final, ANNEXES 1 to 4

Subject: ANNEXES to the Commission Delegated Regulation amending Annexes I, II, IV and V to Regulation (EU) 2018/858 of the European Parliament and of the Council as regards the technical requirements for vehicles produced in unlimited series, vehicles produced in small series, fully automated vehicles produced in small series and special purpose vehicles, and as regards software update

Delegations will find attached document C(2022) 3823 final, ANNEXES 1 to 4.

Encl.: C(2022) 3823 final, ANNEXES 1 to 4



Brussels, 20.6.2022
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ANNEXES 1 to 4

ANNEXES

to the

Commission Delegated Regulation

amending Annexes I, II, IV and V to Regulation (EU) 2018/858 of the European Parliament and of the Council as regards the technical requirements for vehicles produced in unlimited series, vehicles produced in small series, fully automated vehicles produced in small series and special purpose vehicles, and as regards software update

ANNEX I

Annex I to Regulation (EU) 2018/858 is amended as follows:

(1) in Part C, point 5, in the table, the following entries are added:

| | | | |
|-------|----|----------------------|---|
| ‘5.5. | DF | Link semi-trailer | A semi-trailer with a fifth wheel mounted at the rear such that the link semi-trailer could tow another semi-trailer. |
| 5.6. | DG | Link drawbar trailer | A drawbar trailer with a fifth wheel mounted at the rear such that the link trailer could tow another semi-trailer. |

(2) in Appendix 2, the following row 32 is inserted:

‘32 Drop-side tarpaulin;’.

ANNEX II

Annex II to Regulation (EU) 2018/858 is amended as follows:

- (1) Part I is replaced by the following:

‘PART I

Regulatory acts for EU type-approval of vehicles produced in unlimited series

EXPLANATORY NOTES

to the table for vehicles produced in unlimited series

- X: Applies to the vehicle category, separate technical unit or component in accordance with the regulatory act as indicated
- IF: Applies only if the system, separate technical unit or component is fitted to the vehicle in the respective vehicle category

| Item | Subject | Regulatory act | M ₁ | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ | STU | Component |
|------|--|---------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----|-----------|
| A | RESTRAINT SYSTEMS, CRASH TESTING, FUEL SYSTEM INTEGRITY AND HIGH VOLTAGE ELECTRICAL SAFETY | | | | | | | | | | | | | |
| A1 | Interior fittings | Regulation (EU) 2019/2144 | X | | | | | | | | | | | |
| A2 | Seats and head restraints | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | | |
| A3 | Bus seats | Regulation (EU) 2019/2144 | | X | X | | | | | | | | | X |
| A4 | Safety-belt anchorages | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | | |
| A5 | Safety-belts and restraint systems | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | X | X |
| A6 | Safety-belt reminders | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | | |
| A7 | Partitioning systems | Regulation (EU) 2019/2144 | | | | | | | | | | | X | |
| A8 | Child restraint anchorages | Regulation (EU) 2019/2144 | X | IF X | IF X | IF X | IF X | IF X | | | | | | |
| A9 | Child restraint systems (IF) | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | X | X |
| A10 | Enhanced child restraint systems (IF) | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | X | X |
| A11 | Front underrun protection | Regulation (EU) 2019/2144 | | | | | X | X | | | | | X | X |
| A12 | Rear underrun protection | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X | X | X | X |
| A13 | Lateral protection | Regulation (EU) 2019/2144 | | | | | X | X | | | X | X | | |
| A14 | Fuel tank safety (IF) | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X | X | X | |
| A15 | Liquified petroleum gas safety (IF) | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | | X |
| A16 | Compressed and liquified natural gas safety (IF) | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | | X |
| A17 | Hydrogen safety (IF) | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | | X |
| A18 | Hydrogen system material qualification (IF) | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | | X |
| A19 | In-use electric safety | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | | X |

| Item | Subject | Regulatory act | M ₁ | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ | STU | Component |
|------|---|---------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----|-----------|
| | (IF) | | | | | | | | | | | | | |
| A20 | Frontal off-set impact | Regulation (EU) 2019/2144 | X | | | X | | | | | | | | |
| A21 | Frontal full-width impact | Regulation (EU) 2019/2144 | X | | | X | | | | | | | | |
| A22 | Protective steering | Regulation (EU) 2019/2144 | X | | | X | | | | | | | X | |
| A23 | Replacement airbag | Regulation (EU) 2019/2144 | | | | | | | | | | | X | |
| A24 | Cab impact | Regulation (EU) 2019/2144 | | | | X | X | X | | | | | | |
| A25 | Side impact | Regulation (EU) 2019/2144 | X | | | X | | | | | | | | |
| A26 | Pole side impact | Regulation (EU) 2019/2144 | X | | | X | | | | | | | | |
| A27 | Rear impact | Regulation (EU) 2019/2144 | X | | | X | | | | | | | | |
| A28 | 112-based eCall in-vehicles systems | Regulation (EU) 2015/758 | X | | | X | | | | | | | X | X |
| B | VULNERABLE ROAD USERS, VISION AND VISIBILITY | | | | | | | | | | | | | |
| B1 | Pedestrian leg and head protection | Regulation (EU) 2019/2144 | X | | | X | | | | | | | | |
| B2 | Enlarged head impact zone | Regulation (EU) 2019/2144 | X | | | X | | | | | | | | |
| B3 | Frontal protection system | Regulation (EU) 2019/2144 | X | | | X | | | | | | | X | |
| B4 | Advanced emergency braking for pedestrians and cyclists ahead | Regulation (EU) 2019/2144 | X | | | X | | | | | | | | |
| B5 | Pedestrian and cyclist collision warning | Regulation (EU) 2019/2144 | | X | X | | X | X | | | | | X | |
| B6 | Blind spot information system | Regulation (EU) 2019/2144 | | X | X | | X | X | | | | | X | |
| B7 | Reversing detection | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | X | |
| B8 | Forward vision | Regulation (EU) 2019/2144 | X | | | X | | | | | | | | |
| B9 | Heavy-duty vehicles direct vision | Regulation (EU) 2019/2144 | | X | X | | X | X | | | | | | |
| B10 | Safety glazing | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X | X | | X |
| B11 | Defrost/demist | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | | |
| B12 | Wash/wipe | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | X | |
| B13 | Indirect vision | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | | X |

| Item | Subject | Regulatory act | M ₁ | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ | STU | Component |
|------|--|-----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----|-----------|
| | devices | | | | | | | | | | | | | |
| B14 | Acoustic Vehicle Alerting Systems | Regulation (EU) No 540/2014 | X | X | X | X | X | X | | | | | | |
| C | VEHICLE CHASSIS, BRAKING, TYRES AND STEERING | | | | | | | | | | | | | |
| C1 | Steering equipment | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X | X | | |
| C2 | Lane departure warning | Regulation (EU) 2019/2144 | | X | X | | X | X | | | | | | |
| C3 | Emergency lane keeping | Regulation (EU) 2019/2144 | X | | | X | | | | | | | | |
| C4 | Braking | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X | X | | |
| C5 | Replacement braking parts | Regulation (EU) 2019/2144 | | | | | | | | | | | X | |
| C6 | Brake assist | Regulation (EU) 2019/2144 | X | | | X | | | | | | | | |
| C7 | Stability control | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X | X | | |
| C8 | Advanced emergency braking on heavy-duty vehicles | Regulation (EU) 2019/2144 | | X | X | | X | X | | | | | | |
| C9 | Advanced emergency braking on light-duty vehicles | Regulation (EU) 2019/2144 | X | | | X | | | | | | | | |
| C10 | Tyre safety and environmental performance | Regulation (EU) 2019/2144 | | | | | | | | | | | | X |
| C11 | Spare wheels and run-flat systems (IF) | Regulation (EU) 2019/2144 | X | | | X | | | | | | | | |
| C12 | Retreaded tyres | Regulation (EU) 2019/2144 | | | | | | | | | | | | X |
| C13 | Tyre pressure monitoring for light-duty vehicles | Regulation (EU) 2019/2144 | X | | | X | | | | | | | | |
| C14 | Tyre pressure monitoring for heavy-duty vehicles | Regulation (EU) 2019/2144 | | X | X | | X | X | | | X | X | | |
| C15 | Tyre installation | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X | X | | |
| C16 | Replacement wheels | Regulation (EU) 2019/2144 | | | | | | | | | | | | X |
| D | ON-BOARD INSTRUMENTS, ELECTRICAL SYSTEM, VEHICLE LIGHTING AND PROTECTION AGAINST UNAUTHORISED USE, INCLUDING | | | | | | | | | | | | | |

| Item | Subject | Regulatory act | M ₁ | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ | STU | Component |
|------|--|---------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----|-----------|
| | CYBERATTACKS | | | | | | | | | | | | | |
| D1 | Audible warning | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | | X |
| D2 | Radio interference (electromagnetic compatibility) | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X | X | X | X |
| D3 | Protection against unauthorised use, immobiliser and alarm systems | Regulation (EU) 2019/2144 | X | IF X | IF X | X | IF X | IF X | | | | | X | X |
| D4 | Protection of vehicle against cyberattacks | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | X | X |
| D5 | Speedometer | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | | |
| D6 | Odometer | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | | |
| D7 | Speed limitation devices | Regulation (EU) 2019/2144 | | X | X | | X | X | | | | | | X |
| D8 | Intelligent speed assistance | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | X | |
| D9 | Identification of controls, tell-tales and indicators | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | | |
| D10 | Heating systems | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X | X | | X |
| D11 | Light signalling devices | Regulation (EU) 2019/2144 | | | | | | | | | | | | X |
| D12 | Road illumination devices | Regulation (EU) 2019/2144 | | | | | | | | | | | | X |
| D13 | Retro-reflective devices | Regulation (EU) 2019/2144 | | | | | | | | | | | | X |
| D14 | Light sources | Regulation (EU) 2019/2144 | | | | | | | | | | | | X |
| D15 | Installation of light signalling, road illumination and retro-reflective devices | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X | X | | |
| D16 | Emergency stop signal | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | | |

| Item | Subject | Regulatory act | M ₁ | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ | STU | Component |
|------|--|---------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----|-----------|
| D17 | Headlamp cleaners (IF) | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | | X |
| D18 | Gear shift indicator | Regulation (EU) 2019/2144 | X | | | | | | | | | | | |
| E | DRIVER AND SYSTEM BEHAVIOUR | | | | | | | | | | | | | |
| E1 | Alcohol interlock installation facilitation | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | | |
| E2 | Driver drowsiness and attention warning | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | | |
| E3 | Advanced driver distraction warning | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | | |
| E4 | Driver availability monitoring system (in case of automated vehicles) | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | | |
| E5 | Event data recorder | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | X | |
| E6 | Systems to replace driver's control (in case of automated vehicles) | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | | |
| E7 | Systems to provide the vehicle with information on state of vehicle and surrounding area (in case of automated vehicles) | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | | |
| E8 | Platooning (IF) | Regulation (EU) 2019/2144 | | X | X | | X | X | | | | | | |
| E9 | Systems to provide safety information to other road users (in case of automated vehicles) | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | | |
| F | GENERAL VEHICLE CONSTRUCTION AND FEATURES | | | | | | | | | | | | | |
| F1 | Registration plate space | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X | X | | |

| Item | Subject | Regulatory act | M ₁ | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ | STU | Component |
|------|--|-----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----|-----------|
| F2 | Reversing motion | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | | |
| F3 | Door latches and hinges | Regulation (EU) 2019/2144 | X | | | X | | | | | | | | |
| F4 | Door entry steps, handholds and running boards | Regulation (EU) 2019/2144 | X | | | X | X | X | | | | | | |
| F5 | External projections | Regulation (EU) 2019/2144 | X | | | | | | | | | | | |
| F6 | External projections of commercial vehicle cabs | Regulation (EU) 2019/2144 | | | | X | X | X | | | | | | |
| F7 | Statutory plate and vehicle identification number | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X | X | | |
| F8 | Towing devices | Regulation (EU) 2019/2144 | X | X | X | X | X | X | | | | | | |
| F9 | Wheel guards | Regulation (EU) 2019/2144 | X | | | | | | | | | | | |
| F10 | Spray suppression systems | Regulation (EU) 2019/2144 | | | | X | X | X | X | X | X | X | X | |
| F11 | Masses and dimensions | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X | X | | |
| F12 | Mechanical couplings | Regulation (EU) 2019/2144 | IF X | IF X | IF X | IF X | IF X | IF X | X | X | X | X | X | X |
| F13 | Vehicles intended for the transportation of dangerous goods (IF) | Regulation (EU) 2019/2144 | | | | X | X | X | X | X | X | X | | |
| F14 | General bus construction | Regulation (EU) 2019/2144 | | X | X | | | | | | | | | |
| F15 | Bus strength of superstructure | Regulation (EU) 2019/2144 | | X | X | | | | | | | | | |
| F16 | Flammability in buses | Regulation (EU) 2019/2144 | | | X | | | | | | | | | X |
| G | ENVIRONMENTAL PERFORMANCE AND EMISSIONS | | | | | | | | | | | | | |
| G1 | Sound level | Regulation (EU) No 540/2014 | X | X | X | X | X | X | | | | | X | |
| G2 | Tailpipe emissions of vehicle in lab | Regulation (EC) No 715/2007 | X | X | | X | X | | | | | | | X |
| G2a | Determination of specific CO ₂ | Regulation (EC) No 715/2007 | X | X | | X | X | | | | | | | X |

| Item | Subject | Regulatory act | M ₁ | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ | STU | Component |
|------|---|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----|-----------|
| | emissions and fuel consumption of vehicle and device for monitoring on board the vehicle the consumption of fuel and/or electric energy | | | | | | | | | | | | | |
| G3 | Tailpipe emissions of engine in lab | Regulation (EC) No 595/2009 | X | X | X | X | X | X | | | | | X | |
| G3a | Determination of specific CO ₂ emissions and fuel consumption of vehicle | Regulation (EC) No 595/2009 | | | X | | X | X | | | | | | |
| G3b | Determination of specific energy efficiency performance of trailer | Regulation (EC) No 595/2009 | | | | | | | | | X | X | | |
| G4 | Tailpipe emissions on the road | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | X | X | X | X | X | X | | | | | X | |
| G5 | Durability of tailpipe emissions | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | X | X | X | X | X | X | | | | | X | |
| G6 | Crankcase emissions | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | X | X | X | X | X | X | | | | | X | |
| G7 | Evaporative emissions | Regulation (EC) No 715/2007 | X | X | | X | X | | | | | | | |
| G8 | Low-temperature tailpipe emissions in lab | Regulation (EC) No 715/2007 | X | X | | X | X | | | | | | | |
| G9 | On-board diagnostics | Regulation (EC) | X | X | X | X | X | X | | | | | X | |

| Item | Subject | Regulatory act | M ₁ | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ | STU | Component |
|------|--|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----|-----------|
| | | No 715/2007 Regulation (EC) No 595/2009 | | | | | | | | | | | | |
| G10 | Absence of defeat device | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | X | X | X | X | X | X | | | | | X | |
| G11 | Auxiliary emissions strategies | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | X | X | X | X | X | X | | | | | X | |
| G12 | Anti-tampering | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | X | X | X | X | X | X | | | | | | |
| G13 | Recyclability | Directive 2005/64/EC | X | | | X | | | | | | | | |
| G14 | Air-conditioning systems | Directive 2006/40/EC | X | | | X | | | | | | | | X |
| H | ACCESS TO VEHICLE INFORMATION AND SOFTWARE UPDATE | | | | | | | | | | | | | |
| H1 | Access to vehicle OBD information and vehicle repair and maintenance information | Regulation (EU) 2018/858, Articles 61 to 66 and Annex X. | X | X | X | X | X | X | X | X | X | X | | |
| H2 | Software update | Regulation (EU) 2018/858, Annex IV UN Regulation No 156 | X | X | X | X | X | X | X | X | X | X | | |

The item and subject entries listed in the table above shall apply for the purpose of information to be provided in accordance with Commission Implementing Regulation (EU) 2020/683, Annex II, Part III from [OP please insert the date of entry into force of this Regulation] for new whole-vehicle type-approvals and from [OP please insert date of 24 months after the date of entry into force of this Regulation] for existing approvals.

Compliance with Regulation (EU) 2019/2144 is mandatory, however, a separate type-approval under that Regulation is not foreseen as it represents the collection of individual items.

Compliance with items from G2 to G12 is mandatory, however, only one type-approval either under Regulation (EC) No 715/2007 or under Regulation (EC) 595/2009 is foreseen depending on the scope.

_____?

- (2) Appendix 1 to Part I is replaced by the following:

‘Appendix 1

EXPLANATORY NOTES

to the tables for vehicles produced in small series

The requirements laid down in table 1 for “Small series scheme I” apply provided that:

- the vehicle type is not based on or derived from a vehicle produced in large series, including those for EU or third markets; and
- the manufacturer’s combined number of units, of all its categories M and N vehicle types registered, made available on the market or entered into service annually in the Union does not exceed 1 500.

In all other cases, the requirements laid down in table 1 for “Small series scheme II” and in table 2 apply.

- X: Full application of the regulatory act as follows:
- (a) a type-approval certificate shall be required;
 - (b) tests and checks shall be conducted by the technical service or the manufacturer under the conditions laid down in Articles 67 to 81;
 - (c) the test report shall be drafted in accordance with Annex III;
 - (d) Conformity of Production shall be ensured.
- A: Application of the regulatory act as follows:
- (a) all requirements of the regulatory act shall be fulfilled unless otherwise stated;
 - (b) a type-approval certificate is not required;
 - (c) tests and checks shall be conducted by the technical service or the manufacturer under the conditions laid down in Articles 67 to 81;
 - (d) the test report shall be drafted in accordance with Annex III;
 - (e) Conformity of Production shall be ensured.
- B: Application of the regulatory act as follows:
Same as for explanatory note “A” with the exception that the tests and checks may be performed by the manufacturer themselves, subject to the agreement of the approval authority.
- C: Application of the regulatory act as follows:
- (a) the technical requirements from the regulatory act shall be fulfilled, but with different transitional provision;
 - (b) a type-approval certificate is not required;
 - (c) tests and checks shall be conducted by the technical service or the manufacturer under the conditions laid down in Articles 67 to 81;
 - (d) the test report shall be drafted in accordance with Annex III;
 - (e) Conformity of Production shall be ensured.
- IF: Systems, separate technical units or components shall meet the requirements if fitted to the vehicle
- n/a: Not applicable

The specific provisions set out in table 1 and table 2 cannot be mixed or combined.

Table 1: Regulatory acts for EU type-approval of manually driven vehicles produced in small series pursuant to Article 41

| Item | Subject | Regulatory act | <i>Small series scheme I</i> | | <i>Small series scheme II</i> | |
|------|--|---------------------------|---|----------------|-------------------------------|----------------|
| | | | M ₁ | N ₁ | M ₁ | N ₁ |
| A | RESTRAINT SYSTEMS, CRASH TESTING, FUEL SYSTEM INTEGRITY AND HIGH VOLTAGE ELECTRICAL SAFETY | | | | | |
| A1 | Interior fittings | Regulation (EU) 2019/2144 | <p>B</p> <p>(a) Interior arrangement</p> <p>(i) Radii and protrusion requirements for switches, pull-knobs and the like, controls and general interior fittings The requirements of paragraphs 5.1 to 5.6 of UN Regulation No 21 may be waived at the request of the manufacturer.</p> <p>The requirements of paragraph 5.2 of UN Regulation No 21 with the exception of paragraphs 5.2.3.1, 5.2.3.2 and 5.2.4 of that Regulation shall apply.</p> <p>(ii) Energy absorption tests on the upper dashboard Energy absorption tests on the upper dashboard shall only be performed when the vehicle is not fitted with at least two front airbags or two static four-point harnesses.</p> <p>(iii) Energy absorption test on the rear part of the seats: not applicable</p> <p>(b) Power-operation of windows, roof-panel systems and partition systems All requirements of paragraph 5.8 of UN Regulation No 21 shall apply.</p> | not in scope | B | not in scope |

| Item | Subject | Regulatory act | <i>Small series scheme I</i> | | <i>Small series scheme II</i> | | |
|------|---------------------------|---------------------------|--|----------------|-------------------------------|----------------|---|
| | | | M ₁ | N ₁ | M ₁ | N ₁ | |
| A2 | Seats and head restraints | Regulation (EU) 2019/2144 | <p>B</p> <p>(a) General requirements (i) Specifications Requirements of paragraph 5.2 of UN Regulation No 17 shall apply with the exception of paragraph 5.2.3 of that Regulation. (ii) Strength tests for seat backrest and head restraints The requirements of paragraph 6.2 of UN Regulation No 17 shall apply. (iii) Unlocking and adjustment tests The test shall be performed in accordance with the requirements of Annex 7 to UN Regulation No 17. (b) Head restraints (i) Specifications Requirements of paragraphs 5.4, 5.5, 5.6, 5.10, 5.11 and 5.12 of UN Regulation No 17 shall apply with the exception of paragraph 5.5.2 of that Regulation. (ii) Strength tests on head restraints The test prescribed in paragraph 6.4 of UN Regulation No 17 shall be performed. (c) Special requirements regarding the protection of occupants from displaced luggage The requirements of Annex 9 to UN Regulation No 17 may be waived at the request of the manufacturer.</p> | B | B | B | B |
| A3 | Bus seats | Regulation (EU) | not in scope | not in scope | not in scope | not in scope | |

| Item | Subject | Regulatory act | <i>Small series scheme I</i> | | <i>Small series scheme II</i> | |
|------|--|---------------------------|---|---|---|---|
| | | | M ₁ | N ₁ | M ₁ | N ₁ |
| | | 2019/2144 | | | | |
| A4 | Safety-belt anchorages | Regulation (EU) 2019/2144 | B | B | B | B |
| A5 | Safety-belts and restraint systems | Regulation (EU) 2019/2144 | (a) Components X (b) Installation requirements B | (a) Components X (b) Installation requirements B | (a) Components X (b) Installation requirements B | (a) Components X (b) Installation requirements B |
| A6 | Safety-belt reminders | Regulation (EU) 2019/2144 | B | B | B | B |
| A7 | Partitioning systems | Regulation (EU) 2019/2144 | equipment | equipment | equipment | equipment |
| A8 | Child restraint anchorages | Regulation (EU) 2019/2144 | B | IF B | B | IF B |
| A9 | Child restraint systems (IF) | Regulation (EU) 2019/2144 | X | X | X | X |
| A10 | Enhanced child restraint systems (IF) | Regulation (EU) 2019/2144 | X | X | X | X |
| A11 | Front underrun protection | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | not in scope |
| A12 | Rear underrun protection | Regulation (EU) 2019/2144 | B | B | B | B |
| A13 | Lateral protection | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | not in scope |
| A14 | Fuel tank safety (IF) | Regulation (EU) 2019/2144 | B (a) Liquid fuel tanks (b) Installation in vehicle | B (a) Liquid fuel tanks (b) Installation in vehicle | B (a) Liquid fuel tanks (b) Installation in vehicle | B (a) Liquid fuel tanks (b) Installation in vehicle |
| A15 | Liquified petroleum gas safety (IF) | Regulation (EU) 2019/2144 | (a) Components X (b) Installation B | (a) Components X (b) Installation B | (a) Components X (b) Installation B | (a) Components X (b) Installation B |
| A16 | Compressed and liquified natural gas safety (IF) | Regulation (EU) 2019/2144 | (a) Components X (b) Installation B | (a) Components X (b) Installation B | (a) Components X (b) Installation B | (a) Components X (b) Installation B |
| A17 | Hydrogen safety (IF) | Regulation (EU) 2019/2144 | X | X | X | X |
| A18 | Hydrogen system | Regulation (EU) | (a) Components X | (a) Components X | (a) Components X | (a) Components X |

| Item | Subject | Regulatory act | <i>Small series scheme I</i> | | <i>Small series scheme II</i> | |
|------|-----------------------------|---------------------------|--|--|-------------------------------|---|
| | | | M ₁ | N ₁ | M ₁ | N ₁ |
| | material qualification (IF) | 2019/2144 | (b) Installation B | (b) Installation B | (b) Installation B | (b) Installation B |
| A19 | In-use electric safety (IF) | Regulation (EU) 2019/2144 | B | B | B | B |
| A20 | Frontal off-set impact | Regulation (EU) 2019/2144 | B Shall apply to vehicles fitted with front airbags. May comply with A21 Frontal full-width impact instead, at the choice of the manufacturer. Vehicles not fitted with airbags shall comply with A22 Protective steering (in full) | B Shall apply to vehicles fitted with front airbags. May comply with A21 Frontal full-width impact instead, at the choice of the manufacturer. Vehicles not fitted with airbags shall comply with A22 Protective steering (in full) Completed vehicles are deemed to comply with the frontal off-set impact requirements provided that compliance has been demonstrated for at least the van or chassis-cab configuration, with appropriate powertrain, as part of a previous-stage type-approval, irrespective of the mass in running order increase and the relevant restraint systems have not been modified to the extent that it would result in a decrease of the level of safety, as agreed by the technical service. | B | B Completed vehicles are deemed to comply with the frontal off-set impact requirements provided that compliance has been demonstrated for at least the van or chassis-cab configuration, with appropriate powertrain, as part of a previous-stage type-approval, irrespective of the mass in running order increase and the relevant restraint systems have not been modified to the extent that it would result in a decrease of the level of safety, as agreed by the technical service. |
| A21 | Frontal full-width impact | Regulation (EU) 2019/2144 | B On voluntary basis | B On voluntary basis Completed vehicles are deemed to comply with the frontal full- | B | B Completed vehicles are deemed to comply with the frontal full-width impact requirements provided that compliance has |

| Item | Subject | Regulatory act | <i>Small series scheme I</i> | | <i>Small series scheme II</i> | |
|------|---------------------|---------------------------|--|---|-------------------------------|--|
| | | | M ₁ | N ₁ | M ₁ | N ₁ |
| | | | | width impact requirements provided that compliance has been demonstrated for at least the van or chassis-cab configuration, with appropriate powertrain, as part of a previous-stage type-approval, irrespective of the mass in running order increase and the relevant restraint systems have not been modified to the extent that it would result in a decrease of the level of safety, as agreed by the technical service. | | been demonstrated for at least the van or chassis-cab configuration, with appropriate powertrain, as part of a previous-stage type-approval, irrespective of the mass in running order increase and the relevant restraint systems have not been modified to the extent that it would result in a decrease of the level of safety, as agreed by the technical service. |
| A22 | Protective steering | Regulation (EU) 2019/2144 | B Shall apply to vehicles that do not comply with A20 Frontal off-set impact or A21 Frontal full-width impact | B Shall apply to vehicles that do not comply with A20 Frontal off-set impact or A21 Frontal full-width impact | B | B |
| A23 | Replacement airbag | Regulation (EU) 2019/2144 | equipment | equipment | equipment | equipment |
| A24 | Cab impact | Regulation (EU) 2019/2144 | not in scope | B Test A is required for vehicles with a maximum permissible mass of 1 500 kg or more if compliance with A20 Frontal off-set impact, A21 Frontal full-width impact or A22 Protective steering was not demonstrated. Test C is required only for vehicles which have a separate cab. Completed vehicles are deemed | not in scope | B Test A is deemed to be fulfilled by means of A20 Frontal off-set impact, A21 Frontal full-width impact or A22 Protective steering. Test C is required only for vehicles which have a separate cab. Completed vehicles are deemed to comply with cab impact requirements provided that compliance has been |

| Item | Subject | Regulatory act | <i>Small series scheme I</i> | | <i>Small series scheme II</i> | |
|------|-------------|---------------------------|---|---|-------------------------------|---|
| | | | M ₁ | N ₁ | M ₁ | N ₁ |
| | | | | to comply with cab impact requirements provided that compliance has been demonstrated for at least the van or chassis-cab configuration, with appropriate powertrain, as part of a previous-stage type-approval, irrespective of the mass in running order increase. | | demonstrated for at least the van or chassis-cab configuration, with appropriate powertrain, as part of a previous-stage type-approval, irrespective of the mass in running order increase. |
| A25 | Side impact | Regulation (EU) 2019/2144 | <p>B</p> <p>Head form test The manufacturer shall supply the technical service with suitable information concerning a possible impact of the head of the dummy against the structure of the vehicle or the side glazing, if made of laminated glazing. When such impact is proven likely to happen, then the partial test using the head form test described in paragraph 3.1. of Annex 8 to UN Regulation No 95 shall be conducted and the criterion specified in paragraph 5.2.1.1. of UN Regulation No 95 shall be met. In agreement with the technical service, the test procedure described in Annex 4 to UN Regulation No 21 may be used as an alternative to the test of UN Regulation No 95.</p> <p>Alternatively, a full-scale test in</p> | <p>B</p> <p>Head form test The manufacturer shall supply the technical service with suitable information concerning a possible impact of the head of the dummy against the structure of the vehicle or the side glazing, if made of laminated glazing. When such impact is proven likely to happen, then the partial test using the head form test described in paragraph 3.1. of Annex 8 to UN Regulation No 95 shall be conducted and the criterion specified in paragraph 5.2.1.1. of UN Regulation No 95 shall be met. In agreement with the technical service, the test procedure described in Annex 4 to UN Regulation No 21 may be used as an alternative to the test of UN Regulation No 95.</p> <p>Alternatively, a full-scale test in</p> | B | <p>B</p> <p>Completed vehicles are deemed to comply with side impact requirements provided that compliance has been demonstrated for at least the van or chassis-cab configuration, with appropriate powertrain, as part of a previous-stage type-approval, irrespective of the mass in running order increase and the relevant restraint systems have not been modified to the extent that it would result in a decrease of the level of safety, as agreed by the technical service.</p> |

| Item | Subject | Regulatory act | <i>Small series scheme I</i> | | <i>Small series scheme II</i> | |
|------|------------------|---------------------------|---|--|-------------------------------|---|
| | | | M ₁ | N ₁ | M ₁ | N ₁ |
| | | | accordance with UN Regulation No 95 may be carried out. | accordance with UN Regulation No 95 may be carried out. Completed vehicles are deemed to comply with side impact requirements provided that compliance has been demonstrated for at least the van or chassis-cab configuration, with appropriate powertrain, as part of a previous-stage type-approval, irrespective of the mass in running order increase and the relevant restraint systems have not been modified to the extent that it would result in a decrease of the level of safety, as agreed by the technical service. | | |
| A26 | Pole side impact | Regulation (EU) 2019/2144 | n/a | n/a | B | B Completed vehicles are deemed to comply with the pole side impact requirements provided that compliance has been demonstrated for at least the van or chassis-cab configuration, with appropriate powertrain, as part of a previous-stage type-approval, irrespective of the mass in running order increase and the relevant restraint systems have not been modified to the extent that it would result in a decrease of the level of safety, as agreed by the technical service. |
| A27 | Rear impact | Regulation (EU) | n/a | n/a | B | B |

| Item | Subject | Regulatory act | <i>Small series scheme I</i> | | <i>Small series scheme II</i> | |
|----------|---|---------------------------|---|---|---|---|
| | | | M ₁ | N ₁ | M ₁ | N ₁ |
| | | 2019/2144 | | | | Completed vehicles are deemed to comply with rear impact requirements provided that compliance has been demonstrated for at least the van or chassis-cab configuration, with appropriate powertrain, as part of a previous-stage type-approval, irrespective of the mass in running order increase. |
| A28 | 112-based eCall in-vehicles systems | Regulation (EU) 2015/758 | n/a | n/a | n/a | n/a |
| B | VULNERABLE ROAD USERS, VISION AND VISIBILITY | | | | | |
| B1 | Pedestrian leg and head protection | Regulation (EU) 2019/2144 | C Date for refusal to grant EU type- approval: 7 January 2026 Date for the prohibition of the registration of vehicles: 7 July 2034 | C Date for refusal to grant EU type- approval: 7 January 2026 Date for the prohibition of the registration of vehicles: 7 July 2034 | C Date for refusal to grant EU type- approval: 7 January 2026 Date for the prohibition of the registration of vehicles: 7 July 2034 | C Date for refusal to grant EU type- approval: 7 January 2026 Date for the prohibition of the registration of vehicles: 7 July 2034 |
| B2 | Enlarged head impact zone | Regulation (EU) 2019/2144 | C Date for refusal to grant EU type- approval: 7 January 2026 Date for the prohibition of the registration of vehicles: 7 July 2034 | C Date for refusal to grant EU type- approval: 7 January 2026 Date for the prohibition of the registration of vehicles: 7 July 2034 | C Date for refusal to grant EU type- approval: 7 January 2026 Date for the prohibition of the registration of vehicles: 7 July 2034 | C Date for refusal to grant EU type- approval: 7 January 2026 Date for the prohibition of the registration of vehicles: 7 July 2034 |
| B3 | Frontal protection system | Regulation (EU) 2019/2144 | equipment | equipment | equipment | equipment |
| B4 | Advanced emergency braking for | Regulation (EU) 2019/2144 | IF Date for refusal to grant EU | B IF Date for refusal to grant EU | B B Not required for vehicles without | B Not required for vehicles without |

| Item | Subject | Regulatory act | <i>Small series scheme I</i> | | <i>Small series scheme II</i> | |
|------|--|---------------------------|---|---|---|---|
| | | | M ₁ | N ₁ | M ₁ | N ₁ |
| | pedestrians and cyclists ahead | | <p>type- approval: 7 July 2026</p> <p>Date for the prohibition of the registration of vehicles: 7 July 2028</p> | <p>type- approval: 7 July 2026</p> <p>Date for the prohibition of the registration of vehicles: 7 July 2028</p> | <p>a windscreen, with a foldable windscreen or with a windscreen where the maximum vertical distance between the top edge and lowest edge of the transparent surface does not exceed 300 mm (assessed excluding areas with less than 70% transparency shade bands, dot-printed areas, text, graphics and transparent slots for regulatory sight lines) and where the R-point of the driver seat is not more than 450 mm from the ground level.</p> <p>Date for refusal to grant EU type- approval: 7 July 2026</p> <p>Date for the prohibition of the registration of vehicles: 7 July 2028</p> | <p>a windscreen, with a foldable windscreen or with a windscreen where the maximum vertical distance between the top edge and lowest edge of the transparent surface does not exceed 300 mm (assessed excluding areas with less than 70% transparency shade bands, dot-printed areas, text, graphics and transparent slots for regulatory sight lines) and where the R-point of the driver seat is not more than 450 mm from the ground level.</p> <p>Date for refusal to grant EU type- approval: 7 July 2026</p> <p>Date for the prohibition of the registration of vehicles: 7 July 2028</p> |
| B5 | Pedestrian and cyclist collision warning | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | not in scope |
| B6 | Blind spot information system | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | not in scope |
| B7 | Reversing detection | Regulation (EU) 2019/2144 | n/a | n/a | B | B |
| B8 | Forward vision | Regulation (EU) 2019/2144 | B | <p>B</p> <p>Date for refusal to grant EU type- approval: 7 July 2026</p> <p>Date for the prohibition of the</p> | <p>B</p> <p>Date for refusal to grant EU type- approval: 7 July 2026</p> <p>Date for the prohibition of the</p> | <p>B</p> <p>Date for refusal to grant EU type- approval: 7 July 2026</p> <p>Date for the prohibition of the</p> |

| Item | Subject | Regulatory act | <i>Small series scheme I</i> | | <i>Small series scheme II</i> | |
|------|---|-----------------------------|---|---|---|---|
| | | | M ₁ | N ₁ | M ₁ | N ₁ |
| | | | | registration of vehicles: 7 July 2028 | | registration of vehicles: 7 July 2028 |
| B9 | Heavy-duty vehicles direct vision | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | not in scope |
| B10 | Safety glazing | Regulation (EU) 2019/2144 | (a) Components X (b) Installation B | (a) Components X (b) Installation B | (a) Components X (b) Installation B | (a) Components X (b) Installation B |
| B11 | Defrost/demist | Regulation (EU) 2019/2144 | B Vehicles shall be fitted with an adequate windscreen defrosting and demisting device | B Vehicles shall be fitted with an adequate windscreen defrosting and demisting device | B Vehicles shall be fitted with an adequate windscreen defrosting and demisting device | B Vehicles shall be fitted with an adequate windscreen defrosting and demisting device |
| B12 | Wash/wipe | Regulation (EU) 2019/2144 | B Vehicles shall be fitted with adequate windscreen washing and wiping devices | B Vehicles shall be fitted with adequate windscreen washing and wiping devices | B Vehicles shall be fitted with adequate windscreen washing and wiping devices | B Vehicles shall be fitted with adequate windscreen washing and wiping devices |
| B13 | Indirect vision devices | Regulation (EU) 2019/2144 | (a) Components X (b) Installation on vehicle B | (a) Components X (b) Installation on vehicle B | (a) Components X (b) Installation on vehicle B | (a) Components X (b) Installation on vehicle B |
| B14 | Acoustic Vehicle Alerting Systems | Regulation (EU) No 540/2014 | A | A | A | A |
| C | VEHICLE CHASSIS, BRAKING, TYRES AND STEERING | | | | | |
| C1 | Steering equipment | Regulation (EU) 2019/2144 | B | B | B | B |
| C2 | Lane departure warning | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | not in scope |
| C3 | Emergency lane keeping | Regulation (EU) 2019/2144 | IF B | IF B | B Not required for vehicles without a windscreen, with a foldable windscreen or with a windscreen where the maximum vertical distance between the top edge and lowest edge of the transparent surface does not exceed 300 mm | B Not required for vehicles without a windscreen, with a foldable windscreen or with a windscreen where the maximum vertical distance between the top edge and lowest edge of the transparent surface does not exceed 300 mm |

| Item | Subject | Regulatory act | <i>Small series scheme I</i> | | <i>Small series scheme II</i> | |
|------|---|---------------------------|------------------------------|----------------|--|--|
| | | | M ₁ | N ₁ | M ₁ | N ₁ |
| | | | | | (assessed excluding areas with less than 70% transparency shade bands, dot-printed areas, text, graphics and transparent slots for regulatory sight lines) and where the R-point of the driver seat is not more than 450 mm from the ground level. | (assessed excluding areas with less than 70% transparency shade bands, dot-printed areas, text, graphics and transparent slots for regulatory sight lines) and where the R-point of the driver seat is not more than 450 mm from the ground level. |
| C4 | Braking | Regulation (EU) 2019/2144 | A | A | A | A |
| C5 | Replacement braking parts | Regulation (EU) 2019/2144 | equipment | equipment | equipment | equipment |
| C6 | Brake assist | Regulation (EU) 2019/2144 | IF B | IF B | B | B |
| C7 | Stability control | Regulation (EU) 2019/2144 | IF B | IF B | B | B |
| C8 | Advanced emergency braking on heavy-duty vehicles | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | not in scope |
| C9 | Advanced emergency braking on light-duty vehicles | Regulation (EU) 2019/2144 | IF B | IF B | B Not required for vehicles without a windscreen, with a foldable windscreen or with a windscreen where the maximum vertical distance between the top edge and lowest edge of the transparent surface does not exceed 300 mm (assessed excluding areas with less than 70% transparency shade bands, dot-printed areas, text, graphics and transparent slots for regulatory sight lines) and where the R-point of the driver seat is | B Not required for vehicles without a windscreen, with a foldable windscreen or with a windscreen where the maximum vertical distance between the top edge and lowest edge of the transparent surface does not exceed 300 mm (assessed excluding areas with less than 70% transparency shade bands, dot-printed areas, text, graphics and transparent slots for regulatory sight lines) and where the R-point of the driver seat is |

| Item | Subject | Regulatory act | <i>Small series scheme I</i> | | <i>Small series scheme II</i> | |
|------|--|---------------------------|--|--|--|--|
| | | | M ₁ | N ₁ | M ₁ | N ₁ |
| | | | | | not more than 450 mm from the ground level. | not more than 450 mm from the ground level. |
| C10 | Tyre safety and environmental performance | Regulation (EU) 2019/2144 | X | X | X | X |
| C11 | Spare wheels and run-flat systems (IF) | Regulation (EU) 2019/2144 | X | X | X | X |
| C12 | Retreaded tyres | Regulation (EU) 2019/2144 | equipment | equipment | equipment | equipment |
| C13 | Tyre pressure monitoring for light-duty vehicles | Regulation (EU) 2019/2144 | n/a | n/a | B | B |
| C14 | Tyre pressure monitoring for heavy-duty vehicles | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | not in scope |
| C15 | Tyre installation | Regulation (EU) 2019/2144 | B | B | B | B |
| C16 | Replacement wheels | Regulation (EU) 2019/2144 | equipment | equipment | equipment | equipment |
| D | ON-BOARD INSTRUMENTS, ELECTRICAL SYSTEM, VEHICLE LIGHTING AND PROTECTION AGAINST UNAUTHORISED USE, INCLUDING CYBERATTACKS | | | | | |
| D1 | Audible warning | Regulation (EU) 2019/2144 | (a) Components X (b) Installation on vehicle B | (a) Components X (b) Installation on vehicle B | (a) Components X (b) Installation on vehicle B | (a) Components X (b) Installation on vehicle B |
| D2 | Radio interference (electromagnetic compatibility) | Regulation (EU) 2019/2144 | B | B | B | B |
| D3 | Protection against unauthorised use, immobiliser and alarm systems | Regulation (EU) 2019/2144 | A The provisions of paragraph 8.3.1.1.1. of UN Regulation No 116 may be applied instead of paragraph 8.3.1.1.2. of that | A The provisions of paragraph 8.3.1.1.1. of UN Regulation No 116 may be applied instead of paragraph 8.3.1.1.2. of that | A The provisions of paragraph 8.3.1.1.1. of UN Regulation No 116 may be applied instead of paragraph 8.3.1.1.2. of that | A The provisions of paragraph 8.3.1.1.1. of UN Regulation No 116 may be applied instead of paragraph 8.3.1.1.2. of that |

| Item | Subject | Regulatory act | <i>Small series scheme I</i> | | <i>Small series scheme II</i> | |
|------|--|---------------------------|---|---|--|--|
| | | | M ₁ | N ₁ | M ₁ | N ₁ |
| | | | Regulation regardless of the type of powertrain. VAS: (a) Components X (b) Installation B | Regulation regardless of the type of powertrain. VAS: (a) Components X (b) Installation B | Regulation regardless of the type of powertrain. VAS: (a) Components X (b) Installation B | Regulation regardless of the type of powertrain. VAS: (a) Components X (b) Installation B |
| D4 | Protection of vehicle against cyberattacks | Regulation (EU) 2019/2144 | B Only for vehicles fitted with lane keeping system, adaptive cruise control or other likewise systems | B Only for vehicles fitted with lane keeping system, adaptive cruise control or other likewise systems | B | B |
| D5 | Speedometer | Regulation (EU) 2019/2144 | B | B | B | B |
| D6 | Odometer | Regulation (EU) 2019/2144 | B | B | B | B |
| D7 | Speed limitation devices | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | not in scope |
| D8 | Intelligent speed assistance | Regulation (EU) 2019/2144 | n/a | n/a | B Not required for vehicles without a windscreen, with a foldable windscreen or with a windscreen where the maximum vertical distance between the top edge and lowest edge of the transparent surface does not exceed 300 mm (assessed excluding areas with less than 70% transparency shade bands, dot-printed areas, text, graphics and transparent slots for regulatory sight lines) and where the R-point of the driver seat is not more than 450 mm from the ground level. | B Not required for vehicles without a windscreen, with a foldable windscreen or with a windscreen where the maximum vertical distance between the top edge and lowest edge of the transparent surface does not exceed 300 mm (assessed excluding areas with less than 70% transparency shade bands, dot-printed areas, text, graphics and transparent slots for regulatory sight lines) and where the R-point of the driver seat is not more than 450 mm from the ground level. |
| D9 | Identification of | Regulation (EU) | A | A | A | A |

| Item | Subject | Regulatory act | <i>Small series scheme I</i> | | <i>Small series scheme II</i> | |
|------|--|---------------------------|---|---|---|---|
| | | | M ₁ | N ₁ | M ₁ | N ₁ |
| | controls, tell-tales and indicators | 2019/2144 | | | | |
| D10 | Heating systems | Regulation (EU) 2019/2144 | B | B | B | B |
| D11 | Light signalling devices | Regulation (EU) 2019/2144 | X | X | X | X |
| D12 | Road illumination devices | Regulation (EU) 2019/2144 | X | X | X | X |
| D13 | Retro-reflective devices | Regulation (EU) 2019/2144 | X | X | X | X |
| D14 | Light sources | Regulation (EU) 2019/2144 | X | X | X | X |
| D15 | Installation of light signalling, road illumination and retro-reflective devices | Regulation (EU) 2019/2144 | B Daytime Running Lamps (DRL) shall be fitted to a new type of vehicle | B Daytime Running Lamps (DRL) shall be fitted to a new type of vehicle | B Daytime Running Lamps (DRL) shall be fitted to a new type of vehicle | B Daytime Running Lamps (DRL) shall be fitted to a new type of vehicle |
| D16 | Emergency stop signal | Regulation (EU) 2019/2144 | B Only for vehicles fitted with electronically controlled anti-lock braking system | B Only for vehicles fitted with electronically controlled anti-lock braking system | B | B |
| D17 | Headlamp cleaners (IF) | Regulation (EU) 2019/2144 | IF B | IF B | IF B | IF B |
| D18 | Gear shift indicator | Regulation (EU) 2019/2144 | n/a | not in scope | n/a | not in scope |
| E | DRIVER AND SYSTEM BEHAVIOUR | | | | | |
| E1 | Alcohol interlock installation facilitation | Regulation (EU) 2019/2144 | A | A | A | A |
| E2 | Driver drowsiness and | Regulation (EU) 2019/2144 | n/a | n/a | B | B |

| Item | Subject | Regulatory act | <i>Small series scheme I</i> | | <i>Small series scheme II</i> | |
|------|--|---------------------------|------------------------------|--------------------|-------------------------------|--------------------|
| | | | M ₁ | N ₁ | M ₁ | N ₁ |
| | attention warning | | | | | |
| E3 | Advanced driver distraction warning | Regulation (EU) 2019/2144 | No requirement yet | No requirement yet | No requirement yet | No requirement yet |
| E4 | Driver availability monitoring system (in case of automated vehicles) | Regulation (EU) 2019/2144 | IF B | IF B | IF B | IF B |
| E5 | Event data recorder | Regulation (EU) 2019/2144 | n/a | n/a | B | B |
| E6 | Systems to replace driver's control (in case of automated vehicles) | Regulation (EU) 2019/2144 | IF B | No requirement yet | IF B | No requirement yet |
| E7 | Systems to provide the vehicle with information on state of vehicle and surrounding area (in case of automated vehicles) | Regulation (EU) 2019/2144 | IF B | No requirement yet | IF B | No requirement yet |
| E8 | Platooning (IF) | Regulation (EU) 2019/2144 | No requirement yet | No requirement yet | No requirement yet | No requirement yet |
| E9 | Systems to provide safety information to other road users (in case of automated vehicles) | Regulation (EU) 2019/2144 | No requirement yet | No requirement yet | No requirement yet | No requirement yet |

| Item | Subject | Regulatory act | <i>Small series scheme I</i> | | <i>Small series scheme II</i> | |
|------|---|---------------------------|--|--|--|--|
| | | | M ₁ | N ₁ | M ₁ | N ₁ |
| F | GENERAL VEHICLE CONSTRUCTION AND FEATURES | | | | | |
| F1 | Registration plate space | Regulation (EU) 2019/2144 | B | B | B | B |
| F2 | Reversing motion | Regulation (EU) 2019/2144 | B Statement of compliance | B Statement of compliance | B Statement of compliance | B Statement of compliance |
| F3 | Door latches and hinges | Regulation (EU) 2019/2144 | B (a) General requirements (Paragraph 5 of UN Regulation No 11) All the requirements shall apply. (b) Performance requirements (Paragraph 6 of UN Regulation No 11) Only the requirements of paragraph 6.1.5.4 and paragraph 6.3 of UN Regulation No 11 shall apply. | B (a) General requirements (Paragraph 5 of UN Regulation No 11) All the requirements shall apply. (b) Performance requirements (Paragraph 6 of UN Regulation No 11) Only the requirements of paragraph 6.1.5.4 and paragraph 6.3 of UN Regulation No 11 shall apply. | B | B |
| F4 | Door entry steps, handholds and running boards | Regulation (EU) 2019/2144 | B | B | B | B |
| F5 | External projections | Regulation (EU) 2019/2144 | B (a) General specifications The requirements of paragraph 5 of UN Regulation No 26 shall apply. (b) Particular specifications The requirements of paragraph 6 of UN Regulation No 26 shall apply. | not in scope | B (a) General specifications The requirements of paragraph 5 of UN Regulation No 26 shall apply. (b) Particular specifications The requirements of paragraph 6 of UN Regulation No 26 shall apply. | not in scope |
| F6 | External projections of commercial vehicle cabs | Regulation (EU) 2019/2144 | not in scope | B (a) General specifications The requirements of paragraph 5 of UN Regulation No 61 shall apply (b) Particular specifications The requirements of paragraph 6 of | not in scope | B (a) General specifications The requirements of paragraph 5 of UN Regulation No 61 shall apply (b) Particular specifications The requirements of paragraph 6 of |

| Item | Subject | Regulatory act | <i>Small series scheme I</i> | | <i>Small series scheme II</i> | |
|------|--|---------------------------|---|---|--|--|
| | | | M ₁ | N ₁ | M ₁ | N ₁ |
| | | | | UN Regulation No 61 shall apply. | | UN Regulation No 61 shall apply. |
| F7 | Statutory plate and vehicle identification number | Regulation (EU) 2019/2144 | B | B | B | B |
| F8 | Towing devices | Regulation (EU) 2019/2144 | B | B | B | B |
| F9 | Wheel guards | Regulation (EU) 2019/2144 | B | not in scope | B | not in scope |
| F10 | Spray suppression systems | Regulation (EU) 2019/2144 | not in scope | B | not in scope | B |
| F11 | Masses and dimensions | Regulation (EU) 2019/2144 | B The hill start ability test of Regulation (EU) 2021/535, Annex XIII, Part 2, Section B, Point 5. may be waived at the request of the manufacturer. | B The hill start ability test of Regulation (EU) 2021/535, Annex XIII, Part 2, Section B, Point 5. may be waived at the request of the manufacturer. | B | B |
| F12 | Mechanical couplings | Regulation (EU) 2019/2144 | IF (a) Components X (b) Installation B | IF (a) Components X (b) Installation B | IF (a) Components X (b) Installation B | IF (a) Components X (b) Installation B |
| F13 | Vehicles intended for the transportation of dangerous goods (IF) | Regulation (EU) 2019/2144 | not in scope | A | not in scope | A |
| F14 | General bus construction | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | not in scope |
| F15 | Bus strength of superstructure | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | not in scope |
| F16 | Flammability in buses | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | not in scope |
| G | ENVIRONMENTAL PERFORMANCE AND EMISSIONS | | | | | |

| Item | Subject | Regulatory act | <i>Small series scheme I</i> | | <i>Small series scheme II</i> | |
|------|---|-----------------------------|---|---|-------------------------------|----------------|
| | | | M ₁ | N ₁ | M ₁ | N ₁ |
| G1 | Sound level | Regulation (EU) No 540/2014 | A | A | A | A |
| G2 | Tailpipe emissions of vehicle in lab | Regulation (EC) No 715/2007 | A Where the vehicle manufacturer uses an engine from another manufacturer, bench test data from the engine manufacturer are accepted provided that the engine management system is identical (i.e. having at least the same electronic control unit (ECU)). The power output test may be performed on a chassis dynamometer, taking into account the power loss in the transmission. | A Where the vehicle manufacturer uses an engine from another manufacturer, bench test data from the engine manufacturer are accepted provided that the engine management system is identical (i.e. having at least the same electronic control unit (ECU)). The power output test may be performed on a chassis dynamometer, taking into account the power loss in the transmission. | A | A |
| G2a | Determination of specific CO ₂ emissions and fuel consumption of vehicle and device for monitoring on board the vehicle the consumption of fuel and/or electric energy | Regulation (EC) No 715/2007 | A | A | A | A |
| G3 | Tailpipe emissions of engine in lab | Regulation (EC) No 595/2009 | A Where the vehicle manufacturer uses an engine from another manufacturer, bench test data from the engine manufacturer are accepted provided that the engine management system is identical | A Where the vehicle manufacturer uses an engine from another manufacturer, bench test data from the engine manufacturer are accepted provided that the engine management system is identical | A | A |

| Item | Subject | Regulatory act | <i>Small series scheme I</i> | | <i>Small series scheme II</i> | |
|------|---|--|---|---|-------------------------------|----------------|
| | | | M ₁ | N ₁ | M ₁ | N ₁ |
| | | | (i.e. having at least the same electronic control unit (ECU)). The power output test may be performed on a chassis dynamometer, taking into account the power loss in the transmission. | (i.e. having at least the same electronic control unit (ECU)). The power output test may be performed on a chassis dynamometer, taking into account the power loss in the transmission. | | |
| G3a | Determination of specific CO ₂ emissions and fuel consumption of vehicle | Regulation (EC) No 595/2009 | A | A | A | A |
| G3b | Determination of specific energy efficiency performance of trailer | Regulation (EC) No 595/2009 | not in scope | not in scope | not in scope | not in scope |
| G4 | Tailpipe emissions on the road | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | A | A | A | A |
| G5 | Durability of tailpipe emissions | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | A | A | A | A |
| G6 | Crankcase emissions | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | A | A | A | A |
| G7 | Evaporative emissions | Regulation (EC) No 715/2007 | A | A | A | A |
| G8 | Low-temperature tailpipe emissions in lab | Regulation (EC) No 715/2007 | A | A | A | A |
| G9 | On-board diagnostics | Regulation (EC) No 715/2007 | The vehicle shall be fitted with an OBD system that shall be | The vehicle shall be fitted with an OBD system that shall be | A | A |

| Item | Subject | Regulatory act | <i>Small series scheme I</i> | | <i>Small series scheme II</i> | |
|------|--|--|--|--|---|---|
| | | | M ₁ | N ₁ | M ₁ | N ₁ |
| | | Regulation (EC) No 595/2009 | designed, constructed and installed as to enable it to identify types of deterioration or malfunction over the entire life of the vehicle and record at least the malfunction of the engine management system. The OBD-interface shall be able to communicate with commonly available diagnostic tools. | designed, constructed and installed as to enable it to identify types of deterioration or malfunction over the entire life of the vehicle and record at least the malfunction of the engine management system. The OBD-interface shall be able to communicate with commonly available diagnostic tools. | | |
| G10 | Absence of defeat device | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | A | A | A | A |
| G11 | Auxiliary emissions strategies | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | A | A | A | A |
| G12 | Anti-tampering | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | A | A | A | A |
| G13 | Recyclability | Directive 2005/64/EC | n/a However, Annex V on prohibition of reuse of the specified component parts shall apply. | n/a However, Annex V on prohibition of reuse of the specified component parts shall apply. | n/a However, Annex V on prohibition of reuse of the specified component parts shall apply. | n/a However, Annex V on prohibition of reuse of the specified component parts shall apply. |
| G14 | Air-conditioning systems | Directive 2006/40/EC | A | A | A | A |
| H | ACCESS TO VEHICLE INFORMATION AND SOFTWARE UPDATE | | | | | |
| H1 | Access to vehicle OBD information and vehicle repair and maintenance | Regulation (EU) 2018/858, Articles 61 to 66 and Annex X | X | X | X | X |

| Item | Subject | Regulatory act | <i>Small series scheme I</i> | | <i>Small series scheme II</i> | |
|------|-----------------|--|------------------------------|----------------|-------------------------------|----------------|
| | | | M ₁ | N ₁ | M ₁ | N ₁ |
| | information | | | | | |
| H2 | Software update | Regulation (EU) 2018/858 UN Regulation No 156 | X | X | X | X |

Table 2: Regulatory acts for EU type-approval of fully automated vehicles (as defined in Article 3(22) of Regulation (EU) 2019/2144) produced in small series pursuant to Article 41

| Item | Subject | Regulatory act (the scope of the regulatory act remains unchanged) | Fully automated vehicles of categories N ₁ , N ₂ and N ₃ without driver seat and without occupants | Fully automated vehicles of categories N ₁ , N ₂ , N ₃ , M ₁ , M ₂ , M ₃ without driver seat, with occupants | Dual mode vehicles: vehicles with a driver seat designed and constructed to be driven by the driver in the “manual driving mode” and to be driven by the automated driving system (ADS) without any driver supervision in the “fully automated driving mode” | Specific provisions to be applied if letter A is used (i.e. the approval is not possible under the regulatory act because it does not yet include specific requirements for fully automated vehicles) No provision shall apply if the vehicle category is not in the scope of the base regulatory act. |
|------|--|--|---|--|--|---|
| A | RESTRAINT SYSTEMS, CRASH TESTING, FUEL SYSTEM INTEGRITY AND HIGH VOLTAGE ELECTRICAL SAFETY | | | | | |
| A1 | Interior fittings | Regulation (EU) 2019/2144 | not in scope | A | X for manual driving mode. A for fully automated driving mode | All windows, roof-panels and partitions for use by occupants shall be equipped with an auto-reversing device in order to make a driver-controlled switch redundant. For bidirectional vehicles (i.e. vehicles with no distinguishable rear/front and that can be driven in both directions), requirements shall be met in both directions. Alternative requirements leading to an equivalent level of safety to the satisfaction of the type-approval authority are permitted if meeting all the requirements in both directions is incompatible with the bidirectional use. |
| A2 | Seats and head restraints | Regulation (EU) 2019/2144 | n/a | X A (for bidirectional vehicles) | X | For bidirectional vehicles, requirements shall be met in both directions. Alternative requirements leading to an equivalent level of safety to the satisfaction of the type-approval authority are permitted if meeting all the requirements in both directions is incompatible with the bidirectional use. |
| A3 | Bus seats | Regulation (EU) 2019/2144 | n/a | X A (for bidirectional vehicles) | X | For bidirectional vehicles, requirements shall be met in both directions. Alternative requirements leading to an equivalent level of safety to the satisfaction of the type- |

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|-----|---------------------------------------|---------------------------|-------------------------------------|-------------------------------------|-----------|---|
| | | | | | | approval authority are permitted if meeting all the requirements in both directions is incompatible with the bidirectional use. |
| A4 | Safety-belt anchorages | Regulation (EU) 2019/2144 | n/a | A | X | For vehicle with no driver seat, any seat in the first seat row shall be considered to be a front passenger seat. Paragraphs 5.1.6.2.1. and 5.1.6.2.2. of UN Regulation No 14 are not applicable. |
| A5 | Safety-belts and restraint systems | Regulation (EU) 2019/2144 | n/a | A | X | For vehicles without driver seat, any seat in the first seat row shall be considered to be a front passenger seat. |
| A6 | Safety-belt reminders | Regulation (EU) 2019/2144 | n/a | A | X | For vehicles without driver seat, any seat in the first seat row shall be considered to be a front passenger seat. The safety-belt reminder signal shall be transmitted to the automated driving system (ADS) and the remote intervention operator (if applicable) as defined in Commission Implementing Regulation (EU) 2022/ ... [to insert reference when published]. |
| A7 | Partitioning systems | Regulation (EU) 2019/2144 | equipment | equipment | equipment | |
| A8 | Child restraint anchorages | Regulation (EU) 2019/2144 | n/a | X | X | |
| A9 | Child restraint systems (IF) | Regulation (EU) 2019/2144 | n/a | X | X | |
| A10 | Enhanced child restraint systems (IF) | Regulation (EU) 2019/2144 | n/a | X | X | |
| A11 | Front underrun protection | Regulation (EU) 2019/2144 | X A (for bidirectional vehicles) | X A (for bidirectional vehicles) | X | For bidirectional vehicles, requirements shall be met in both directions. Alternative requirements leading to an equivalent level of safety to the satisfaction of the type-approval authority are permitted if meeting all the requirements in both directions is incompatible with the bidirectional use. |
| A12 | Rear underrun protection | Regulation (EU) 2019/2144 | X A (for bidirectional vehicles) | X A (for bidirectional vehicles) | X | For bidirectional vehicles, requirements shall be met in both directions. Alternative requirements leading to an equivalent level of safety to the satisfaction of the type-approval authority are permitted if meeting all the requirements in both directions is incompatible with the |

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|-----|--|---------------------------|-------------------------------------|-------------------------------------|---|--|
| | | | | | | bidirectional use. |
| A13 | Lateral protection | Regulation (EU) 2019/2144 | X A (for bidirectional vehicles) | X A (for bidirectional vehicles) | X | For bidirectional vehicles, requirements shall be met in both directions. Alternative requirements leading to an equivalent level of safety to the satisfaction of the type-approval authority are permitted if meeting all the requirements in both directions is incompatible with the bidirectional use. |
| A14 | Fuel tank safety (IF) | Regulation (EU) 2019/2144 | X | X | X | |
| A15 | Liquified petroleum gas safety (IF) | Regulation (EU) 2019/2144 | A | A | X (for manual driving mode) A (for fully automated driving mode) | The required malfunction or fault indication shall be replaced by a signal transmitted to the automated driving system and remote intervention operator (if applicable). |
| A16 | Compressed and liquified natural gas safety (IF) | Regulation (EU) 2019/2144 | X | X | X | |
| A17 | Hydrogen safety (IF) | Regulation (EU) 2019/2144 | X | X | X | |
| A18 | Hydrogen system material qualification (IF) | Regulation (EU) 2019/2144 | X | X | X | |
| A19 | In-use electric safety (IF) | Regulation (EU) 2019/2144 | A | A | X (for manual driving mode) A (for fully automated driving mode) | The requirements for passenger compartment shall not apply to N vehicles with no passenger. The indications normally given to the driver ' shall be sent to the ADS and the remote intervention operator (if applicable) |
| A20 | Frontal off-set impact | Regulation (EU) 2019/2144 | Not applicable | A n/a for vehicles below 30 km/h | X | The "R" point of the driver shall be considered to be the "R" point of the foremost passenger. If the vehicle has no steering wheel or pedal cluster, the positioning of the steering wheel and pedal cluster shall not be taken into account. If the vehicle does not contain a driver or/and a co-driver seat, these positions should not be tested. For bidirectional vehicles, requirements shall be met in both directions. Alternative requirements leading to an equivalent level of safety to the satisfaction of the type- |

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|-----|---------------------------|---------------------------|-----|-------------------------------------|-----------|--|
| | | | | | | approval authority are permitted if meeting all the requirements in both directions is incompatible with the bidirectional use. |
| A21 | Frontal full-width impact | Regulation (EU) 2019/2144 | n/a | A n/a for vehicles below 30 km/h | X | The “R” point of the driver shall be considered to be the “R” point of the foremost passenger. For bidirectional vehicles, requirements shall be met in both directions. Alternative requirements leading to an equivalent level of safety to the satisfaction of the type-approval authority are permitted if meeting all the requirements in both directions is incompatible with the bidirectional use. |
| A22 | Protective steering | Regulation (EU) 2019/2144 | n/a | n/a | X | |
| A23 | Replacement airbag | Regulation (EU) 2019/2144 | n/a | equipment | equipment | |
| A24 | Cab impact | Regulation (EU) 2019/2144 | n/a | X A (for bidirectional vehicles) | X | For bidirectional vehicles, requirements shall be met in both directions. Alternative requirements leading to an equivalent level of safety to the satisfaction of the type-approval authority are permitted if meeting all the requirements in both directions is incompatible with the bidirectional use. |
| A25 | Side impact | Regulation (EU) 2019/2144 | n/a | A n/a for vehicles below 30 km/h | X | The collision test will be carried out on the side or sides as agreed between the manufacturer and type approval authority. For bidirectional vehicles, requirements shall be met in both directions. Alternative requirements leading to an equivalent level of safety to the satisfaction of the type-approval authority are permitted if meeting all the requirements in both directions is incompatible with the bidirectional use. |
| A26 | Pole side impact | Regulation (EU) 2019/2144 | n/a | A n/a for vehicles below 30 km/h | X | The “R” point of the driver's seat shall be considered to be the “R” point of the foremost passenger seat. The dynamic pole side impact test will be carried out on the side or sides as agreed between the manufacturer and type approval authority. |

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|---|---|---------------------------|---|---|---|---|
| | | | | | | For bidirectional vehicles, requirements shall be met in both directions. Alternative requirements leading to an equivalent level of safety to the satisfaction of the type-approval authority are permitted if meeting all the requirements in both directions is incompatible with the bidirectional use. |
| A27 | Rear impact | Regulation (EU) 2019/2144 | n/a | X A (for bidirectional vehicles) | X | For bidirectional vehicles, requirements shall be met in both directions. Alternative requirements leading to an equivalent level of safety to the satisfaction of the type-approval authority are permitted if meeting all the requirements in both directions is incompatible with the bidirectional use. |
| A28 | 112-based eCall in-vehicles systems | Regulation (EU) 2015/758 | n/a | A | X (for manual driving mode) A (for fully automated driving mode) | For fully automated driving mode, the ADS takes care of the functionality. |
| B VULNERABLE ROAD USERS, VISION AND VISIBILITY | | | | | | |
| B1 | Pedestrian leg and head protection | Regulation (EU) 2019/2144 | X A (for bidirectional vehicles) | X A (for bidirectional vehicles) | X | For bidirectional vehicles, requirements shall be met in both directions. Alternative requirements leading to an equivalent level of safety to the satisfaction of the type-approval authority are permitted if meeting all the requirements in both directions is incompatible with the bidirectional use. |
| B2 | Enlarged head impact zone | Regulation (EU) 2019/2144 | X A (for bidirectional vehicles) | X A (for bidirectional vehicles) | X | For bidirectional vehicles, requirements shall be met in both directions. Alternative requirements leading to an equivalent level of safety to the satisfaction of the type-approval authority are permitted if meeting all the requirements in both directions is incompatible with the bidirectional use. |
| B3 | Frontal protection system | Regulation (EU) 2019/2144 | equipment | equipment | equipment | |
| B4 | Advanced emergency braking for pedestrians and cyclists ahead | Regulation (EU) 2019/2144 | n/a (functionality to be covered by the ADS) | n/a (functionality to be covered by the ADS) | X (for manual driving mode) n/a (for fully automated driving mode) (functionality to be covered by the ADS) | |

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|-----|--|---------------------------|--|--|---|--|
| B5 | Pedestrian and cyclist collision warning | Regulation (EU) 2019/2144 | n/a (functionality to be covered by the ADS) | n/a (functionality to be covered by the ADS) | X (for manual driving mode) n/a (for fully automated driving mode) (functionality to be covered by the ADS) | |
| B6 | Blind spot information system | Regulation (EU) 2019/2144 | n/a (functionality to be covered by the ADS) | n/a (functionality covered by the ADS) | X (for manual driving mode) n/a (for fully automated driving mode) (functionality covered by the ADS) | |
| B7 | Reversing detection | Regulation (EU) 2019/2144 | n/a (functionality covered by the ADS) | n/a (functionality covered by the ADS) | X (for manual driving mode) n/a (for fully automated driving mode) (functionality to be covered by the ADS) | |
| B8 | Forward vision | Regulation (EU) 2019/2144 | n/a | n/a | X (for manual driving mode) n/a (for fully automated driving mode) (functionality covered by the ADS) | |
| B9 | Heavy-duty vehicles direct vision | Regulation (EU) 2019/2144 | n/a (functionality covered by the ADS) | n/a (functionality covered by the ADS) | X (for manual driving mode) n/a (for fully automated driving mode) | |
| B10 | Safety glazing | Regulation (EU) 2019/2144 | n/a | A | X | Point 4.1.3 of Annex 24 is not applicable (no R-point available in relation to the installation of the windscreen). Any front exterior forward-facing glazing shall be regarded as windscreen. For bidirectional vehicles, requirements shall be met in both directions. Alternative requirements leading to an equivalent level of safety to the satisfaction of the type-approval authority are permitted if meeting all the requirements in both directions is incompatible with the bidirectional use. |
| B11 | Defrost/demist | Regulation (EU) 2019/2144 | n/a | n/a | X (for manual driving mode) n/a (for fully automated | |

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|----------|---|-----------------------------|---|---|---|--|
| | | | | | driving mode) (functionality covered by the ADS) | |
| B12 | Wash/wipe | Regulation (EU) 2019/2144 | n/a | n/a | X (for manual driving mode) n/a (for fully automated driving mode) | |
| B13 | Indirect vision devices | Regulation (EU) 2019/2144 | n/a (functionality covered by the ADS) | n/a (functionality covered by the ADS) | X (for manual driving mode) n/a (for fully automated driving mode) | |
| B14 | Acoustic Vehicle Alerting Systems | Regulation (EU) No 540/2014 | X | X | X | |
| C | VEHICLE CHASSIS, BRAKING, TYRES AND STEERING | | | | | |
| C1 | Steering equipment | Regulation (EU) 2019/2144 | A | A | X (for manual driving mode) A (for fully automated driving mode) | The basic steering (mechanical) requirements apply however: - the requirements applicable to the steering control (e.g. max steering forces) are not applicable; - the failure provisions and performance at 5.3 are not relevant if there's no driver but the failure notification should be made (digitally) available to the ADS and the remote intervention operator (if applicable). - The provisions of Annex 6-complex electronic systems need to be fulfilled and may be covered by the ADS safety concept. The ADS shall take care of the tasks assigned to the driver and driver steering assistance system. |
| C2 | Lane departure warning | Regulation (EU) 2019/2144 | n/a (functionality covered by the ADS) | n/a (functionality covered by the ADS) | X (for manual driving mode) n/a (for fully automated driving mode) (functionality covered by the ADS) | |
| C3 | Emergency lane keeping | Regulation (EU) 2019/2144 | n/a (functionality covered by the ADS) | n/a (functionality covered by the ADS) | X (for manual driving mode) n/a (for fully automated driving mode) | |
| C4 | Braking | Regulation (EU) 2019/2144 | A | A | X (for manual driving mode) A (for fully automated | Activation of the brakes managed by the ADS in replacement of the driver and driver assistant systems. |

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| | | | | | mode) | <p>Each vehicle shall be fitted where applicable with</p> <ul style="list-style-type: none"> - a service braking system - a secondary braking system - a parking braking system - an endurance braking system. (for vehicle categories covered by UN Regulation No 13) <p>All Annexes to UN Regulation No 13, except for Annex 5 (Additional provisions applicable to certain vehicles as specified in the ADR), shall remain applicable.</p> <p>All muscular generated performances (e.g. secondary brake) shall be replaced by alternative supply. (to be performed by the ADS- need for a special test mode). Issue of failure to be covered (no driver as fallback).</p> <p>All the tell tales, indicators, warnings and information in accordance to UN Regulation No 13 or UN Regulation No 13-H (depending on the vehicle category) shall be sent to the ADS and the remote intervention operator (if applicable).</p> <p>When more than one control is required in UN Regulation No13 (e.g. paragraph 5.2.1.2.1) this shall be replaced by two independent power sources. e.g. service brake activation and parking braking brake shall be activated by actuators with separated energy reserves, actuators and logic.</p> <p>The ADS safety concept shall cover the electronic systems of the braking system (including the interfaces and interactions with any other affected electronic systems of the vehicle).</p> <p>The ADS takes care of the tasks assigned to the driver and braking assistance systems.</p> |
| C5 | Replacement braking parts | Regulation (EU) 2019/2144 | equipment | equipment | equipment | |

| | | | | | | |
|-----|---|---------------------------|--|--|--|--|
| C6 | Brake assist | Regulation (EU) 2019/2144 | n/a (functionality covered by the ADS) | n/a (functionality covered by the ADS) | X (for manual driving mode) n/a (for fully automated driving mode) (functionality covered by the ADS) | |
| C7 | Stability control | Regulation (EU) 2019/2144 | n/a (functionality covered by the ADS) | n/a (functionality covered by the ADS) | X (for manual driving mode) n/a (for fully automated driving mode) (functionality covered by the ADS) | |
| C8 | Advanced emergency braking on heavy-duty vehicles | Regulation (EU) 2019/2144 | n/a (functionality covered by the ADS) | n/a (functionality covered by the ADS) | X (for manual driving mode) n/a (for fully automated driving mode) (functionality covered by the ADS) | |
| C9 | Advanced emergency braking on light-duty vehicles | Regulation (EU) 2019/2144 | n/a (functionality covered by the ADS) | n/a (functionality covered by the ADS) | X for manual driving mode Not applicable for fully automated driving mode (functionality covered by the ADS) | |
| C10 | Tyre safety and environmental performance | Regulation (EU) 2019/2144 | X | X | X | |
| C11 | Spare wheels and run-flat systems (IF) | Regulation (EU) 2019/2144 | A | A | X (for manual driving mode) A (for fully automated mode) | In the case of vehicles equipped with a Run-Flat Warning System the warning signal and the run-flat malfunction signal shall be replaced by signals transmitted to the ADS and the remote intervention operator (if applicable). |
| C12 | Retreaded tyres | Regulation (EU) 2019/2144 | equipment | equipment | equipment | |
| C13 | Tyre pressure monitoring for light-duty vehicles | Regulation (EU) 2019/2144 | A | A | X (for manual driving mode) A (for fully automated driving mode) | The warning signal shall be sent to the ADS and the remote intervention operator (if applicable). |
| C14 | Tyre pressure monitoring for heavy-duty vehicles | Regulation (EU) 2019/2144 | A | A | X (for manual driving mode) A (for fully automated driving mode) | The warning signal shall be sent to the ADS and the remote intervention operator (if applicable). |
| C15 | Tyre installation | Regulation (EU) | A | A | X | The maximum speed warning label (in vehicle) shall not |

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| | | 2019/2144 | | | | be required. The ADS shall not exceed the maximum speed capability of the tyres prescribed by the vehicle manufacturer. |
| C16 | Replacement wheels | Regulation (EU) 2019/2144 | equipment | equipment | equipment | |
| D ON-BOARD INSTRUMENTS, ELECTRICAL SYSTEM, VEHICLE LIGHTING AND PROTECTION AGAINST UNAUTHORISED USE, INCLUDING CYBERATTACKS | | | | | | |
| D1 | Audible warning | Regulation (EU) 2019/2144 | X | X | X | |
| D2 | Radio interference (electromagnetic compatibility) | Regulation (EU) 2019/2144 | A | A | X (for manual driving mode) A (for fully automated driving mode) | <p>Test mode needed.</p> <p>In addition to the requirements EMC tests described in Annexes 4 to 22 to UN Regulation No 10, the following procedure before and during initial EMC tests shall be followed:</p> <p>1. When a fully automated vehicle with an ADS is EMC tested, the ADS functions should be switched on and also work in active mode. However certain limitations in use case can be observed. Therefore, before executing the EMC test, the type-approval authority needs to be consulted about the test program to agree about the Pass/Fail criteria proposal made by the EMC lab according to paragraph 6.1.2 of UN Regulation No 10. Before testing the Technical Service has to prepare a test plan in conjunction with the manufacturer, which contains at least mode of operation, stimulated function(s), monitored function(s), pass/fail criterion (criteria) and intended emissions.</p> <p>3. The manufacturer of the vehicle or Electric/electronic subassembly (ESA) shall fill in the information according to UN Regulation 10, Annex 2A or 2B. The EMC lab shall make this available as an annex to the test report.”.</p> <p>4. In case if a remote intervention is used and could influence the behaviour of the vehicle the remote intervention should be part of the EMC test plan.</p> |

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| | | | | | | 5. When it's needed during the initial test, to install Ferrite blocks or aluminium foil on several elements to pass the EMC tests, it proves that the EMC design was weak and potentially prone to variation. Therefore the initial tests can never be used for further revision or extension for further vehicles or adding/changing ESA's (Electronic Sub-Assemblies) to the vehicle / DUT's. |
| D3 | Protection against unauthorised use, immobiliser and alarm systems | Regulation (EU) 2019/2144 | X | X | X | |
| D4 | Protection of vehicle against cyberattacks | Regulation (EU) 2019/2144 | X | X | X | |
| D5 | Speedometer | Regulation (EU) 2019/2144 | A | A | X (for manual driving mode) A (for fully automated driving mode) | Requirements are not applicable except that the speed signal shall be send to the ADS |
| D6 | Odometer | Regulation (EU) 2019/2144 | A | A | X (for manual driving mode) A (for fully automated driving mode) | The odometer signal shall be send to the ADS |
| D7 | Speed limitation devices | Regulation (EU) 2019/2144 | A | A | X (for manual driving mode) A for fully automated driving mode | Test mode needed. The speed management and limitation shall be ensured by ADS. |
| D8 | Intelligent speed assistance | Regulation (EU) 2019/2144 | n/a | n/a | X (for manual driving mode) n/a (for fully automated driving mode) (functionality covered by the ADS) | |
| D9 | Identification of controls, tell-tales and indicators | Regulation (EU) 2019/2144 | n/a | n/a | X (for manual driving mode) n/a (for fully automated driving mode) | |
| D10 | Heating systems | Regulation (EU) 2019/2144 | n/a | A | X (for manual driving mode) A (for fully automated driving mode) | In the case of part or parts of the heating system in the passenger compartment, and in the case of overheating, the temperature of the parts shall not exceed 110 °C (70°C for M ₂ and 80°C for M ₃). |

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| | | | | | | The activation and adjustment of the heating system can be managed by the ADS and/or passengers or remote intervention operator (if applicable). |
| D11 | Light signalling devices | Regulation (EU) 2019/2144 | X | X | X | |
| D12 | Road illumination devices | Regulation (EU) 2019/2144 | X | X | X | |
| D13 | Retro-reflective devices | Regulation (EU) 2019/2144 | X | X | X | |
| D14 | Light sources | Regulation (EU) 2019/2144 | X | X | X | |
| D15 | Installation of light signalling, road illumination and retro-reflective devices | Regulation (EU) 2019/2144 | A | A | X (for manual driving mode) A (for fully automated driving mode) | The requirements shall remain the same, but in case of malfunctioning, the information shall be sent to ADS and the remote intervention operator (if applicable). The activation of the lights is managed by the ADS. For bidirectional vehicles, requirements shall be met in both directions unless it is incompatible with the use in agreement with the type-approval authority. |
| D16 | Emergency stop signal | Regulation (EU) 2019/2144 | X | X | X | |
| D17 | Headlamp cleaners (IF) | Regulation (EU) 2019/2144 | A | A | X (for manual driving mode) A (for fully automated driving mode) | The control of the headlamp cleaner shall be managed by the ADS. |
| D18 | Gear shift indicator | Regulation (EU) 2019/2144 | n/a | n/a | X (for manual driving mode) n/a (for fully automated mode) | not in scope |
| | | | | | | |
| E | DRIVER AND SYSTEM BEHAVIOUR | | | | | |
| E1 | Alcohol interlock installation facilitation | Regulation (EU) 2019/2144 | n/a | n/a | X (for manual driving mode) n/a (for fully automated driving mode) | |
| E2 | Driver drowsiness and attention warning | Regulation (EU) 2019/2144 | n/a | n/a | X (for manual driving mode) n/a (for fully automated driving mode) | |

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| E3 | Advanced driver distraction warning | Regulation (EU) 2019/2144 | No requirement yet | No requirement yet | No requirement yet | |
| E4 | Driver availability monitoring system (in case of automated vehicles) | Regulation (EU) 2019/2144 | n/a | n/a | X | |
| E5 | Event data recorder | Regulation (EU) 2019/2144 | A | A | A for fully automated driving mode X for manual driving mode | Specific ADS data elements are covered in Commission Implementing Regulation (EU) 2022/ ... |
| E6 | Systems to replace driver's control (in case of automated vehicles) | Regulation (EU) 2019/2144 | X | X | X | Covered by Commission Implementing Regulation (EU) 2022/ ... [insert reference to ADS act when published] |
| E7 | Systems to provide the vehicle with information on state of vehicle and surrounding area (in case of automated vehicles) | Regulation (EU) 2019/2144 | X | X | X | Covered by Commission Implementing Regulation (EU) 2022/ ... [insert reference to ADS act when published] |
| E8 | Platooning (IF) | Regulation (EU) 2019/2144 | No requirement yet | No requirement yet | No requirement yet | No requirement yet |
| E9 | Systems to provide safety information to other road users (in case of automated vehicles) | Regulation (EU) 2019/2144 | X | X | X | Covered by Commission Implementing Regulation (EU) 2022/ ... [insert reference to ADS act when published] |
| F | GENERAL VEHICLE CONSTRUCTION AND FEATURES | | | | | |
| F1 | Registration plate space | Regulation (EU) 2019/2144 | A | A | X (for manual driving mode) A (for fully automated driving mode) | For bidirectional vehicles, requirements shall be met in both directions unless it is incompatible with the use in agreement with the type-approval authority. |
| F2 | Reversing motion | Regulation (EU) 2019/2144 | A | A | X (for manual driving mode) A (for fully automated driving mode) | The ADS shall also be tested for manoeuvrability (reverse gear). The ADS shall take care of the tasks assigned to the driver (e.g. activation of the reverse gear). |

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| F3 | Door latches and hinges | Regulation (EU) 2019/2144 | n/a | A | X (for manual driving mode) A (for fully automated driving mode) | <p>The visual signal of the door closure warning system shall be replaced by a signal transmitted to the ADS and the remote intervention operator (if applicable).</p> <p>The equipment of side doors with locking devices shall be subject to the discretion of the manufacturer.</p> <p>The primary door controls which normally would be accessible by the driver, would need to be accessible either from a primary seating position (if applicable) or adjacent to each door.</p> <p>The ADS shall ensure that the vehicle can only move if doors are closed.</p> |
| F4 | Door entry steps, handholds and running boards | Regulation (EU) 2019/2144 | A | X | X | Vehicle access requirements do not apply where there is no vehicle cab. |
| F5 | External projections | Regulation (EU) 2019/2144 | not in scope | A | A (for fully automated driving mode) | <p>Sensors fitted to the ADS vehicle which are necessary to perform the Dynamic Driving Task can be excluded in a similar manner as camera monitor systems devices if they meet the general requirements on camera monitor devices in paragraph 6.2.2.1. of UN Regulation 46.</p> <p>The “R” point of the driver referred shall be considered to be the “R” point of the foremost passenger in case there is no driver seat.</p> <p>For bidirectional vehicles, requirements shall be met in both directions. Alternative requirements leading to an equivalent level of safety to the satisfaction of the type-approval authority are permitted if meeting all the requirements in both directions is incompatible with the bidirectional use.</p> |
| F6 | External projections of commercial | Regulation (EU) 2019/2144 | A | A | A | Sensors fitted to the ADS vehicle which are necessary to perform the Dynamic Driving Task can be excluded in a similar manner as camera monitor systems devices if they |

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| | vehicle cabs | | | | | <p>meet the general requirements on camera monitor devices in paragraph 6.2.2.1. of UN Regulation 46.</p> <p>The “R” point of the driver referred shall be considered to be the “R” point of the foremost passenger in case there is no driver seat.</p> <p>For bidirectional vehicles, requirements shall be met in both directions. Alternative requirements leading to an equivalent level of safety to the satisfaction of the type-approval authority are permitted if meeting all the requirements in both directions is incompatible with the bidirectional use.</p> |
| F7 | Statutory plate and vehicle identification number | Regulation (EU) 2019/2144 | X A for bidirectional vehicles | X A for bidirectional vehicles | X | For bidirectional vehicles, requirements shall be met in both directions. Alternative requirements leading to an equivalent level of safety to the satisfaction of the type-approval authority are permitted if meeting all the requirements in both directions is incompatible with the bidirectional use. |
| F8 | Towing devices | Regulation (EU) 2019/2144 | X | X | X | |
| F9 | Wheel guards | Regulation (EU) 2019/2144 | Not in scope | A | X (for manual driving mode) A (for fully automated mode) | <p>Fully applicable.</p> <p>For bidirectional vehicles, requirements shall be met in both directions. Alternative requirements leading to an equivalent level of safety to the satisfaction of the type-approval authority are permitted if meeting all the requirements in both directions is incompatible with the bidirectional use.</p> |
| F10 | Spray suppression systems | Regulation (EU) 2019/2144 | X | X | X | |
| F11 | Masses and dimensions | Regulation (EU) 2019/2144 | A | A. | A (for fully automated mode) X (for manual driving mode) | <p>Mass in running order shall exclude mass of the driver if there is no on-board operator.</p> <p>The ADS sensors above 2 meters are not included in the maximum dimensions in accordance with the provisions of Regulation (EU) 2021/535, Annex XIII.</p> |
| F12 | Mechanical | Regulation (EU) | A | A | X (for manual driving mode) | The indication to driver that the mechanical coupling is |

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| | couplings | 2019/2144 | | | A (for fully automated driving mode) | locked/unlocked shall be addressed to the ADS and the remote intervention operator (if applicable). |
| F13 | Vehicles intended for the transportation of dangerous goods (IF) | Regulation (EU) 2019/2144 | Not in scope | Not in scope | Not in scope | Fully automated vehicles intended for the transportation of dangerous goods cannot be approved. |
| F14 | General bus construction | Regulation (EU) 2019/2144 | Not in scope | A | X (for manual driving mode) A (for fully automated mode) | <p>Buses without a roof and trolley buses are out of scope.</p> <p>In general the tasks normally expected by the driver under UN Regulation No 107 shall be covered in the ADS safety concept.</p> <p>The requirements of paragraphs 7.2.2.1.1, 7.2.2.1.2 and 7.2.2.1.3 as defined in Annex 3 to UN-Regulation No 107 shall not apply.</p> <p>All required information normally displayed or noticed to the driver or information to passengers in case of an emergency shall be transferred to the ADS, the on-board operator and the remote intervention operator (e.g. fire suppression system)</p> <p>The ADS shall take care of power operated doors.</p> <p>The ADS shall take care of the reaction to fire as part of the ADS safety concept (e.g. emergency manoeuvre and transfer to the safe state), doors automatically unlocked when safe to do so.</p> <p>In case of emergency, the ADS shall take care of the emergency lighting system as part of the ADS safety concept. Once activated, the emergency lighting system shall remain active for at least 30 minutes. This active function shall be displayed as well to the remote intervention operator who may deactivate the emergency lighting system.</p> |

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| | | | | | | The kneeling system shall in ADS operation automatically be actuated to achieve required step height. Also prevention system shall be part of the ADS safety concept to prevent the feet/legs of passengers boarding the vehicle from getting stuck underneath the vehicle during lowering process. |
| F15 | Bus strength of superstructure | Regulation (EU) 2019/2144 | Not in scope | X | X | |
| F16 | Flammability in buses | Regulation (EU) 2019/2144 | Not in scope | X | X | |
| G | ENVIRONMENTAL PERFORMANCE AND EMISSIONS | | | | | |
| G1 | Sound level | Regulation (EU) No 540/2014 | A | A | X (for manual driving mode) A (for fully automated driving mode) | <p>Test mode necessary. Manufacturer to define how to perform the test in accordance with the technical justification in agreement with technical service. Highest value measured in manual or / and in autonomous mode shall be considered for type approval.</p> <p>Vehicles having overall sound levels complying with the requirements in paragraph 6.2.8 of UNECE Regulation No 138(1) with a margin of +3 dB(A), are not required to be equipped with Acoustic Vehicle Alerting System (AVAS). The requirements laid down in paragraph 6.2.8 of that Regulation for one-third octave bands and the requirements laid down in paragraph 6.2.3 of that Regulation for the frequency shift as defined in paragraph 2.4 of that Regulation (“frequency shift”) shall not apply to those vehicles to determine the need for AVAS independent whether the vehicles is driven in manual or autonomous mode during the test.</p> <p>The R point of the driver seat shall be considered to be the lowest R point of the passenger seats in the 1st seat row. Used test procedure/special arrangement to be recorded in the test report.</p> |
| G2 | Tailpipe emissions of vehicle in lab | Regulation (EC) No 715/2007 | A | A | X (for manual driving mode) A (for fully automated driving mode) | The manufacturer shall define a test mode in order to allow testing on a chassis dynamometer and communicate the method to the relevant approval authorities. |

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| | | | | | | The required driver warning and inducement system shall be replaced by signals transmitted to the automated driving system, and remote intervention operator (if applicable). It shall be clearly indicated to the remote intervention operator when the inducement will be activated. |
| G2a | Determination of specific CO ₂ emissions and fuel consumption of vehicle and device for monitoring on board the vehicle the consumption of fuel and/or electric energy | Regulation (EC) No 715/2007 | A | A | X (for manual driving mode) A (for fully automated driving mode) | The manufacturer shall define a test mode in order to allow testing on a chassis dynamometer and communicate the method to the relevant approval authorities. |
| G3 | Tailpipe emissions of engine in lab | Regulation (EC) No 595/2009 | A | A | X (for manual driving mode) A (for automated driving mode) | The required driver warning and inducement system shall be replaced by signals transmitted to the automated driving system and remote intervention operator (if applicable). It shall be clearly indicated to the remote intervention operator when the inducement will be activated. |
| G3a | Determination of specific CO ₂ emissions and fuel consumption of vehicle | Regulation (EC) No 595/2009 | A | A | X (for manual driving mode) A (for automated driving mode) | The manufacturer shall define a test mode in order to perform the verification testing procedure and communicate the method to the relevant approval authorities. |
| G3b | Determination of specific energy efficiency performance of trailer | Regulation (EC) No 595/2009 | Not in scope | Not in scope | Not in scope | Not in scope |
| G4 | Tailpipe emissions on the road | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | A | A | X (for manual driving mode) A (for automated driving mode) | The manufacturer shall define a test mode in order to allow testing on the road and communicate the method to the relevant approval authorities. The required driver warning and inducement system shall be replaced by signals transmitted to the automated driving |

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| | | | | | | system, and remote intervention operator (if applicable). It shall be clearly indicated to the remote intervention operator when the inducement will be activated. |
| G5 | Durability of tailpipe emissions | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | A | A | X (for manual driving mode) | The manufacturer shall define a test mode in order to allow testing on the road and communicate the method to the relevant approval authorities. |
| G6 | Crankcase emissions | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | X | X | X | |
| G7 | Evaporative emissions | Regulation (EC) No 715/2007 | X | X | X | |
| G8 | Low-temperature tailpipe emissions in lab | Regulation (EC) No 715/2007 | A | A | X (for manual driving mode) A (for automated driving mode) | The manufacturer shall define a test mode in order to allow testing on a chassis dynamometer and communicate the method to the relevant approval authorities. The required driver warning and inducement system shall be replaced by signals transmitted to the automated driving system and remote intervention operator (if applicable). It shall be clearly indicated to the remote intervention operator when the inducement will be activated. |
| G9 | On-board diagnostics | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | A | A | X (for manual driving mode) A (for automated driving mode) | The required Malfunction Indicator Light (MIL) shall be replaced by a signal transmitted to the automated driving system, and remote intervention operator (if applicable). |
| G10 | Absence of defeat device | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | X | X | X | |
| G11 | Auxiliary emissions strategies | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | X | X | X | |
| G12 | Anti-tampering | Regulation (EC) No 715/2007 Regulation (EC) No | X | X | X | |

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| | | 595/2009 | | | | |
| G13 | Recyclability | Directive 2005/64/EC | X | X | X | |
| G14 | Air-conditioning systems | Directive 2006/40/EC | n/a | X | X | |
| H | ACCESS TO VEHICLE INFORMATION AND SOFTWARE UPDATE | | | | | |
| H1 | Access to vehicle OBD information and vehicle repair and maintenance information | Regulation (EU) 2018/858, Articles 61 to 66 and Annex X | X | X | X | |
| H2 | Software update | Regulation (EU) 2018/858 UN Regulation No 156 | X | X | X | |



(3) Part II is amended as follows:

(a) The following paragraph is added after the second paragraph below the title:

‘Installation requirements laid down in a Directive or Regulation in the table of Part I shall apply also to components and separate technical units approved in accordance with the UN Regulations listed in the following table.’.

(b) The table is replaced by the following:

| Item | Subject | UN Regulation | Series of amendments |
|-------------|--|----------------------|-----------------------------|
| B14 | Acoustic vehicle alerting system | 138 | 01 |
| G1 | Sound level | 51 | 03 |
| | | 59 | 01 |
| G13 | Recyclability(*) <small>(*) The requirements set out in Annex I to Directive 2005/64/EC shall apply</small> | 133 | 00 |

- (4) Part III and its Appendices 1 to 6 are replaced by the following:

‘PART III

**List of regulatory acts setting out the requirements for the purpose of
EU type-approval of special purpose vehicles**

EXPLANATORY NOTES

to the tables in Appendices 1 to 6

- X: Compliance with the regulatory act is required according to the vehicle category for which type-approval is sought. Any specific provisions noted in addition to this explanatory note shall be taken into account.
- G: In case of multi-stage approval, compliance with the regulatory act according to which the base vehicle (e.g. the chassis of which was used to build the special purpose vehicle) has been type-approved shall be accepted. In this case, any vehicle systems, their features, parts, equipment, components and separate technical units that have been modified or added by the manufacturer, may be assessed against the base vehicle’s requirements. Any specific provisions noted in addition to this explanatory note shall be taken into account.
- A: The approval authority may agree to fully or partly grant exemptions upon the condition that the manufacturer demonstrates to the satisfaction of the technical service that the vehicle cannot meet the full set of requirements due to its special purpose. The manufacturer shall however endeavour to meet the requirements to the largest possible extent taking into account proportionality. Those exemptions shall be described in Part 2 of the vehicle EU type-approval certificate as well as under “remarks” in the Certificate of Conformity. Any specific provisions noted in addition to this explanatory note shall be taken into account.

Appendix 1

Motor-caravans, ambulances and hearses

| Item | Subject | Regulatory act | M ₁ ≤ 2 500 kg | M ₁ > 2 500 kg | M ₂ | M ₃ |
|------|--|---------------------------|--|--|--|--|
| A | RESTRAINT SYSTEMS, CRASH TESTING, FUEL SYSTEM INTEGRITY AND HIGH VOLTAGE ELECTRICAL SAFETY | | | | | |
| A1 | Interior fittings | Regulation (EU) 2019/2144 | <p>G</p> <p>Application is limited to the passenger compartment in front of the transverse plane passing through the torso reference line of the 3-D H machine placed on the rearmost seat designated for normal use when the vehicle is used on a public road, as well as to the respective reference zones of each seating position designated for normal use as defined in the regulatory act when the vehicle type is subject to the requirements applicable to vehicle category M₁. It does not apply to the patient compartment of ambulances</p> <p>Additional requirements for new types of ambulances: The patient compartment of ambulances shall comply with the requirements of EN 1789:2020 on Medical vehicles and their equipment – Road</p> | <p>G</p> <p>Application is limited to the passenger compartment in front of the transverse plane passing through the torso reference line of the 3-D H machine placed on the rearmost seat designated for normal use when the vehicle is used on a public road, as well as to the respective reference zones of each seating position designated for normal use as defined in the regulatory act when the vehicle type is subject to the requirements applicable to vehicle category M₁. It does not apply to the patient compartment of ambulances</p> <p>Additional requirements for new types of ambulances: The patient compartment of ambulances shall comply with the requirements of EN 1789:2020 on Medical vehicles and their equipment – Road</p> | <p>n/a for the passenger or patient compartment</p> <p>Additional requirements for new types of ambulances: The patient compartment of ambulances shall comply with the requirements of EN 1789:2020 on Medical vehicles and their equipment – Road ambulances with the exception of section 6.5, list of equipment. Proof of compliance shall be provided with a test report of the technical service and may be based on an assessment carried out by subcontractors or subsidiaries of the technical service in accordance with the provisions of Article 71. If a wheelchair space is foreseen, the requirements for wheelchair accessible vehicles (code SH) relating to the wheelchair tie-down and occupant restraint systems shall</p> | <p>n/a for the passenger or patient compartment</p> <p>Additional requirements for new types of ambulances: The patient compartment of ambulances shall comply with the requirements of EN 1789:2020 on Medical vehicles and their equipment – Road ambulances with the exception of section 6.5, list of equipment. Proof of compliance shall be provided with a test report of the technical service and may be based on an assessment carried out by subcontractors or subsidiaries of the technical service in accordance with the provisions of Article 71. If a wheelchair space is foreseen, the requirements for wheelchair accessible vehicles (code SH) relating to the wheelchair tie-down and occupant</p> |

| Item | Subject | Regulatory act | $M_1 \leq 2\,500\text{ kg}$ | $M_1 > 2\,500\text{ kg}$ | M_2 | M_3 |
|------|---------------------------|---------------------------|--|--|---|---|
| | | | ambulances with the exception of section 6.5, list of equipment. Proof of compliance shall be provided with a test report of the technical service and may be based on an assessment carried out by subcontractors or subsidiaries of the technical service in accordance with the provisions of Article 71. If a wheelchair space is foreseen, the requirements for wheelchair accessible vehicles (code SH) relating to the wheelchair tie-down and occupant restraint systems shall also apply. | ambulances with the exception of section 6.5, list of equipment. Proof of compliance shall be provided with a test report of the technical service and may be based on an assessment carried out by subcontractors or subsidiaries of the technical service in accordance with the provisions of Article 71. If a wheelchair space is foreseen, the requirements for wheelchair accessible vehicles (code SH) relating to the wheelchair tie-down and occupant restraint systems shall also apply. | also apply. | restraint systems shall also apply. |
| A2 | Seats and head restraints | Regulation (EU) 2019/2144 | <p>G</p> <p>Application is limited to seats designated for normal use when the vehicle is used on a public road.</p> <p>Seats that are not designated as such shall be clearly and permanently identified to users, either by means of a pictogram or a sign with an appropriate text.</p> <p>The energy dissipation and radii requirements are checked in accordance with paragraphs 5.2.3./5.2.4.2.</p> | <p>G</p> <p>Application is limited to seats designated for normal use when the vehicle is used on a public road.</p> <p>Seats that are not designated as such shall be clearly and permanently identified to users, either by means of a pictogram or a sign with an appropriate text.</p> <p>The energy dissipation and radii requirements are checked in accordance with paragraphs 5.2.3./5.2.4.2.</p> | <p>X</p> <p>Application limited to seats designated for normal use when the vehicle is used on a public road.</p> <p>Seats that are not designated as such shall be clearly and permanently identified to users, either by means of a pictogram or a sign with an appropriate text.</p> | <p>X</p> <p>Application limited to seats designated for normal use when the vehicle is used on a public road.</p> <p>Seats that are not designated as such shall be clearly and permanently identified to users, either by means of a pictogram or a sign with an appropriate text.</p> |

| Item | Subject | Regulatory act | $M_1 \leq 2\,500\text{ kg}$ | $M_1 > 2\,500\text{ kg}$ | M_2 | M_3 |
|------|------------------------|---------------------------|---|---|--|--|
| | | | and 5.2.4. of UN Regulation No 17 when the vehicle type is subject to the requirements applicable to vehicle category M_1 . The luggage retention requirements of UN Regulation No 17 (para. 1, point (c) and Annex 9) do not apply. | and 5.2.4. of UN Regulation No 17 when the vehicle type is subject to the requirements applicable to vehicle category M_1 . The luggage retention requirements of UN Regulation No 17 (para. 1, point (c) and Annex 9) do not apply. | | |
| A3 | Bus seats | Regulation (EU) 2019/2144 | not in scope | not in scope | X Application limited to seats designated for normal use when the vehicle is used on a public road. Seats that are not designated as such shall be clearly and permanently identified to users, either by means of a pictogram or a sign with an appropriate text. | X Application limited to seats designated for normal use when the vehicle is used on a public road. Seats that are not designated as such shall be clearly and permanently identified to users, either by means of a pictogram or a sign with an appropriate text. |
| A4 | Safety-belt anchorages | Regulation (EU) 2019/2144 | X Application limited to seats designated for normal use when the vehicle is used on a public road. | G Application limited to seats designated for normal use when the vehicle is used on a public road. At least anchorages for lap belts are required in the rear seating positions. | X Application limited to seats designated for normal use when the vehicle is used on a public road. At least anchorages for lap belts are required in | X Application limited to seats designated for normal use when the vehicle is used on a public road. At least anchorages for lap belts are required in |

| Item | Subject | Regulatory act | M ₁ ≤ 2 500 kg | M ₁ > 2 500 kg | M ₂ | M ₃ |
|------|---------------------------------------|---------------------------|--|--|--|--|
| | | | | | the rear seating positions. | the rear seating positions. |
| A5 | Safety-belts and restraint systems | Regulation (EU) 2019/2144 | X Application limited to seats designated for normal use when the vehicle is used on a public road. | G Application limited to seats designated for normal use when the vehicle is used on a public road. At least lap belts are required in the rear seating positions. | G Application limited to seats designated for normal use when the vehicle is used on a public road. At least lap belts are required in the rear seating positions. | G Application limited to seats designated for normal use when the vehicle is used on a public road. At least lap belts are required in the rear seating positions. |
| A6 | Safety-belt reminders | Regulation (EU) 2019/2144 | X Not required for rear seats | X Not required for rear seats | X Not required for rear seats | X Not required for rear seats |
| A7 | Partitioning systems | Regulation (EU) 2019/2144 | equipment | equipment | Equipment | equipment |
| A8 | Child restraint anchorages | Regulation (EU) 2019/2144 | G ISOFIX is not required on ambulances and hearses | G ISOFIX is not required on ambulances and hearses | IF | IF |
| A9 | Child restraint systems (IF) | Regulation (EU) 2019/2144 | equipment | equipment | Equipment | equipment |
| A10 | Enhanced child restraint systems (IF) | Regulation (EU) 2019/2144 | equipment | equipment | Equipment | equipment |
| A11 | Front underrun protection | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | not in scope |
| A12 | Rear underrun protection | Regulation (EU) 2019/2144 | X | X | X | X |
| A13 | Lateral protection | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₁ ≤ 2 500 kg | M ₁ > 2 500 kg | M ₂ | M ₃ |
|------|--|---------------------------|---|--|---|---|
| A14 | Fuel tank safety (IF) | Regulation (EU) 2019/2144 | X Modification to the routing and length of the refuelling duct and re-positioning of the original tank inboard is permissible provided all installation requirements are met. | X Modification to the routing and length of the refuelling duct and re-positioning of the original tank inboard is permissible provided all installation requirements are met. | X Modification to the routing and length of the refuelling duct and re-positioning of the original tank inboard is permissible provided all installation requirements are met. | X Modification to the routing and length of the refuelling duct and re-positioning of the original tank inboard is permissible provided all installation requirements are met. |
| A15 | Liquified petroleum gas safety (IF) | Regulation (EU) 2019/2144 | X | G | G | X |
| A16 | Compressed and liquified natural gas safety (IF) | Regulation (EU) 2019/2144 | X | G | G | X |
| A17 | Hydrogen safety (IF) | Regulation (EU) 2019/2144 | X | G | G | X |
| A18 | Hydrogen system material qualification (IF) | Regulation (EU) 2019/2144 | X | X | X | X |
| A19 | In-use electric safety (IF) | Regulation (EU) 2019/2144 | X | G | X | X |
| A20 | Frontal off-set impact | Regulation (EU) 2019/2144 | X | G Completed vehicles are deemed to comply with the frontal off-set impact requirements provided that compliance has been demonstrated for at least the van or chassis-cab configuration, with appropriate powertrain, | not in scope | not in scope |

| Item | Subject | Regulatory act | $M_1 \leq 2\,500\text{ kg}$ | $M_1 > 2\,500\text{ kg}$ | M_2 | M_3 |
|------|---------------------------|---------------------------|-----------------------------|--|--------------|--------------|
| | | | | <p>irrespective of the mass in running order increase, as part of a previous-stage type-approval and the relevant restraint systems have not been modified to the extent that it would result in a decrease of the level of safety, as agreed by the technical service.</p> <p>Completed vehicles on the basis of a type-approved incomplete chassis-cowl configuration are exempted from the full-scale crash test. However, it shall be demonstrated to the satisfaction of the technical service that there is no unacceptable risk of fuel system integrity failure or unacceptable risk of direct contact with live parts of high voltage propulsion systems, after a frontal impact.</p> <p>Virtual testing methods may be used in accordance with Annex VIII to Regulation (EU) 2018/858.</p> | | |
| A21 | Frontal full-width impact | Regulation (EU) 2019/2144 | G | G Completed vehicles are deemed to comply with the frontal full-width impact | not in scope | not in scope |

| Item | Subject | Regulatory act | $M_1 \leq 2\,500\text{ kg}$ | $M_1 > 2\,500\text{ kg}$ | M_2 | M_3 |
|------|---------|----------------|-----------------------------|---|-------|-------|
| | | | | <p>requirements provided that compliance has been demonstrated for at least the van or chassis-cab configuration, with appropriate powertrain, irrespective of the mass in running order increase, as part of a previous-stage type-approval and the relevant restraint systems have not been modified to the extent that it would result in a decrease of the level of safety, as agreed by the technical service.</p> <p>Completed vehicles on the basis of a type-approved incomplete chassis-cowl configuration are exempted from the full-scale crash test. However, it shall be demonstrated to the satisfaction of the technical service that there is no unacceptable risk of fuel system integrity failure or unacceptable risk of direct contact with live parts of high voltage propulsion systems, after a frontal impact.</p> <p>Virtual testing methods may be used in accordance with Annex VIII to Regulation (EU) 2018/858..</p> | | |

| Item | Subject | Regulatory act | M ₁ ≤ 2 500 kg | M ₁ > 2 500 kg | M ₂ | M ₃ |
|------|---------------------|---------------------------|---------------------------|--|----------------|----------------|
| A22 | Protective steering | Regulation (EU) 2019/2144 | X | G | not in scope | not in scope |
| A23 | Replacement airbag | Regulation (EU) 2019/2144 | equipment | equipment | equipment | equipment |
| A24 | Cab impact | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | not in scope |
| A25 | Side impact | Regulation (EU) 2019/2144 | X | G Completed vehicles are deemed to comply with the side impact requirements provided that compliance has been demonstrated for at least the van or chassis-cab configuration, with appropriate powertrain, irrespective of the mass in running order increase, as part of a previous-stage type-approval. Completed vehicles on the basis of a type-approved incomplete chassis-cowl configuration are exempted from the full-scale crash test. However, it shall be demonstrated to the satisfaction of the technical service that there is no unacceptable risk of fuel system integrity failure or unacceptable risk of direct contact with live parts of high voltage propulsion systems, after a side impact. | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₁ ≤ 2 500 kg | M ₁ > 2 500 kg | M ₂ | M ₃ |
|------|--|---------------------------|---------------------------|---|----------------|----------------|
| | | | | Virtual testing methods may be used in accordance with Annex VIII to Regulation (EU) 2018/858. | | |
| A26 | Pole side impact | Regulation (EU) 2019/2144 | n/a | n/a | not in scope | not in scope |
| A27 | Rear impact | Regulation (EU) 2019/2144 | X | G Completed vehicles are deemed to comply with rear impact requirements provided that compliance has been demonstrated for at least the van or chassis-cab configuration, with appropriate powertrain, as part of a previous-stage type-approval, irrespective of the mass in running order increase | not in scope | not in scope |
| A28 | 112-based eCall in-vehicles systems | Regulation (EU) 2015/758 | G | G | not in scope | not in scope |
| B | VULNERABLE ROAD USERS, VISION AND VISIBILITY | | | | | |
| B1 | Pedestrian leg and head protection | Regulation (EU) 2019/2144 | X | G | not in scope | not in scope |
| B2 | Enlarged head impact zone | Regulation (EU) 2019/2144 | X | G Modifications to the interior fittings directly behind the windscreen do not have to be taken into account. | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₁ ≤ 2 500 kg | M ₁ > 2 500 kg | M ₂ | M ₃ |
|------|---|---------------------------|--|--|--|--|
| B3 | Frontal protection system | Regulation (EU) 2019/2144 | equipment | equipment | equipment | equipment |
| B4 | Advanced emergency braking for pedestrians and cyclists ahead | Regulation (EU) 2019/2144 | X | G | not in scope | not in scope |
| B5 | Pedestrian and cyclist collision warning | Regulation (EU) 2019/2144 | not in scope | not in scope | X | X |
| B6 | Blind spot information system | Regulation (EU) 2019/2144 | not in scope | not in scope | X | X |
| B7 | Reversing detection | Regulation (EU) 2019/2144 | X | X | X | X |
| B8 | Forward vision | Regulation (EU) 2019/2144 | X | G | not in scope | not in scope |
| B9 | Heavy-duty vehicles direct vision | Regulation (EU) 2019/2144 | not in scope | not in scope | no requirements yet | no requirements yet |
| B10 | Safety glazing | Regulation (EU) 2019/2144 | X For all glazing other than the windscreen and side windows located forward of the driver's eye points, the material may be either of safety glass or rigid plastic glazing. | X For all glazing other than the windscreen and side windows located forward of the driver's eye points, the material may be either of safety glass or rigid plastic glazing. | X For all glazing other than the windscreen and side windows located forward of the driver's eye points, the material may be either of safety glass or rigid plastic glazing. | X For all glazing other than the windscreen and side windows located forward of the driver's eye points, the material may be either of safety glass or rigid plastic glazing. |
| B11 | Defrost/demist | Regulation (EU) 2019/2144 | G | G | X Vehicles shall be fitted with an adequate windscreen defrosting and demisting device | X Vehicles shall be fitted with an adequate windscreen defrosting and demisting device |

| Item | Subject | Regulatory act | M ₁ ≤ 2 500 kg | M ₁ > 2 500 kg | M ₂ | M ₃ |
|------|--|-----------------------------|---------------------------|--|---|---|
| B12 | Wash/wipe | Regulation (EU) 2019/2144 | G | G | X Vehicles shall be fitted with adequate windscreen washing and wiping devices | X Vehicles shall be fitted with adequate windscreen washing and wiping devices |
| B13 | Indirect vision devices | Regulation (EU) 2019/2144 | X | G | G | G |
| B14 | Acoustic Vehicle Alerting Systems | Regulation (EU) No 540/2014 | X | X | X | X |
| C | VEHICLE CHASSIS, BRAKING, TYRES AND STEERING | | | | | |
| C1 | Steering equipment | Regulation (EU) 2019/2144 | X | G | G | G |
| C2 | Lane departure warning | Regulation (EU) 2019/2144 | not in scope | not in scope | n/a | n/a |
| C3 | Emergency lane keeping | Regulation (EU) 2019/2144 | X | G May be a C2 Lane departure warning system in case this was applicable for the base vehicle. | not in scope | not in scope |
| C4 | Braking | Regulation (EU) 2019/2144 | G | G | G | G |
| C5 | Replacement braking parts | Regulation (EU) 2019/2144 | equipment | equipment | equipment | equipment |
| C6 | Brake assist | Regulation (EU) 2019/2144 | X | G | not in scope | not in scope |
| C7 | Stability control | Regulation (EU) 2019/2144 | X | G In the case of modifications to the stability control system, included as part of | n/a | n/a |

| Item | Subject | Regulatory act | $M_1 \leq 2\,500\text{ kg}$ | $M_1 > 2\,500\text{ kg}$ | M_2 | M_3 |
|------|---|---------------------------|-----------------------------|--|--------------|--------------|
| | | | | a previous stage type-approval, that are likely to affect the function of that base vehicle's stability control system, it shall be demonstrated that the vehicle has not been rendered unsafe or unstable. This shall be proven by tests e.g. performing rapid double lane-change manoeuvres in each direction at 80 km/h with sufficient severity to cause intervention by the stability control system. These interventions shall be well-controlled and shall improve the stability of the vehicle under those driving conditions in comparison to the stability of the vehicle with a disabled stability control system. All tests are subject to the agreement between the manufacturer and technical service. | | |
| C8 | Advanced emergency braking on heavy-duty vehicles | Regulation (EU) 2019/2144 | not in scope | not in scope | n/a | n/a |
| C9 | Advanced emergency braking on light-duty vehicles | Regulation (EU) 2019/2144 | X | G | not in scope | not in scope |
| C10 | Tyre safety and | Regulation (EU) | X | G | G | G |

| Item | Subject | Regulatory act | M ₁ ≤ 2 500 kg | M ₁ > 2 500 kg | M ₂ | M ₃ |
|------|---|---------------------------|---------------------------|---------------------------|----------------|----------------|
| | environmental performance | 2019/2144 | | | | |
| C11 | Spare wheels and run-flat systems (IF) | Regulation (EU) 2019/2144 | X | X | not in scope | not in scope |
| C12 | Retreaded tyres | Regulation (EU) 2019/2144 | equipment | equipment | equipment | equipment |
| C13 | Tyre pressure monitoring for light-duty vehicles | Regulation (EU) 2019/2144 | X | G | not in scope | not in scope |
| C14 | Tyre pressure monitoring for heavy-duty vehicles | Regulation (EU) 2019/2144 | not in scope | not in scope | X | X |
| C15 | Tyre installation | Regulation (EU) 2019/2144 | X | G | G | G |
| C16 | Replacement wheels | Regulation (EU) 2019/2144 | equipment | equipment | equipment | equipment |
| D | ON-BOARD INSTRUMENTS, ELECTRICAL SYSTEM, VEHICLE LIGHTING AND PROTECTION AGAINST UNAUTHORISED USE, INCLUDING CYBERATTACKS | | | | | |
| D1 | Audible warning | Regulation (EU) 2019/2144 | X | X | X | X |
| D2 | Radio interference (electromagnetic compatibility) | Regulation (EU) 2019/2144 | X | X | X | X |
| D3 | Protection against unauthorised use, immobiliser and alarm systems | Regulation (EU) 2019/2144 | X | G | IF G | IF G |
| D4 | Protection of vehicle against | Regulation (EU) 2019/2144 | X | X | X | X |

| Item | Subject | Regulatory act | M ₁ ≤ 2 500 kg | M ₁ > 2 500 kg | M ₂ | M ₃ |
|------|--|---------------------------|---|---|---|---|
| | cyberattacks | | | | | |
| D5 | Speedometer | Regulation (EU) 2019/2144 | X | X | X | X |
| D6 | Odometer | Regulation (EU) 2019/2144 | X | X | X | X |
| D7 | Speed limitation devices | Regulation (EU) 2019/2144 | not in scope | not in scope | X | X |
| D8 | Intelligent speed assistance | Regulation (EU) 2019/2144 | X | X | X | X |
| D9 | Identification of controls, tell-tales and indicators | Regulation (EU) 2019/2144 | X | X | X | X |
| D10 | Heating systems | Regulation (EU) 2019/2144 | X | X | X | X |
| D11 | Light signalling devices | Regulation (EU) 2019/2144 | X | X | X | X |
| D12 | Road illumination devices | Regulation (EU) 2019/2144 | X | X | X | X |
| D13 | Retro-reflective devices | Regulation (EU) 2019/2144 | X | X | X | X |
| D14 | Light sources | Regulation (EU) 2019/2144 | X | X | X | X |
| D15 | Installation of light signalling, road illumination and retro-reflective devices | Regulation (EU) 2019/2144 | A Provided that all mandatory lighting devices are installed and that the geometric visibility is not affected | A + G for the cab A for the remaining part Provided that all mandatory lighting devices are installed and that the geometric visibility is not affected | A + G for the cab A for the remaining part Provided that all mandatory lighting devices are installed and that the geometric visibility is not affected | A + G for the cab A for the remaining part Provided that all mandatory lighting devices are installed and that the geometric visibility is not affected |

| Item | Subject | Regulatory act | M ₁ ≤ 2 500 kg | M ₁ > 2 500 kg | M ₂ | M ₃ |
|------|---|---------------------------|---------------------------|---------------------------|---|---|
| D16 | Emergency stop signal | Regulation (EU) 2019/2144 | X | X | X Only for vehicles fitted with electronically controlled anti-lock braking system | X Only for vehicles fitted with electronically controlled anti-lock braking system |
| D17 | Headlamp cleaners (IF) | Regulation (EU) 2019/2144 | IF | IF | IF | IF |
| D18 | Gear shift indicator | Regulation (EU) 2019/2144 | G | G | not in scope | not in scope |
| E | DRIVER AND SYSTEM BEHAVIOUR | | | | | |
| E1 | Alcohol interlock installation facilitation | Regulation (EU) 2019/2144 | X | X | X | X |
| E2 | Driver drowsiness and attention warning | Regulation (EU) 2019/2144 | X | X | X | X |
| E3 | Advanced driver distraction warning | Regulation (EU) 2019/2144 | no requirement yet | no requirement yet | no requirement yet | no requirement yet |
| E4 | Driver availability monitoring system (in case of automated vehicles) | Regulation (EU) 2019/2144 | IF | IF | not in scope | not in scope |
| E5 | Event data recorder | Regulation (EU) 2019/2144 | X | G | no requirement yet | no requirement yet |
| E6 | Systems to replace driver's control (in case of automated vehicles) | Regulation (EU) 2019/2144 | IF | IF | no requirement yet | no requirement yet |
| E7 | Systems to provide the vehicle with | Regulation (EU) 2019/2144 | IF | IF | no requirement yet | no requirement yet |

| Item | Subject | Regulatory act | M ₁ ≤ 2 500 kg | M ₁ > 2 500 kg | M ₂ | M ₃ |
|------|---|---------------------------|--|--|--------------------|--------------------|
| | information on state of vehicle and surrounding area (in case of automated vehicles) | | | | | |
| E8 | Platooning (IF) | Regulation (EU) 2019/2144 | no requirement yet | no requirement yet | no requirement yet | no requirement yet |
| E9 | Systems to provide safety information to other road users (in case of automated vehicles) | Regulation (EU) 2019/2144 | no requirement yet | no requirement yet | no requirement yet | no requirement yet |
| F | GENERAL VEHICLE CONSTRUCTION AND FEATURES | | | | | |
| F1 | Registration plate space | Regulation (EU) 2019/2144 | X | X | X | X |
| F2 | Reversing motion | Regulation (EU) 2019/2144 | X | X | X | X |
| F3 | Door latches and hinges | Regulation (EU) 2019/2144 | X Application limited to doors giving access to seats designated for normal use when the vehicle is used on a public road and where the distance between the R-point of the seat and the average plane of the door surface, measured perpendicular to the longitudinal medium plane of the vehicle, does not exceed 500 mm. | G Application limited to doors giving access to seats designated for normal use when the vehicle is used on a public road and where the distance between the R-point of the seat and the average plane of the door surface, measured perpendicular to the longitudinal medium plane of the vehicle, does not exceed 500 mm. | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₁ ≤ 2 500 kg | M ₁ > 2 500 kg | M ₂ | M ₃ |
|------|---|---------------------------|--|--|--|--|
| | | | | Completed vehicles on the basis of a type-approved incomplete chassis-cowl configuration are exempted from the general and performance requirements. | | |
| F4 | Door entry steps, handholds and running boards | Regulation (EU) 2019/2144 | X | X | not in scope | not in scope |
| F5 | External projections | Regulation (EU) 2019/2144 | G for the cab A for the remaining part The requirements on the protrusion of open windows do not apply to the living compartment | G for the cab A for the remaining part The requirements on the protrusion of open windows do not apply to the living compartment | not in scope | not in scope |
| F6 | External projections of commercial vehicle cabs | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | not in scope |
| F7 | Statutory plate and vehicle identification number | Regulation (EU) 2019/2144 | X | X | X | X |
| F8 | Towing devices | Regulation (EU) 2019/2144 | X Required for the front only, to be tested if fitted at the rear | X Required for the front only, to be tested if fitted at the rear | X Required for the front only, to be tested if fitted at the rear | X Required for the front only, to be tested if fitted at the rear |
| F9 | Wheel guards | Regulation (EU) 2019/2144 | G | G | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₁ ≤ 2 500 kg | M ₁ > 2 500 kg | M ₂ | M ₃ |
|------|--|-----------------------------|---|---|---|---|
| F10 | Spray suppression systems | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | not in scope |
| F11 | Masses and dimensions | Regulation (EU) 2019/2144 | X | X | X | X |
| F12 | Mechanical couplings | Regulation (EU) 2019/2144 | IF X | IF G | IF G | IF G |
| F13 | Vehicles intended for the transportation of dangerous goods (IF) | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | not in scope |
| F14 | General bus construction | Regulation (EU) 2019/2144 | not in scope | not in scope | A | A |
| F15 | Bus strength of superstructure | Regulation (EU) 2019/2144 | not in scope | not in scope | A | A |
| F16 | Flammability in buses | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | G for the cab X for the remaining part |
| G | ENVIRONMENTAL PERFORMANCE AND EMISSIONS | | | | | |
| G1 | Sound level | Regulation (EU) No 540/2014 | X Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test. | G Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test. | G Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test. | G Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test. |
| G2 | Tailpipe emissions of vehicle in lab | Regulation (EC) No 715/2007 | G Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test. | G Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test. | G Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test. | not in scope |

| Item | Subject | Regulatory act | $M_1 \leq 2\,500\text{ kg}$ | $M_1 > 2\,500\text{ kg}$ | M_2 | M_3 |
|------|--|-----------------------------|---|---|---|--------------|
| | | | <p>In the case of ambulances, an EU type-approval granted to the most representative base vehicle remains valid irrespective of a change in the reference weight.</p> <p>Motor-caravans and hearses:</p> <p>In the case of conversion of a vehicle (e.g. in a multi-stage type-approval process), the manufacturer responsible for the conversion needs to consult the original (complete or incomplete) vehicle manufacturer to get confirmation that the converted vehicle is covered by the emission approval of the original (complete or incomplete) vehicle. It is allowed for the reference mass of the converted vehicle to exceed 2840 kg.</p> | <p>In the case of ambulances, an EU type-approval granted to the most representative base vehicle remains valid irrespective of a change in the reference weight.</p> <p>Motor-caravans and hearses:</p> <p>In the case of conversion of a vehicle (e.g. in a multi-stage type-approval process), the manufacturer responsible for the conversion needs to consult the original (complete or incomplete) vehicle manufacturer to get confirmation that the converted vehicle is covered by the emission approval of the original (complete or incomplete) vehicle. It is allowed for the reference mass of the converted vehicle to exceed 2840 kg.</p> | <p>In the case of ambulances, an EU type-approval granted to the most representative base vehicle remains valid irrespective of a change in the reference weight.</p> <p>Motor-caravans and hearses:</p> <p>In the case of conversion of a vehicle (e.g. in a multi-stage type-approval process), the manufacturer responsible for the conversion needs to consult the original (complete or incomplete) vehicle manufacturer to get confirmation that the converted vehicle is covered by the emission approval of the original (complete or incomplete) vehicle. It is allowed for the reference mass of the converted vehicle to exceed 2840 kg.</p> | |
| G2a | Determination of specific CO ₂ emissions and fuel consumption of vehicle and device for monitoring on board the vehicle the consumption of fuel and/or electric | Regulation (EC) No 715/2007 | <p>G</p> <p>In the case of multi-stage type-approval, the new CO₂ value shall be calculated in accordance with the CO₂ interpolation method, using the relevant data from the completed vehicle.</p> | <p>G</p> <p>In the case of multi-stage type-approval, the new CO₂ value shall be calculated in accordance with the CO₂ interpolation method, using the relevant data from the completed vehicle.</p> | <p>G</p> <p>In the case of multi-stage type-approval, the new CO₂ value shall be calculated in accordance with the CO₂ interpolation method, using the relevant data from the</p> | Not in scope |

| Item | Subject | Regulatory act | $M_1 \leq 2\,500\text{ kg}$ | $M_1 > 2\,500\text{ kg}$ | M_2 | M_3 |
|------|---|-----------------------------|--|--|---|---|
| | energy | | Alternatively, the new CO ₂ value shall be calculated on the basis of the parameters of the completed vehicle as specified in paragraph 3.2.4. of Annex B7 to UN Regulation 154 and using the road load matrix tool supplied by the manufacturer of the base vehicle. If the tool is not available or CO ₂ interpolation is impractical, the CO ₂ value of Vehicle High from the base vehicle shall be used, at the request of the manufacturer responsible for the conversion, and with the agreement of the approval authority. | Alternatively, the new CO ₂ value shall be calculated on the basis of the parameters of the completed vehicle as specified in paragraph 3.2.4. of Annex B7 to UN Regulation 154 and using the road load matrix tool supplied by the manufacturer of the base vehicle. If the tool is not available or CO ₂ interpolation is impractical, the CO ₂ value of Vehicle High from the base vehicle shall be used, at the request of the manufacturer responsible for the conversion, and with the agreement of the approval authority. | completed vehicle. Alternatively, the new CO ₂ value shall be calculated on the basis of the parameters of the completed vehicle as specified in paragraph 3.2.4. of Annex B7 to UN Regulation 154 and using the road load matrix tool supplied by the manufacturer of the base vehicle. If the tool is not available or CO ₂ interpolation is impractical, the CO ₂ value of Vehicle High from the base vehicle shall be used, at the request of the manufacturer responsible for the conversion, and with the agreement of the approval authority. | |
| G3 | Tailpipe emissions of engine in lab | Regulation (EC) No 595/2009 | not in scope | G Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test. | G Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test. | G Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test. |
| G3a | Determination of specific CO ₂ emissions and fuel consumption of vehicle | Regulation (EC) No 595/2009 | Not in scope | Not in scope | Not in scope | Not in scope |

| Item | Subject | Regulatory act | $M_1 \leq 2\,500\text{ kg}$ | $M_1 > 2\,500\text{ kg}$ | M_2 | M_3 |
|------|--|--|---|---|--------------|--------------|
| G3b | Determination of specific energy efficiency performance of trailer | Regulation (EC) No 595/2009 | Not in scope | Not in scope | Not in scope | Not in scope |
| G4 | Tailpipe emissions on the road | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | <p>G</p> <p>Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test.</p> <p>In the case of ambulances, an EU type-approval granted to the most representative base vehicle remains valid irrespective of a change in the reference weight.</p> <p>Motor-caravans and hearses:</p> <p>In the case of conversion of a vehicle (e.g. in a multi-stage type-approval process), the manufacturer responsible for the conversion needs to consult the original (complete or incomplete) vehicle manufacturer to get confirmation that the converted vehicle is covered by the emission approval of the original (complete or incomplete) vehicle. It is allowed for</p> | <p>G</p> <p>Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test.</p> <p>In the case of ambulances, an EU type-approval granted to the most representative base vehicle remains valid irrespective of a change in the reference weight.</p> <p>Motor-caravans and hearses:</p> <p>In the case of conversion of a vehicle (e.g. in a multi-stage type-approval process), the manufacturer responsible for the conversion needs to consult the original (complete or incomplete) vehicle manufacturer to get confirmation that the converted vehicle is covered by the emission approval of the original (complete or incomplete) vehicle. It is allowed for the</p> | G | G |

| Item | Subject | Regulatory act | $M_1 \leq 2\,500\text{ kg}$ | $M_1 > 2\,500\text{ kg}$ | M_2 | M_3 |
|------|---|--|--|--|-------|--------------|
| | | | the reference mass of the converted vehicle to exceed 2840 kg. | reference mass of the converted vehicle to exceed 2840 kg. | | |
| G5 | Durability of tailpipe emissions | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | G | G | G | G |
| G6 | Crankcase emissions | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | G | G | G | G |
| G7 | Evaporative emissions | Regulation (EC) No 715/2007 | G | G | G | not in scope |
| G8 | Low-temperature tailpipe emissions in lab | Regulation (EC) No 715/2007 | G | G | G | not in scope |
| G9 | On-board diagnostics | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | G | G | G | G |
| G10 | Absence of defeat device | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | G | G | G | G |
| G11 | Auxiliary emissions strategies | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | G | G | G | G |
| G12 | Anti-tampering | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | G | G | G | G |

| Item | Subject | Regulatory act | M ₁ ≤ 2 500 kg | M ₁ > 2 500 kg | M ₂ | M ₃ |
|------|--|---|---|---|----------------|----------------|
| G13 | Recyclability | Directive 2005/64/EC | n/a However, Annex V on prohibition of reuse of the specified component parts shall apply. | n/a However, Annex V on prohibition of reuse of the specified component parts shall apply. | not in scope | not in scope |
| G14 | Air-conditioning systems | Directive 2006/40/EC | G | G | not in scope | not in scope |
| H | ACCESS TO VEHICLE INFORMATION AND SOFTWARE UPDATE | | | | | |
| H1 | Access to vehicle OBD information and vehicle repair and maintenance information | Regulation (EU) 2018/858, Articles 61 to 66 and Annex X | X | X | X | X |
| H2 | Software update | Regulation (EU) 2018/858 UN Regulation No 156 | X | X | X | X |

Appendix 2
Armoured vehicles

| Item | Subject | Regulatory act | M ₁ | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|--|---------------------------|--|--|--|--|--|--|----------------|----------------|----------------|----------------|
| A | RESTRAINT SYSTEMS, CRASH TESTING, FUEL SYSTEM INTEGRITY AND HIGH VOLTAGE ELECTRICAL SAFETY | | | | | | | | | | | |
| A1 | Interior fittings | Regulation (EU) 2019/2144 | A | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| A2 | Seats and head restraints | Regulation (EU) 2019/2144 | X Application limited to seats designated for normal use when the vehicle is used on a public road. Seats that are not designated as such shall be clearly and permanently identified to users, either by means of a pictogram or a sign with an appropriate text. | X Application limited to seats designated for normal use when the vehicle is used on a public road. Seats that are not designated as such shall be clearly and permanently identified to users, either by means of a pictogram or a sign with an appropriate text. | X Application limited to seats designated for normal use when the vehicle is used on a public road. Seats that are not designated as such shall be clearly and permanently identified to users, either by means of a pictogram or a sign with an appropriate text. | X Application limited to seats designated for normal use when the vehicle is used on a public road. Seats that are not designated as such shall be clearly and permanently identified to users, either by means of a pictogram or a sign with an appropriate text. | X Application limited to seats designated for normal use when the vehicle is used on a public road. Seats that are not designated as such shall be clearly and permanently identified to users, either by means of a pictogram or a sign with an appropriate text. | X Application limited to seats designated for normal use when the vehicle is used on a public road. Seats that are not designated as such shall be clearly and permanently identified to users, either by means of a pictogram or a sign with an appropriate text. | not in scope | not in scope | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₁ | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|------------------------------------|---------------------------|----------------|--|--|---------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | | | | | with an appropriate text. | | | | | | |
| A3 | Bus seats | Regulation (EU) 2019/2144 | not in scope | X Application limited to seats designated for normal use when the vehicle is used on a public road. Seats that are not designated as such shall be clearly and permanently identified to users, either by means of a pictogram or a sign with an appropriate text. | X Application limited to seats designated for normal use when the vehicle is used on a public road. Seats that are not designated as such shall be clearly and permanently identified to users, either by means of a pictogram or a sign with an appropriate text. | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| A4 | Safety-belt anchorages | Regulation (EU) 2019/2144 | A | A | A | A | A | A | not in scope | not in scope | not in scope | not in scope |
| A5 | Safety-belts and restraint systems | Regulation (EU) 2019/2144 | A | A | A | A | A | A | not in scope | not in scope | not in scope | not in scope |
| A6 | Safety-belt reminders | Regulation (EU) 2019/2144 | A | A | A | A | A | A | not in scope | not in scope | not in scope | not in scope |
| A7 | Partitioning systems | Regulation (EU) 2019/2144 | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment |

| Item | Subject | Regulatory act | M ₁ | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|--|---------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| A8 | Child restraint anchorages | Regulation (EU) 2019/2144 | A | IF | IF | IF | IF | IF | not in scope | not in scope | not in scope | not in scope |
| A9 | Child restraint systems (IF) | Regulation (EU) 2019/2144 | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment |
| A10 | Enhanced child restraint systems (IF) | Regulation (EU) 2019/2144 | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment |
| A11 | Front underrun protection | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | not in scope | X | X | not in scope | not in scope | not in scope | not in scope |
| A12 | Rear underrun protection | Regulation (EU) 2019/2144 | X | X | X | X | A | A | X | X | X | X |
| A13 | Lateral protection | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | not in scope | X | X | not in scope | not in scope | X | X |
| A14 | Fuel tank safety (IF) | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X | X |
| A15 | Liquified petroleum gas safety (IF) | Regulation (EU) 2019/2144 | A | A | A | A | A | A | not in scope | not in scope | not in scope | not in scope |
| A16 | Compressed and liquified natural gas safety (IF) | Regulation (EU) 2019/2144 | A | A | A | A | A | A | not in scope | not in scope | not in scope | not in scope |
| A17 | Hydrogen safety (IF) | Regulation (EU) 2019/2144 | A | A | A | A | A | A | not in scope | not in scope | not in scope | not in scope |
| A18 | Hydrogen system material qualification (IF) | Regulation (EU) 2019/2144 | X | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| A19 | In-use electric safety (IF) | Regulation (EU) 2019/2144 | X | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| A20 | Frontal off-set | Regulation (EU) | n/a | not in scope | not in scope | n/a | not in scope | not in scope | not in | not in | not in | not in |

| Item | Subject | Regulatory act | M ₁ | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|----------|---|---------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | impact | 2019/2144 | | | | | | | scope | scope | scope | scope |
| A21 | Frontal full-width impact | Regulation (EU) 2019/2144 | n/a | not in scope | not in scope | n/a | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| A22 | Protective steering | Regulation (EU) 2019/2144 | n/a | not in scope | not in scope | n/a | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| A23 | Replacement airbag | Regulation (EU) 2019/2144 | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment |
| A24 | Cab impact | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | n/a | n/a | n/a | not in scope | not in scope | not in scope | not in scope |
| A25 | Side impact | Regulation (EU) 2019/2144 | n/a | not in scope | not in scope | n/a | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| A26 | Pole side impact | Regulation (EU) 2019/2144 | n/a | not in scope | not in scope | n/a | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| A27 | Rear impact | Regulation (EU) 2019/2144 | n/a | not in scope | not in scope | n/a | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| A28 | 112-based eCall in-vehicles systems | Regulation (EU) 2015/758 | G | not in scope | not in scope | G | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| B | VULNERABLE ROAD USERS, VISION AND VISIBILITY | | | | | | | | | | | |
| B1 | Pedestrian leg and head protection | Regulation (EU) 2019/2144 | n/a | not in scope | not in scope | n/a | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| B2 | Enlarged head impact zone | Regulation (EU) 2019/2144 | n/a | not in scope | not in scope | n/a | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| B3 | Frontal protection system | Regulation (EU) 2019/2144 | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment |
| B4 | Advanced emergency braking for | Regulation (EU) 2019/2144 | n/a | not in scope | not in scope | n/a | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₁ | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|--|---------------------------|----------------|--|--|----------------|--|--|----------------|----------------|----------------|----------------|
| | pedestrians and cyclists ahead | | | | | | | | | | | |
| B5 | Pedestrian and cyclist collision warning | Regulation (EU) 2019/2144 | not in scope | A May be partly exempted if the necessary devices cannot be placed in the optimal position as to prevent them from being damaged, which prevents full compliance with the requirements and may be fully exempted if it is impossible to meet these requirements | A May be partly exempted if the necessary devices cannot be placed in the optimal position as to prevent them from being damaged, which prevents full compliance with the requirements and may be fully exempted if it is impossible to meet these requirements | not in scope | A May be partly exempted if the necessary devices cannot be placed in the optimal position as to prevent them from being damaged, which prevents full compliance with the requirements and may be fully exempted if it is impossible to meet these requirements | A May be partly exempted if the necessary devices cannot be placed in the optimal position as to prevent them from being damaged, which prevents full compliance with the requirements and may be fully exempted if it is impossible to meet these requirements | not in scope | not in scope | not in scope | not in scope |
| B6 | Blind spot information system | Regulation (EU) 2019/2144 | not in scope | A May be partly exempted if the necessary devices cannot be placed in the optimal position as to prevent them | A May be partly exempted if the necessary devices cannot be placed in the optimal position as to prevent them | not in scope | A May be partly exempted if the necessary devices cannot be placed in the optimal position as to prevent them from being | A May be partly exempted if the necessary devices cannot be placed in the optimal position as to prevent them from being | not in scope | not in scope | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₁ | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|---------------------|---------------------------|--|--|--|--|--|--|----------------|----------------|----------------|----------------|
| | | | | from being damaged, which prevents full compliance with the requirements and may be fully exempted if it is impossible to meet these requirements | from being damaged, which prevents full compliance with the requirements and may be fully exempted if it is impossible to meet these requirements | | damaged, which prevents full compliance with the requirements and may be fully exempted if it is impossible to meet these requirements | damaged, which prevents full compliance with the requirements and may be fully exempted if it is impossible to meet these requirements | | | | |
| B7 | Reversing detection | Regulation (EU) 2019/2144 | A May be partly exempted if the necessary devices cannot be placed in the optimal position as to prevent them from being damaged, which prevents full compliance with the requirements and may be fully exempted if it is impossible to meet these requirements | A May be partly exempted if the necessary devices cannot be placed in the optimal position as to prevent them from being damaged, which prevents full compliance with the requirements and may be fully exempted if it is impossible to meet these requirements | A May be partly exempted if the necessary devices cannot be placed in the optimal position as to prevent them from being damaged, which prevents full compliance with the requirements and may be fully exempted if it is impossible to meet these requirements | A May be partly exempted if the necessary devices cannot be placed in the optimal position as to prevent them from being damaged, which prevents full compliance with the requirements and may be fully exempted if it is impossible to meet these requirements | A May be partly exempted if the necessary devices cannot be placed in the optimal position as to prevent them from being damaged, which prevents full compliance with the requirements and may be fully exempted if it is impossible to meet these requirements | A May be partly exempted if the necessary devices cannot be placed in the optimal position as to prevent them from being damaged, which prevents full compliance with the requirements and may be fully exempted if it is impossible to meet these requirements | not in scope | not in scope | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₁ | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|-----------------------------------|---------------------------|---|--|--|---|--|--|----------------|----------------|----------------|----------------|
| | | | | | | may be fully exempted if it is impossible to meet these requirements | | | | | | |
| B8 | Forward vision | Regulation (EU) 2019/2144 | G The light transmission factor is at least 60 % and the “A” pillar obstruction angle is not more than 10 degrees. | not in scope | not in scope | G The light transmission factor is at least 60 % and the “A” pillar obstruction angle is not more than 10 degrees. | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| B9 | Heavy-duty vehicles direct vision | Regulation (EU) 2019/2144 | not in scope | no requirements yet | no requirements yet | not in scope | no requirements yet | no requirements yet | not in scope | not in scope | not in scope | not in scope |
| B10 | Safety glazing | Regulation (EU) 2019/2144 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| B11 | Defrost/demist | Regulation (EU) 2019/2144 | A | X Vehicles shall be fitted with an adequate windscreen defrosting and demisting | X Vehicles shall be fitted with an adequate windscreen defrosting and demisting | X Vehicles shall be fitted with an adequate windscreen | X Vehicles shall be fitted with an adequate windscreen defrosting and demisting | X Vehicles shall be fitted with an adequate windscreen defrosting and demisting | not in scope | not in scope | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₁ | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|----------|---|-----------------------------|----------------|---|---|---|---|---|----------------|----------------|----------------|----------------|
| | | | | device | device | n defrosting and demisting device | device | device | | | | |
| B12 | Wash/wipe | Regulation (EU) 2019/2144 | A | X Vehicles shall be fitted with adequate windscreen washing and wiping devices | X Vehicles shall be fitted with adequate windscreen washing and wiping devices | X Vehicles shall be fitted with adequate windscreen washing and wiping devices | X Vehicles shall be fitted with adequate windscreen washing and wiping devices | X Vehicles shall be fitted with adequate windscreen washing and wiping devices | not in scope | not in scope | not in scope | not in scope |
| B13 | Indirect vision devices | Regulation (EU) 2019/2144 | A | A | A | A | A | A | not in scope | not in scope | not in scope | not in scope |
| B14 | Acoustic Vehicle Alerting Systems | Regulation (EU) No 540/2014 | X | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| C | VEHICLE CHASSIS, BRAKING, TYRES AND STEERING | | | | | | | | | | | |
| C1 | Steering equipment | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X | X |
| C2 | Lane departure warning | Regulation (EU) 2019/2144 | not in scope | n/a | n/a | not in scope | n/a | n/a | not in scope | not in scope | not in scope | not in scope |
| C3 | Emergency lane keeping | Regulation (EU) 2019/2144 | n/a | not in scope | not in scope | n/a | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| C4 | Braking | Regulation (EU) 2019/2144 | G | G | G | G | G | G | X | X | X | X |
| C5 | Replacement braking parts | Regulation (EU) 2019/2144 | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment |

| Item | Subject | Regulatory act | M ₁ | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|---|---------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| C6 | Brake assist | Regulation (EU) 2019/2144 | n/a | not in scope | not in scope | n/a | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| C7 | Stability control | Regulation (EU) 2019/2144 | X | n/a | n/a | X | n/a | n/a | not in scope | not in scope | X | X |
| C8 | Advanced emergency braking on heavy-duty vehicles | Regulation (EU) 2019/2144 | not in scope | n/a | n/a | not in scope | n/a | n/a | not in scope | not in scope | not in scope | not in scope |
| C9 | Advanced emergency braking on light-duty vehicles | Regulation (EU) 2019/2144 | n/a | not in scope | not in scope | n/a | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| C10 | Tyre safety and environmental performance | Regulation (EU) 2019/2144 | A | A | A | A | A | A | A | A | A | A |
| C11 | Spare wheels and run-flat systems (IF) | Regulation (EU) 2019/2144 | A | not in scope | not in scope | A | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| C12 | Retreaded tyres | Regulation (EU) 2019/2144 | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment |
| C13 | Tyre pressure monitoring for light-duty vehicles | Regulation (EU) 2019/2144 | n/a | not in scope | not in scope | n/a | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| C14 | Tyre pressure monitoring for heavy-duty vehicles | Regulation (EU) 2019/2144 | not in scope | n/a | n/a | not in scope | n/a | n/a | not in scope | not in scope | n/a | n/a |
| C15 | Tyre installation | Regulation (EU) 2019/2144 | A | A | A | A | A | A | A | A | A | A |

| Item | Subject | Regulatory act | M ₁ | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|---|---------------------------|---|---|---|---|---|---|----------------|----------------|----------------|----------------|
| C16 | Replacement wheels | Regulation (EU) 2019/2144 | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment |
| D | ON-BOARD INSTRUMENTS, ELECTRICAL SYSTEM, VEHICLE LIGHTING AND PROTECTION AGAINST UNAUTHORISED USE, INCLUDING CYBERATTACKS | | | | | | | | | | | |
| D1 | Audible warning | Regulation (EU) 2019/2144 | A Additional panic alarm devices are permitted | A Additional panic alarm devices are permitted | A Additional panic alarm devices are permitted | A Additional panic alarm devices are permitted | A Additional panic alarm devices are permitted | A Additional panic alarm devices are permitted | not in scope | not in scope | not in scope | not in scope |
| D2 | Radio interference (electromagnetic compatibility) | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X | X |
| D3 | Protection against unauthorised use, immobiliser and alarm systems | Regulation (EU) 2019/2144 | X | IF G | IF G | X | IF G | IF G | not in scope | not in scope | not in scope | not in scope |
| D4 | Protection of vehicle against cyberattacks | Regulation (EU) 2019/2144 | X | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| D5 | Speedometer | Regulation (EU) 2019/2144 | X | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| D6 | Odometer | Regulation (EU) 2019/2144 | X | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| D7 | Speed limitation devices | Regulation (EU) 2019/2144 | not in scope | X | X | not in scope | X | X | not in scope | not in scope | not in scope | not in scope |
| D8 | Intelligent speed | Regulation (EU) | n/a | n/a | n/a | n/a | n/a | n/a | not in | not in | not in | not in |

| Item | Subject | Regulatory act | M ₁ | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|--|---------------------------|---|---|---|---|---|---|---|---|---|---|
| | assistance | 2019/2144 | | | | | | | scope | scope | scope | scope |
| D9 | Identification of controls, tell-tales and indicators | Regulation (EU) 2019/2144 | X | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| D10 | Heating systems | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X | X |
| D11 | Light signalling devices | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X | X |
| D12 | Road illumination devices | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X | X |
| D13 | Retro-reflective devices | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X | X |
| D14 | Light sources | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X | X |
| D15 | Installation of light signalling, road illumination and retro-reflective devices | Regulation (EU) 2019/2144 | A Provided that all mandatory lighting devices are installed and that the geometric visibility is not affected | A Provided that all mandatory lighting devices are installed and that the geometric visibility is not affected | A Provided that all mandatory lighting devices are installed and that the geometric visibility is not affected | A Provided that all mandatory lighting devices are installed and that the geometric visibility is not affected | A Provided that all mandatory lighting devices are installed and that the geometric visibility is not affected | A Provided that all mandatory lighting devices are installed and that the geometric visibility is not affected | A Provided that all mandatory lighting devices are installed and that the geometric visibility is not affected | A Provided that all mandatory lighting devices are installed and that the geometric visibility is not affected | A Provided that all mandatory lighting devices are installed and that the geometric visibility is not affected | A Provided that all mandatory lighting devices are installed and that the geometric visibility is not affected |

| Item | Subject | Regulatory act | M ₁ | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|---|---------------------------|--------------------|---|---|--------------------|---|---|----------------|----------------|-------------------------------------|----------------|
| | | | | | | | | | | not affected | electric visibility is not affected | d |
| D16 | Emergency stop signal | Regulation (EU) 2019/2144 | X | X Only for vehicles fitted with electronically controlled anti-lock braking system | X Only for vehicles fitted with electronically controlled anti-lock braking system | X | X Only for vehicles fitted with electronically controlled anti-lock braking system | X Only for vehicles fitted with electronically controlled anti-lock braking system | not in scope | not in scope | not in scope | not in scope |
| D17 | Headlamp cleaners (IF) | Regulation (EU) 2019/2144 | IF | IF | IF | IF | IF | IF | not in scope | not in scope | not in scope | not in scope |
| D18 | Gear shift indicator | Regulation (EU) 2019/2144 | G | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| E | DRIVER AND SYSTEM BEHAVIOUR | | | | | | | | | | | |
| E1 | Alcohol interlock installation facilitation | Regulation (EU) 2019/2144 | A | A | A | A | A | A | not in scope | not in scope | not in scope | not in scope |
| E2 | Driver drowsiness and attention warning | Regulation (EU) 2019/2144 | A | A | A | A | A | A | not in scope | not in scope | not in scope | not in scope |
| E3 | Advanced driver distraction warning | Regulation (EU) 2019/2144 | no requirement yet | no requirement yet | no requirement yet | no requirement yet | no requirement yet | no requirement yet | not in scope | not in scope | not in scope | not in scope |
| E4 | Driver | Regulation (EU) | IF | not in the | not in the | IF | not in the | not in the | not in | not in | not in | not in |

| Item | Subject | Regulatory act | M ₁ | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|--|---------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|----------------|----------------|----------------|----------------|
| | availability monitoring system (in case of automated vehicles) | 2019/2144 | | scope | scope | | scope | scope | scope | scope | scope | scope |
| E5 | Event data recorder | Regulation (EU) 2019/2144 | A | no requirement yet | no requirement yet | A | no requirement yet | no requirement yet | not in scope | not in scope | not in scope | not in scope |
| E6 | Systems to replace driver's control (in case of automated vehicles) | Regulation (EU) 2019/2144 | IF | no requirement yet | no requirement yet | no requirement yet | no requirement yet | no requirement yet | not in scope | not in scope | not in scope | not in scope |
| E7 | Systems to provide the vehicle with information on state of vehicle and surrounding area (in case of automated vehicles) | Regulation (EU) 2019/2144 | IF | no requirement yet | no requirement yet | no requirement yet | no requirement yet | no requirement yet | not in scope | not in scope | not in scope | not in scope |
| E8 | Platooning (IF) | Regulation (EU) 2019/2144 | no requirement yet | no requirement yet | no requirement yet | no requirement yet | no requirement yet | no requirement yet | not in scope | not in scope | not in scope | not in scope |
| E9 | Systems to provide safety information to other road users (in case of automated vehicles) | Regulation (EU) 2019/2144 | no requirement yet | no requirement yet | no requirement yet | no requirement yet | no requirement yet | no requirement yet | not in scope | not in scope | not in scope | not in scope |
| F | GENERAL VEHICLE CONSTRUCTION AND FEATURES | | | | | | | | | | | |
| F1 | Registration | Regulation (EU) | X | X | X | X | X | X | X | X | X | X |

| Item | Subject | Regulatory act | M ₁ | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|---|---------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | plate space | 2019/2144 | | | | | | | | | | |
| F2 | Reversing motion | Regulation (EU) 2019/2144 | X | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| F3 | Door latches and hinges | Regulation (EU) 2019/2144 | X | not in scope | not in scope | X | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| F4 | Door entry steps, handholds and running boards | Regulation (EU) 2019/2144 | X | not in scope | not in scope | X | X | X | not in scope | not in scope | not in scope | not in scope |
| F5 | External projections | Regulation (EU) 2019/2144 | A | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| F6 | External projections of commercial vehicle cabs | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | A | A | A | not in scope | not in scope | not in scope | not in scope |
| F7 | Statutory plate and vehicle identification number | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X | X |
| F8 | Towing devices | Regulation (EU) 2019/2144 | A | A | A | A | A | A | not in scope | not in scope | not in scope | not in scope |
| F9 | Wheel guards | Regulation (EU) 2019/2144 | G | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| F10 | Spray suppression systems | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | X | X | X | X | X | X | X |
| F11 | Masses and dimensions | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X | X |
| F12 | Mechanical couplings | Regulation (EU) 2019/2144 | IF X | IF X | IF X | IF X | IF X | IF X | X | X | X | X |
| F13 | Vehicles | Regulation (EU) | not in scope | not in scope | not in scope | X | X | X | X | X | X | X |

| Item | Subject | Regulatory act | M ₁ | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|----------|---|-----------------------------|---|---|----------------|---|--|----------------|----------------|----------------|----------------|----------------|
| | intended for the transportation of dangerous goods (IF) | 2019/2144 | | | | | | | | | | |
| F14 | General bus construction | Regulation (EU) 2019/2144 | not in scope | A | A | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| F15 | Bus strength of superstructure | Regulation (EU) 2019/2144 | not in scope | A | A | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| F16 | Flammability in buses | Regulation (EU) 2019/2144 | not in scope | not in scope | X | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| G | ENVIRONMENTAL PERFORMANCE AND EMISSIONS | | | | | | | | | | | |
| G1 | Sound level | Regulation (EU) No 540/2014 | X | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| G2 | Tailpipe emissions of vehicle in lab | Regulation (EC) No 715/2007 | X At the manufacturer's request Regulation (EC) No 715/2007 may apply to vehicles with a reference mass exceeding 2 840 kg. The approval authority may only grant exemption(s) if the manufacturer demonstrates | X At the manufacturer's request Regulation (EC) No 715/2007 may apply to vehicles with a reference mass exceeding 2 840 kg. The approval authority may only grant exemption(s) if the manufacturer demonstrates | not in scope | X At the manufacturer's request Regulation (EC) No 715/2007 may apply to vehicles with a reference mass exceeding 2 840 kg. The approval authority may only grant | X At the manufacturer's request Regulation (EC) No 715/2007 may apply to vehicles with a reference mass exceeding 2 840 kg. The approval authority may only grant exemption(s) if the manufacturer demonstrates that the vehicle | not in scope | not in scope | not in scope | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₁ | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|--|-----------------------------|--|--|----------------|---|---|----------------|----------------|----------------|----------------|----------------|
| | | | that the vehicle cannot meet the requirements due to its special purpose. The exemptions granted are to be described on the vehicle type-approval certificate and the certificate of conformity. | that the vehicle cannot meet the requirements due to its special purpose. The exemptions granted are to be described on the vehicle type-approval certificate and the certificate of conformity. | | exemption (s) if the manufacturer demonstrates that the vehicle cannot meet the requirements due to its special purpose. The exemptions granted are to be described on the vehicle type-approval certificate and the certificate of conformity. | cannot meet the requirements due to its special purpose. The exemptions granted are to be described on the vehicle type-approval certificate and the certificate of conformity. | | | | | |
| G2a | Determination of specific CO ₂ emissions and fuel consumption of vehicle and device for monitoring on board the | Regulation (EC) No 715/2007 | X At the manufacturer's request Regulation (EC) No 715/2007 may apply to | X At the manufacturer's request Regulation (EC) No 715/2007 may apply to | not in scope | X At the manufacturer's request Regulation (EC) No 715/2007 | X At the manufacturer's request Regulation (EC) No 715/2007 may apply to | not in scope | not in scope | not in scope | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₁ | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
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| | vehicle the consumption of fuel and/or electric energy | | <p>vehicles with a reference mass exceeding 2 840 kg.</p> <p>The approval authority may only grant exemption(s) if the manufacturer demonstrates that the vehicle cannot meet the requirements due to its special purpose. The exemptions granted are to be described on the vehicle type-approval certificate and the certificate of conformity.</p> | <p>vehicles with a reference mass exceeding 2 840 kg.</p> <p>The approval authority may only grant exemption(s) if the manufacturer demonstrates that the vehicle cannot meet the requirements due to its special purpose. The exemptions granted are to be described on the vehicle type-approval certificate and the certificate of conformity.</p> | | <p>may apply to vehicles with a reference mass exceeding 2 840 kg.</p> <p>The approval authority may only grant exemption (s) if the manufacturer demonstrates that the vehicle cannot meet the requirements due to its special purpose. The exemptions granted are to be described on the vehicle type-approval certificate and the certificate</p> | <p>vehicles with a reference mass exceeding 2 840 kg.</p> <p>The approval authority may only grant exemption(s) if the manufacturer demonstrates that the vehicle cannot meet the requirements due to its special purpose. The exemptions granted are to be described on the vehicle type-approval certificate and the certificate of conformity.</p> | | | | | |

| Item | Subject | Regulatory act | M ₁ | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
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| | | | | | | of conformity. | | | | | | |
| G3 | Tailpipe emissions of engine in lab | Regulation (EC) No 595/2009 | X | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| G3a | Determination of specific CO ₂ emissions and fuel consumption of vehicle | Regulation (EC) No 595/2009 | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| G3b | Determination of specific energy efficiency performance of trailer | Regulation (EC) No 595/2009 | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| G4 | Tailpipe emissions on the road | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | X | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| G5 | Durability of tailpipe emissions | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | X | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| G6 | Crankcase emissions | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | X | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| G7 | Evaporative emissions | Regulation (EC) No 715/2007 | X | X | not in scope | X | X | not in scope | not in scope | not in scope | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₁ | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|---|--|---|----------------|----------------|---|----------------|----------------|----------------|----------------|----------------|----------------|
| G8 | Low-temperature tailpipe emissions in lab | Regulation (EC) No 715/2007 | X | X | not in scope | X | X | not in scope | not in scope | not in scope | not in scope | not in scope |
| G9 | On-board diagnostics | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | X | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| G10 | Absence of defeat device | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | X | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| G11 | Auxiliary emissions strategies | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | X | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| G12 | Anti-tampering | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | X | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| G13 | Recyclability | Directive 2005/64/EC | n/a However, Annex V on prohibition of reuse of the specified component parts shall apply. | not in scope | not in scope | n/a However, Annex V on prohibition of reuse of the specified component parts shall apply. | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| G14 | Air-conditioning | Directive 2006/40/EC | X | not in scope | not in scope | X | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₁ | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
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| | systems | | | | | | | | | | | |
| H | ACCESS TO VEHICLE INFORMATION AND SOFTWARE UPDATE | | | | | | | | | | | |
| H1 | Access to vehicle OBD information and vehicle repair and maintenance information | Regulation (EU) 2018/858, Articles 61 to 66 and Annex X | X | X | X | X | X | X | X | X | X | X |
| H2 | Software update | Regulation (EU) 2018/858 UN Regulation No 156 | X | X | X | X | X | X | X | X | | |

Appendix 3

Wheelchair accessible vehicles

| Item | Subject | Regulatory act | M ₁ |
|------|--|---------------------------|--|
| A | RESTRAINT SYSTEMS, CRASH TESTING, FUEL SYSTEM INTEGRITY AND HIGH VOLTAGE ELECTRICAL SAFETY | | |
| A1 | Interior fittings | Regulation (EU) 2019/2144 | <p>G</p> <p>Note G may be applied to those fittings in the interior of the vehicle that are not significantly affected by the modification, however, any added or modified fittings in the interior shall comply with the requirements as applicable for vehicle category M₁</p> <p>Application is limited to the passenger compartment in front of the transverse plane passing through the torso reference line of the 3-D H-point machine placed on the rearmost seat designated for normal use when the vehicle is used on a public road, as well as to the respective reference zones of each seating position designated for normal use as defined in the regulatory act when the vehicle type is subject to the requirements applicable to vehicle category M₁.</p> |
| A2 | Seats and head restraints | Regulation (EU) 2019/2144 | <p>G</p> <p>Note G may be applied to seats and head restraints of the vehicle that are not significantly affected by the modification, however, any added or modified fittings concerning seats and head restraints shall comply with the requirements as applicable for vehicle category M₁</p> <p>The energy dissipation and radii requirements of seats and head restraints are checked in accordance with paragraphs 5.2.3./5.2.4.2. and 5.2.4. of UN Regulation No 17 when the vehicle type is subject to the requirements applicable to vehicle category M₁.</p> <p>The longitudinal plane of the intended wheelchair-travelling position shall be parallel to the longitudinal plane of the vehicle. Appropriate information is to be made available to the vehicle owner that, in order to withstand the forces transmitted by the tie-down mechanism during the various driving conditions, a wheelchair with a structure meeting the relevant part of ISO 7176-19:2008/Amd 1:2015 (or later revisions) is recommended.</p> <p>The seats of the vehicle may be adapted without further testing, provided it can be demonstrated to the satisfaction of the technical service that their anchorages, mechanisms and head restraints provide an adequate level of performance.</p> <p>The luggage retention requirements of UN Regulation No 17 ((para. 1, point (c) and Annex 9) do not apply.</p> |
| A3 | Bus seats | Regulation (EU) 2019/2144 | not in scope |
| A4 | Safety-belt anchorages | Regulation (EU) 2019/2144 | <p>X</p> <p>Each wheelchair location shall be provided with anchorages to which a wheelchair tie-down and occupant restraint system</p> |

| Item | Subject | Regulatory act | M ₁ |
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| | | | <p>(WTORS) is to be fitted, and that complies with the additional provisions for testing the wheelchair tie down and occupant restraint system set out below.</p> <p>1. Definitions</p> <p>1.1. Surrogate wheelchair (SWC) means a rigid, re-usable test wheelchair, as defined in section 3 of international standard ISO 10542-1:2012.</p> <p>1.2. Point P means a representation of the position of the wheelchair occupant's hip when seated in the SWC, as defined in section 3 of international standard ISO 10542-1:2012. At the request of the manufacturer, a heavier surrogate wheelchair may be used, provided it has the same dimensional characteristics and centre of gravity position as the prescribed version. The pneumatic tyres may be replaced with solid or foam-filled versions in the same size.</p> <p>1.3. WTORS means a wheelchair tie-down and occupant restraint system.</p> <p>2. General requirements</p> <p>2.1. Each wheelchair location shall be provided with anchorages to which a WTORS can be fitted.</p> <p>2.2. The wheelchair occupant's lower belt anchorages shall be located in accordance with paragraph 5.4.2.2 UN Regulation No 14, relative to Point P on the SWC, when placed in the travelling position designated by the manufacturer. The upper actual anchorage(s) shall be located at least 100 mm above the horizontal plane passing through the points of contact between the rear tyres of the SWC and the vehicle floor. That condition shall still be satisfied after the test carried out in accordance with points 3. or 4. below.</p> <p>Either point 3. or 4. shall apply.</p> <p>3. Static in-vehicle testing</p> <p>3.1. Wheelchair occupant restraint anchorages</p> <p>3.1.1. The wheelchair occupant restraint anchorages shall resist the static forces prescribed for occupant restraint anchorages in UN Regulation No 14, simultaneously with the static forces applied to the wheelchair tie-down anchorages as specified in point 3.2.</p> <p>3.2. Wheelchair tie-down anchorages</p> <p>The wheelchair tie-down anchorages shall resist the following forces, for at least 0.2 seconds, applied via the SWC (or a suitable surrogate wheelchair having a wheelbase, seat height and tie-down attachment points in accordance with the specification for the SWC), at a height of 300 +/- 100 mm from the surface on which the SWC rests:</p> <p>3.2.1. In the case of a forward-facing wheelchair, a simultaneous force, coinciding with the force applied to the occupant restraint anchorages, of 24.5 kN; and</p> <p>3.2.2. a second test applying a static force of 8.2 kN directed towards the rear of the vehicle.</p> <p>3.2.3. In the case of a rearward-facing wheelchair, a simultaneous force, coincident with the force applied to the occupant restraint anchorages, of 8.2 kN, and</p> <p>3.2.4. a second test applying a static force of 24.5 kN directed</p> |

| Item | Subject | Regulatory act | M ₁ |
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| | | | <p>towards the front of the vehicle</p> <p>4. Dynamic in-vehicle testing</p> <p>4.1. The full assembly of the WTORS system shall be tested by an in-vehicle dynamic test in accordance with points 5.2.2. and 5.2.3. and Annex A to international standard ISO 10542-1:2012, testing all components/anchorages simultaneously, using a vehicle body-in-white or representative structure.</p> |
| A5 | Safety-belts and restraint systems | Regulation (EU) 2019/2144 | <p>X</p> <p>Each wheelchair location is to be provided with an occupant restraint belt that complies with the additional provisions for testing the wheelchair tie down and occupant restraint system of set out below.</p> <p>When, due to the conversion, anchorage points for the safety belts need to be moved outside the tolerance provided for in paragraph 7.7.1. of UN Regulation No 16, the technical service shall check whether the alteration constitutes a worst-case or not. If that is the case, the test provided for in paragraph 7.7.1. of UN Regulation No 16 shall be performed. The test may be performed using components that have not undergone the conditioning test prescribed by UN Regulation No 16.</p> <p>1. Definitions</p> <p>1.1. Surrogate wheelchair (SWC) means a rigid, re-usable test wheelchair, as defined in section 3 of international standard ISO 10542-1:2012.</p> <p>1.2. Point P means a representation of the position of the wheelchair occupant's hip when seated in the SWC, as defined in section 3 of international standard ISO 10542-1:2012. At the request of the manufacturer, a heavier surrogate wheelchair may be used, provided it has the same dimensional characteristics and centre of gravity position as the prescribed version. The pneumatic tyres may be replaced with solid or foam-filled versions in the same size.</p> <p>1.3. WTORS means a wheelchair tie-down and occupant restraint system.</p> <p>2. General requirements</p> <p>2.1. An assessment shall be made of the WTORS occupant belt to ensure compliance with paragraphs 8.2.2. to 8.2.2.4. and 8.3.1 to 8.3.4 of UN Regulation No 16.</p> <p>Either point 3. or 4. shall apply.</p> <p>3. Static in-vehicle testing</p> <p>3.1. Components of the system</p> <p>3.1.1. Where the WTORS anchorages have been tested statically in the vehicle, all components of the WTORS shall meet the relevant requirements of international standard ISO 10542-1:2012. However, the dynamic test specified in Annex A to, and points 5.2.2. and 5.2.3. of, international standard ISO 10542-1:2012 shall be carried out on the complete WTORS using the vehicle anchorage geometry instead of the test geometry specified in Annex A to international standard ISO 10542-1:2012. This may be carried out within the vehicle structure or on a surrogate structure</p> |

| Item | Subject | Regulatory act | M ₁ |
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| | | | <p>representative of the vehicle's WTORS anchorage geometry. The location of each anchorage used for the test shall lie within the tolerance provided for in paragraph 7.7.1. of UN Regulation No 16, of its true position relative to Point P.</p> <p>3.1.2. Where the occupant restraint part of the WTORS is approved in accordance with UN Regulation No 16, it shall be subject to the dynamic test as part of the complete WTORS specified in point 3.1.1., however, the requirements of points 5.1., 5.3. and 5.4. of international standard ISO10542-1:2012 shall be considered to have been met.</p> <p>4. Dynamic in-vehicle testing</p> <p>4.1. Where the WTORS anchorages have been tested dynamically in the vehicle, the component parts of the WTORS shall meet the relevant requirements of international standard ISO 10542-1:2012, points 5.1., 5.3. and 5.4. These requirements shall be deemed to have been met in respect of the occupant restraint if it is approved in accordance with UN Regulation No 16.</p> |
| A6 | Safety-belt reminders | Regulation (EU) 2019/2144 | n/a |
| A7 | Partitioning systems | Regulation (EU) 2019/2144 | equipment |
| A8 | Child restraint anchorages | Regulation (EU) 2019/2144 | <p>IF</p> <p>The minimum number of ISOFIX child seat anchorages need not to be provided. In the case of a multi-stage type approval where an ISOFIX anchorage system has been affected by the conversion, either the system shall be re-tested or the anchorages shall be rendered unusable. In the latter case the ISOFIX labels shall be removed and appropriate information shall be provided in the vehicle owner's manual for the completed vehicle.</p> |
| A9 | Child restraint systems (IF) | Regulation (EU) 2019/2144 | equipment |
| A10 | Enhanced child restraint systems (IF) | Regulation (EU) 2019/2144 | equipment |
| A11 | Front underrun protection | Regulation (EU) 2019/2144 | not in scope |
| A12 | Rear underrun protection | Regulation (EU) 2019/2144 | X |
| A13 | Lateral protection | Regulation (EU) 2019/2144 | not in scope |
| A14 | Fuel tank safety (IF) | Regulation (EU) 2019/2144 | <p>X</p> <p>Modification of the routing, length of the refuelling duct, fuel hoses and fuel vapour pipes as well as re-positioning of the original tank and evaporative control devices provided by the manufacturer of the base vehicle is permissible without further testing provided the installation requirements of paragraphs 5.4., 5.5., 5.6., 5.7., 5.8., and 5.11. of UN Regulation No 34 are met, and provided that the technical service is satisfied, by visual inspection, that the essential requirements of paragraph 5.10. of that Regulation have been satisfied. In cases involving re-positioning of the original plastic tank, further testing in accordance with Annex 5 to UN Regulation No 34 is not required.</p> |

| Item | Subject | Regulatory act | M ₁ |
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| A15 | Liquified petroleum gas safety (IF) | Regulation (EU) 2019/2144 | G |
| A16 | Compressed and liquified natural gas safety (IF) | Regulation (EU) 2019/2144 | G |
| A17 | Hydrogen safety (IF) | Regulation (EU) 2019/2144 | G |
| A18 | Hydrogen system material qualification (IF) | Regulation (EU) 2019/2144 | X |
| A19 | In-use electric safety (IF) | Regulation (EU) 2019/2144 | G |
| A20 | Frontal off-set impact | Regulation (EU) 2019/2144 | G Alternatively, a suitable torsion stiffness test, in which a torque is applied to the vehicle as close as practicable to the spring mounting points, with all doors, hatches and bonnet opened, shall demonstrate that the torsional stiffness is within $\pm 75\%$ of that of the unmodified previous-stage vehicle body. In addition, a bending stiffness test shall be carried out with the vehicle on level ground, in which all side and rear doors and hatches shall open normally when the vehicle is loaded to its technically maximum permissible laden mass. |
| A21 | Frontal full-width impact | Regulation (EU) 2019/2144 | G Alternatively, a suitable torsion stiffness test, in which a torque is applied to the vehicle as close as practicable to the spring mounting points, with all doors, hatches and bonnet opened, shall demonstrate that the torsional stiffness is within $\pm 75\%$ of that of the unmodified previous-stage vehicle body. In addition, a bending stiffness test shall be carried out with the vehicle on level ground, in which all side and rear doors and hatches shall open normally when the vehicle is loaded to its technically maximum permissible laden mass. |
| A22 | Protective steering | Regulation (EU) 2019/2144 | G n/a in case of modified steering systems for drivers with special needs |
| A23 | Replacement airbag | Regulation (EU) 2019/2144 | equipment |
| A24 | Cab impact | Regulation (EU) 2019/2144 | not in scope |
| A25 | Side impact | Regulation (EU) 2019/2144 | G Alternatively, a suitable torsion stiffness test, in which a torque is applied to the vehicle as close as practicable to the spring mounting points, with all doors, hatches and bonnet opened, shall demonstrate that the torsional stiffness is within $\pm 75\%$ of that of the unmodified previous-stage vehicle body. In addition, a bending stiffness test shall be carried out with the vehicle on level ground, in which all side and rear doors and hatches shall open normally when the vehicle is loaded to its technically maximum permissible laden mass. |
| A26 | Pole side impact | Regulation (EU) 2019/2144 | n/a |

| Item | Subject | Regulatory act | M ₁ |
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| A27 | Rear impact | Regulation (EU) 2019/2144 | n/a |
| A28 | 112-based eCall in-vehicles systems | Regulation (EU) 2015/758 | G |
| B | VULNERABLE ROAD USERS, VISION AND VISIBILITY | | |
| B1 | Pedestrian leg and head protection | Regulation (EU) 2019/2144 | G |
| B2 | Enlarged head impact zone | Regulation (EU) 2019/2144 | G Modifications to the interior fittings directly behind the windscreen do not have to be taken into account. |
| B3 | Frontal protection system | Regulation (EU) 2019/2144 | equipment |
| B4 | Advanced emergency braking for pedestrians and cyclists ahead | Regulation (EU) 2019/2144 | G n/a in case of modified braking systems for drivers with special needs |
| B5 | Pedestrian and cyclist collision warning | Regulation (EU) 2019/2144 | not in scope |
| B6 | Blind spot information system | Regulation (EU) 2019/2144 | not in scope |
| B7 | Reversing detection | Regulation (EU) 2019/2144 | A May be partly exempted if equipment for special needs passengers prevents full compliance with the requirements and may be fully exempted if it is impossible to meet these requirements |
| B8 | Forward vision | Regulation (EU) 2019/2144 | G |
| B9 | Heavy-duty vehicles direct vision | Regulation (EU) 2019/2144 | not in scope |
| B10 | Safety glazing | Regulation (EU) 2019/2144 | G |
| B11 | Defrost/demist | Regulation (EU) 2019/2144 | G |
| B12 | Wash/wipe | Regulation (EU) 2019/2144 | G |
| B13 | Indirect vision devices | Regulation (EU) 2019/2144 | X |
| B14 | Acoustic Vehicle Alerting Systems | Regulation (EU) No 540/2014 | X |
| C | VEHICLE CHASSIS, BRAKING, TYRES AND STEERING | | |
| C1 | Steering equipment | Regulation (EU) 2019/2144 | G |
| C2 | Lane departure warning | Regulation (EU) 2019/2144 | not in scope |
| C3 | Emergency lane keeping | Regulation (EU) 2019/2144 | G n/a in case of modified steering systems for drivers with special needs, or in case of modified braking system if the ELKS of the base vehicle acts on the braking system instead. |

| Item | Subject | Regulatory act | M ₁ |
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| C4 | Braking | Regulation (EU) 2019/2144 | G |
| C5 | Replacement braking parts | Regulation (EU) 2019/2144 | equipment |
| C6 | Brake assist | Regulation (EU) 2019/2144 | G n/a in case of modified braking systems for drivers with special needs |
| C7 | Stability control | Regulation (EU) 2019/2144 | G In case of modifications to the stability control system included as part of a previous stage type-approval, which are likely to affect the function of that base vehicle's stability control system, it shall be demonstrated that the vehicle has not been rendered unsafe or unstable. This shall be proven by tests e.g. performing rapid double lane-change manoeuvres in each direction at 80 km/h with sufficient severity to cause intervention by the stability control system. These interventions shall be well-controlled and shall improve the stability of the vehicle under those driving conditions in comparison to the stability of the vehicle with, where practicable, a disabled stability control system. All tests are subject to the agreement between the manufacturer and technical service. |
| C8 | Advanced emergency braking on heavy-duty vehicles | Regulation (EU) 2019/2144 | not in scope |
| C9 | Advanced emergency braking on light-duty vehicles | Regulation (EU) 2019/2144 | G n/a in case of modified braking systems for drivers with special needs |
| C10 | Tyre safety and environmental performance | Regulation (EU) 2019/2144 | X |
| C11 | Spare wheels and run-flat systems (IF) | Regulation (EU) 2019/2144 | X |
| C12 | Retreaded tyres | Regulation (EU) 2019/2144 | equipment |
| C13 | Tyre pressure monitoring for light-duty vehicles | Regulation (EU) 2019/2144 | G |
| C14 | Tyre pressure monitoring for heavy-duty vehicles | Regulation (EU) 2019/2144 | not in scope |
| C15 | Tyre installation | Regulation (EU) 2019/2144 | X |
| C16 | Replacement wheels | Regulation (EU) 2019/2144 | equipment |
| D | ON-BOARD INSTRUMENTS, ELECTRICAL SYSTEM, VEHICLE LIGHTING AND PROTECTION AGAINST UNAUTHORISED USE, INCLUDING CYBERATTACKS | | |
| D1 | Audible warning | Regulation (EU) 2019/2144 | X |

| Item | Subject | Regulatory act | M ₁ |
|------|--|---------------------------|---|
| D2 | Radio interference (electromagnetic compatibility) | Regulation (EU) 2019/2144 | X |
| D3 | Protection against unauthorised use, immobiliser and alarm systems | Regulation (EU) 2019/2144 | X |
| D4 | Protection of vehicle against cyberattacks | Regulation (EU) 2019/2144 | X |
| D5 | Speedometer | Regulation (EU) 2019/2144 | X |
| D6 | Odometer | Regulation (EU) 2019/2144 | X |
| D7 | Speed limitation devices | Regulation (EU) 2019/2144 | not in scope |
| D8 | Intelligent speed assistance | Regulation (EU) 2019/2144 | A May be partly exempted if equipment for special needs passengers prevents full compliance with the requirements and may be fully exempted if it is impossible to meet these requirements |
| D9 | Identification of controls, tell-tales and indicators | Regulation (EU) 2019/2144 | X |
| D10 | Heating systems | Regulation (EU) 2019/2144 | X |
| D11 | Light signalling devices | Regulation (EU) 2019/2144 | X |
| D12 | Road illumination devices | Regulation (EU) 2019/2144 | X |
| D13 | Retro-reflective devices | Regulation (EU) 2019/2144 | X |
| D14 | Light sources | Regulation (EU) 2019/2144 | X |
| D15 | Installation of light signalling, road illumination and retro-reflective devices | Regulation (EU) 2019/2144 | X |
| D16 | Emergency stop signal | Regulation (EU) 2019/2144 | X Only for vehicles fitted with electronically controlled anti-lock braking system |
| D17 | Headlamp cleaners (IF) | Regulation (EU) 2019/2144 | IF |
| D18 | Gear shift indicator | Regulation (EU) 2019/2144 | G |
| E | DRIVER AND SYSTEM BEHAVIOUR | | |
| E1 | Alcohol interlock installation facilitation | Regulation (EU) 2019/2144 | A |
| E2 | Driver drowsiness and attention | Regulation (EU) 2019/2144 | A |

| Item | Subject | Regulatory act | M ₁ |
|----------|--|---------------------------|---|
| | warning | | May be partly exempted if equipment for special needs passengers prevents full compliance with the requirements and may be fully exempted if it is impossible to meet these requirements |
| E3 | Advanced driver distraction warning | Regulation (EU) 2019/2144 | No requirement yet |
| E4 | Driver availability monitoring system (in case of automated vehicles) | Regulation (EU) 2019/2144 | IF |
| E5 | Event data recorder | Regulation (EU) 2019/2144 | A May be partly exempted if equipment for special needs passengers prevents full compliance with the requirements and may be fully exempted if it is impossible to meet these requirements |
| E6 | Systems to replace driver's control (in case of automated vehicles) | Regulation (EU) 2019/2144 | IF |
| E7 | Systems to provide the vehicle with information on state of vehicle and surrounding area (in case of automated vehicles) | Regulation (EU) 2019/2144 | IF |
| E8 | Platooning (IF) | Regulation (EU) 2019/2144 | No requirement yet |
| E9 | Systems to provide safety information to other road users (in case of automated vehicles) | Regulation (EU) 2019/2144 | No requirement yet |
| F | GENERAL VEHICLE CONSTRUCTION AND FEATURES | | |
| F1 | Registration plate space | Regulation (EU) 2019/2144 | X |
| F2 | Reversing motion | Regulation (EU) 2019/2144 | X |
| F3 | Door latches and hinges | Regulation (EU) 2019/2144 | X |
| F4 | Door entry steps, handholds and running boards | Regulation (EU) 2019/2144 | X |
| F5 | External projections | Regulation (EU) 2019/2144 | G Any boarding aids are considered only in the stowed position |
| F6 | External projections of commercial vehicle cabs | Regulation (EU) 2019/2144 | not in scope |
| F7 | Statutory plate and | Regulation (EU) | X |

| Item | Subject | Regulatory act | M ₁ |
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| | vehicle identification number | 2019/2144 | |
| F8 | Towing devices | Regulation (EU) 2019/2144 | X Required for the front only, to be tested if fitted at the rear |
| F9 | Wheel guards | Regulation (EU) 2019/2144 | G |
| F10 | Spray suppression systems | Regulation (EU) 2019/2144 | not in scope |
| F11 | Masses and dimensions | Regulation (EU) 2019/2144 | X For the purposes of calculations, the mass of the wheel-chair including the user is assumed to be 160 kg. The mass is concentrated at the P point of the surrogate wheelchair in its travelling position as declared by the manufacturer. It is permitted to temporarily limit the overall passenger capacity and to restrict the use of normal seating positions as a result of the actual transport of wheelchairs, with their users. In such case, the affected normal seating positions shall be clearly and permanently identified to users, either by means of a pictogram or a sign with an appropriate text. This shall be noted in Part 2 of the EU type-approval certificate as well as under “remarks” in the Certificate of Conformity as to allow inclusion of this information in on-board vehicle registration papers. In addition, the following shall be explained in the owner’s manual for the completed vehicle: The meaning of any pictograms used to mark the affected seating positions, as well as a more detailed description of the specific restrictions, if necessary. |
| F12 | Mechanical couplings | Regulation (EU) 2019/2144 | IF X |
| F13 | Vehicles intended for the transportation of dangerous goods (IF) | Regulation (EU) 2019/2144 | not in scope |
| F14 | General bus construction | Regulation (EU) 2019/2144 | not in scope |
| F15 | Bus strength of superstructure | Regulation (EU) 2019/2144 | not in scope |
| F16 | Flammability in buses | Regulation (EU) 2019/2144 | not in scope |
| G | ENVIRONMENTAL PERFORMANCE AND EMISSIONS | | |
| G1 | Sound level | Regulation (EU) No 540/2014 | G Modification of the exhaust system length is permitted without the need for retesting, provided that the exhaust back pressure remains similar. |
| G2 | Tailpipe emissions of vehicle in lab | Regulation (EC) No 715/2007 | G Modification in the exhaust system is permitted without any further test of tailpipe emissions provided that the emission control devices, |

| Item | Subject | Regulatory act | M ₁ |
|------|---|--|---|
| | | | <p>including particulate filters (if any), are not affected.</p> <p>In case of conversion of a vehicle (e.g. in a multi-stage type-approval process), the manufacturer responsible for the conversion needs to consult the original (complete or incomplete) vehicle manufacturer to get confirmation that the converted vehicle is covered by the emission approval of the original (complete or incomplete) vehicle. In such a case it is acceptable if the reference mass of the converted vehicle will exceed 2840 kg.</p> |
| G2a | Determination of specific CO ₂ emissions and fuel consumption of vehicle and device for monitoring on board the vehicle the consumption of fuel and/or electric energy | Regulation (EC) No 715/2007 | <p>G</p> <p>Modification in the exhaust system is permitted without any further test of CO₂/fuel consumption provided that the emission control devices, including particulate filters (if any), are not affected.</p> <p>In the case of multi-stage type-approval, the new CO₂ value shall be calculated in accordance with the CO₂ interpolation method, using the relevant data from the completed vehicle. Alternatively, the new CO₂ value shall be calculated on the basis of the parameters of the completed vehicle as specified in paragraph 3.2.4. of Annex B7 to UN Regulation 154 and using the road load matrix tool supplied by the manufacturer of the base vehicle. If the tool is not available or CO₂ interpolation is impractical, the CO₂ value of Vehicle High from the base vehicle shall be used, at the request of the manufacturer responsible for the conversion, and with the agreement of the approval authority.</p> |
| G3 | Tailpipe emissions of engine in lab | Regulation (EC) No 595/2009 | <p>X</p> <p>Modification in the exhaust system is permitted without any further test of tailpipe emissions and CO₂/fuel consumption provided that the emission control devices, including particulate filters (if any), are not affected. If the evaporative control devices are kept as fitted by the manufacturer of the original (complete or incomplete) vehicle, no new evaporative test is required on the modified vehicle.</p> |
| G3a | Determination of specific CO ₂ emissions and fuel consumption of vehicle | Regulation (EC) No 595/2009 | Not in scope |
| G3b | Determination of specific energy efficiency performance of trailer | Regulation (EC) No 595/2009 | Not in scope |
| G4 | Tailpipe emissions on the road | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | <p>G</p> <p>In case of conversion of a vehicle (e.g. in a multi-stage type-approval process), the manufacturer responsible for the conversion needs to consult the original (complete or incomplete) vehicle manufacturer to get confirmation that the converted vehicle is covered by the emission approval of the original (complete or incomplete) vehicle. In such a case it is acceptable if the reference mass of the converted vehicle will exceed 2840 kg.</p> |

| Item | Subject | Regulatory act | M ₁ |
|----------|--|--|---|
| G5 | Durability of tailpipe emissions | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | G |
| G6 | Crankcase emissions | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | G |
| G7 | Evaporative emissions | Regulation (EC) No 715/2007 | G If the evaporative control devices are kept as fitted by the manufacturer of the original (complete or incomplete) vehicle, no new evaporative test is required on the modified vehicle. |
| G8 | Low-temperature tailpipe emissions in lab | Regulation (EC) No 715/2007 | G |
| G9 | On-board diagnostics | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | G |
| G10 | Absence of defeat device | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | G |
| G11 | Auxiliary emissions strategies | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | G |
| G12 | Anti-tampering | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | G |
| G13 | Recyclability | Directive 2005/64/EC | n/a However, Annex V on prohibition of reuse of the specified component parts shall apply. |
| G14 | Air-conditioning systems | Directive 2006/40/EC | G |
| H | ACCESS TO VEHICLE INFORMATION AND SOFTWARE UPDATE | | |
| H1 | Access to vehicle OBD information and vehicle repair and maintenance information | Regulation (EU) 2018/858, Articles 61 to 66 and Annex X | X |
| H2 | Software update | Regulation (EU) 2018/858, Annex IV UN Regulation No 156 | X |

Appendix 4

Other special purpose vehicles

(including special group, multi-equipment carrier and trailer caravans)

| Item | Subject | Regulatory act | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|--|---------------------------|--|--|--|--|--|----------------|----------------|----------------|----------------|
| A | RESTRAINT SYSTEMS, CRASH TESTING, FUEL SYSTEM INTEGRITY AND HIGH VOLTAGE ELECTRICAL SAFETY | | | | | | | | | | |
| A1 | Interior fittings | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| A2 | Seats and head restraints | Regulation (EU) 2019/2144 | X Application limited to seats designated for normal use when the vehicle is used on a public road. Seats that are not designated as such shall be clearly and permanently identified to users, either by means of a pictogram or a sign with an appropriate text. | X Application limited to seats designated for normal use when the vehicle is used on a public road. Seats that are not designated as such shall be clearly and permanently identified to users, either by means of a pictogram or a sign with an appropriate text. | X Application limited to seats designated for normal use when the vehicle is used on a public road. Seats that are not designated as such shall be clearly and permanently identified to users, either by means of a pictogram or a sign with an appropriate text. | X Application limited to seats designated for normal use when the vehicle is used on a public road. Seats that are not designated as such shall be clearly and permanently identified to users, either by means of a pictogram or a sign with an appropriate text. | X Application limited to seats designated for normal use when the vehicle is used on a public road. Seats that are not designated as such shall be clearly and permanently identified to users, either by means of a pictogram or a sign with an appropriate text. | not in scope | not in scope | not in scope | not in scope |
| A3 | Bus seats | Regulation (EU) 2019/2144 | X Application | X Application | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|------------------------------------|---------------------------|---|---|--|--|--|----------------|----------------|----------------|----------------|
| | | | limited to seats designated for normal use when the vehicle is used on a public road. Seats that are not designated as such shall be clearly and permanently identified to users, either by means of a pictogram or a sign with an appropriate text. | limited to seats designated for normal use when the vehicle is used on a public road. Seats that are not designated as such shall be clearly and permanently identified to users, either by means of a pictogram or a sign with an appropriate text. | | | | | | | |
| A4 | Safety-belt anchorages | Regulation (EU) 2019/2144 | X Application limited to seats designated for normal use when the vehicle is used on a public road. | X Application limited to seats designated for normal use when the vehicle is used on a public road. | X Application limited to seats designated for normal use when the vehicle is used on a public road. | X Application limited to seats designated for normal use when the vehicle is used on a public road. | X Application limited to seats designated for normal use when the vehicle is used on a public road. | not in scope | not in scope | not in scope | not in scope |
| A5 | Safety-belts and restraint systems | Regulation (EU) 2019/2144 | X Application limited to seats | X Application limited to seats | X Application limited to seats | X Application limited to seats designated for | X Application limited to seats | not in scope | not in scope | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|---------------------------------------|---------------------------|--|--|--|--|--|----------------|----------------|----------------|----------------|
| | | | designated for normal use when the vehicle is used on a public road. | designated for normal use when the vehicle is used on a public road. | designated for normal use when the vehicle is used on a public road. | normal use when the vehicle is used on a public road. | designated for normal use when the vehicle is used on a public road. | | | | |
| A6 | Safety-belt reminders | Regulation (EU) 2019/2144 | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| A7 | Partitioning systems | Regulation (EU) 2019/2144 | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment |
| A8 | Child restraint anchorages | Regulation (EU) 2019/2144 | IF | IF | IF | IF | IF | not in scope | not in scope | not in scope | not in scope |
| A9 | Child restraint systems (IF) | Regulation (EU) 2019/2144 | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment |
| A10 | Enhanced child restraint systems (IF) | Regulation (EU) 2019/2144 | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment |
| A11 | Front underrun protection | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | X | X | not in scope | not in scope | not in scope | not in scope |
| A12 | Rear underrun protection | Regulation (EU) 2019/2144 | X | X | A | A | A | X | X | X | X |
| A13 | Lateral protection | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | X | X | not in scope | not in scope | X | X |
| A14 | Fuel tank safety (IF) | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X |
| | | | Modification to the routing and length of the refuelling duct and re-positioning of the original tank inboard is permissible provided all installation requirements are met. | Modification to the routing and length of the refuelling duct and re-positioning of the original tank inboard is permissible provided all installation requirements are met. | Modification to the routing and length of the refuelling duct and re-positioning of the original tank inboard is permissible provided all installation requirements are met. | Modification to the routing and length of the refuelling duct and re-positioning of the original tank inboard is permissible provided all installation requirements are met. | Modification to the routing and length of the refuelling duct and re-positioning of the original tank inboard is permissible provided all installation requirements are met. | | | | |

| Item | Subject | Regulatory act | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|--|---------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| A15 | Liquified petroleum gas safety (IF) | Regulation (EU) 2019/2144 | G | X | G | G | X | not in scope | not in scope | not in scope | not in scope |
| A16 | Compressed and liquified natural gas safety (IF) | Regulation (EU) 2019/2144 | G | X | G | G | X | not in scope | not in scope | not in scope | not in scope |
| A17 | Hydrogen safety (IF) | Regulation (EU) 2019/2144 | G | X | G | G | X | not in scope | not in scope | not in scope | not in scope |
| A18 | Hydrogen system material qualification (IF) | Regulation (EU) 2019/2144 | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| A19 | In-use electric safety (IF) | Regulation (EU) 2019/2144 | G | X | G | G | X | not in scope | not in scope | not in scope | not in scope |
| A20 | Frontal off-set impact | Regulation (EU) 2019/2144 | not in scope | not in scope | G | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |

Completed vehicles are deemed to comply with the frontal off-set impact requirements provided that compliance has been demonstrated for at least the van or chassis-cab configuration, with appropriate powertrain, as part of a previous-stage type-approval,

| Item | Subject | Regulatory act | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|---------------------------|---------------------------|----------------|----------------|--|----------------|----------------|----------------|----------------|----------------|----------------|
| | | | | | irrespective of the mass in running order increase. | | | | | | |
| A21 | Frontal full-width impact | Regulation (EU) 2019/2144 | not in scope | not in scope | G Completed vehicles are deemed to comply with the frontal full-width impact requirements provided that compliance has been demonstrated for at least the van or chassis-cab configuration, with appropriate powertrain, as part of a previous-stage type-approval, irrespective of the mass in running order increase. | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| A22 | Protective steering | Regulation (EU) 2019/2144 | not in scope | not in scope | G | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| A23 | Replacement airbag | Regulation (EU) 2019/2144 | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment |
| A24 | Cab impact | Regulation (EU) | not in scope | not in scope | A + G | A | A | not in | not in | not in | not in |

| Item | Subject | Regulatory act | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|-------------|---------------------------|----------------|----------------|--|----------------|----------------|----------------|----------------|----------------|----------------|
| | | 2019/2144 | | | Completed vehicles are deemed to comply with cab impact requirements provided that compliance has been demonstrated for at least the van or chassis-cab configuration, with appropriate powertrain, as part of a previous-stage type-approval, irrespective of the mass in running order increase. | | | scope | scope | scope | scope |
| A25 | Side impact | Regulation (EU) 2019/2144 | not in scope | not in scope | G Completed vehicles are deemed to comply with side impact requirements provided that compliance has been demonstrated | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|------------------|---------------------------|----------------|----------------|--|----------------|----------------|----------------|----------------|----------------|----------------|
| | | | | | for at least the van or chassis-cab configuration, with appropriate powertrain, as part of a previous-stage type-approval, irrespective of the mass in running order increase. | | | | | | |
| A26 | Pole side impact | Regulation (EU) 2019/2144 | not in scope | not in scope | A + G Completed vehicles are deemed to comply with pole side impact requirements provided that compliance has been demonstrated for at least the van or chassis-cab configuration, with appropriate powertrain, as part of a previous-stage type- | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|----------|---|---------------------------|----------------|----------------|--|----------------|----------------|----------------|----------------|----------------|----------------|
| | | | | | approval, irrespective of the mass in running order increase. | | | | | | |
| A27 | Rear impact | Regulation (EU) 2019/2144 | not in scope | not in scope | A + G Completed vehicles are deemed to comply with rear impact requirements provided that compliance has been demonstrated for at least the van or chassis-cab configuration, with appropriate powertrain, as part of a previous-stage type-approval, irrespective of the mass in running order increase. | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| A28 | 112-based eCall in-vehicles systems | Regulation (EU) 2015/758 | not in scope | not in scope | G | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| B | VULNERABLE ROAD USERS, VISION AND VISIBILITY | | | | | | | | | | |
| B1 | Pedestrian leg and head | Regulation (EU) 2019/2144 | not in scope | not in scope | A | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|---|---------------------------|----------------|----------------|--|---|--|----------------|----------------|----------------|----------------|
| | protection | | | | | | | | | | |
| B2 | Enlarged head impact zone | Regulation (EU) 2019/2144 | not in scope | not in scope | A | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| B3 | Frontal protection system | Regulation (EU) 2019/2144 | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment |
| B4 | Advanced emergency braking for pedestrians and cyclists ahead | Regulation (EU) 2019/2144 | not in scope | not in scope | A May be partly exempted if non-removable equipment on the front of the cab prevents full compliance with the requirements and may be fully exempted if it is impossible to meet these requirements | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| B5 | Pedestrian and cyclist collision warning | Regulation (EU) 2019/2144 | X | X | not in scope | A May be partly exempted if non-removable equipment on the front of the cab prevents full compliance with the requirements and may be fully exempted | A May be partly exempted if non-removable equipment on the front of the cab prevents full compliance with the | not in scope | not in scope | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|-------------------------------|---------------------------|----------------|----------------|---|---|---|----------------|----------------|----------------|----------------|
| | | | | | | if it is impossible to meet these requirements | requirements and may be fully exempted if it is impossible to meet these requirements | | | | |
| B6 | Blind spot information system | Regulation (EU) 2019/2144 | X | X | not in scope | X | X | not in scope | not in scope | not in scope | not in scope |
| B7 | Reversing detection | Regulation (EU) 2019/2144 | X | X | A May be partly exempted if non-removable equipment on the rear of the vehicle prevents full compliance with the requirements and may be fully exempted if it is impossible to meet these requirements | A May be partly exempted if non-removable equipment on the rear of the vehicle prevents full compliance with the requirements and may be fully exempted if it is impossible to meet these requirements | A May be partly exempted if non-removable equipment on the rear of the vehicle prevents full compliance with the requirements and may be fully exempted if it is impossible to meet these requirements | not in scope | not in scope | not in scope | not in scope |
| B8 | Forward vision | Regulation (EU) 2019/2144 | not in scope | not in scope | A May be partly exempted if non-removable equipment on the front of | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|-----------------------------------|---------------------------|--|--|--|--|--|---|---|---|---|
| | | | | | the cab prevents full compliance with the requirements and may be fully exempted if it is impossible to meet these requirements | | | | | | |
| B9 | Heavy-duty vehicles direct vision | Regulation (EU) 2019/2144 | no requirements yet | no requirements yet | not in scope | no requirements yet | no requirements yet | not in scope | not in scope | not in scope | not in scope |
| B10 | Safety glazing | Regulation (EU) 2019/2144 | X For all glazing other than the windscreen and side windows located forward of the driver's eye points, the material may be either of safety glass or rigid plastic glazing. | X For all glazing other than the windscreen and side windows located forward of the driver's eye points, the material may be either of safety glass or rigid plastic glazing. | X For all glazing other than the windscreen and side windows located forward of the driver's eye points, the material may be either of safety glass or rigid plastic glazing. | X For all glazing other than the windscreen and side windows located forward of the driver's eye points, the material may be either of safety glass or rigid plastic glazing. | X For all glazing other than the windscreen and side windows located forward of the driver's eye points, the material may be either of safety glass or rigid plastic glazing. | X Glazing material may be either of safety glass or rigid plastic glazing. | X Glazing material may be either of safety glass or rigid plastic glazing. | X Glazing material may be either of safety glass or rigid plastic glazing. | X Glazing material may be either of safety glass or rigid plastic glazing. |
| B11 | Defrost/demist | Regulation (EU) 2019/2144 | X Vehicles shall be fitted with an adequate | X Vehicles shall be fitted with an adequate windscreen | X Vehicles shall be fitted with an adequate windscreen | X Vehicles shall be fitted with an adequate windscreen | X Vehicles shall be fitted with an adequate | not in scope | not in scope | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|----------|---|-----------------------------|---|---|--|---|---|----------------|----------------|----------------|----------------|
| | | | windscreen defrosting and demisting device | defrosting and demisting device | defrosting and demisting device | defrosting and demisting device | windscreen defrosting and demisting device | | | | |
| B12 | Wash/wipe | Regulation (EU) 2019/2144 | X Vehicles shall be fitted with adequate windscreen washing and wiping devices | X Vehicles shall be fitted with adequate windscreen washing and wiping devices | X Vehicles shall be fitted with adequate windscreen washing and wiping devices | X Vehicles shall be fitted with adequate windscreen washing and wiping devices | X Vehicles shall be fitted with adequate windscreen washing and wiping devices | not in scope | not in scope | not in scope | not in scope |
| B13 | Indirect vision devices | Regulation (EU) 2019/2144 | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| B14 | Acoustic Vehicle Alerting Systems | Regulation (EU) No 540/2014 | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| C | VEHICLE CHASSIS, BRAKING, TYRES AND STEERING | | | | | | | | | | |
| C1 | Steering equipment | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X |
| C2 | Lane departure warning | Regulation (EU) 2019/2144 | n/a | n/a | not in scope | n/a | n/a | not in scope | not in scope | not in scope | not in scope |
| C3 | Emergency lane keeping | Regulation (EU) 2019/2144 | not in scope | not in scope | A May be partly exempted if non-removable equipment on the front of the cab prevents full compliance with the requirements and may be | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|---|---------------------------|----------------|----------------|---|--|--|----------------|----------------|----------------|----------------|
| | | | | | fully exempted if it is impossible to meet these requirements | | | | | | |
| C4 | Braking | Regulation (EU) 2019/2144 | G | G | G | G | G | X | X | X | X |
| | | | | | | Anti-lock braking system is not mandatory for vehicles with hydrostatic drive. | Anti-lock braking system is not mandatory for vehicles with hydrostatic drive. | | | | |
| C5 | Replacement braking parts | Regulation (EU) 2019/2144 | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment |
| C6 | Brake assist | Regulation (EU) 2019/2144 | not in scope | not in scope | A | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| C7 | Stability control | Regulation (EU) 2019/2144 | n/a | n/a | n/a | n/a | n/a | not in scope | not in scope | X | X |
| C8 | Advanced emergency braking on heavy-duty vehicles | Regulation (EU) 2019/2144 | n/a | n/a | not in scope | n/a | n/a | not in scope | not in scope | not in scope | not in scope |
| C9 | Advanced emergency braking on light-duty vehicles | Regulation (EU) 2019/2144 | not in scope | not in scope | A | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| | | | | | May be partly exempted if non-removable equipment on the front of the cab prevents full compliance with the | | | | | | |

| Item | Subject | Regulatory act | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|---|---------------------------|----------------|----------------|---|----------------|----------------|----------------|----------------|----------------|----------------|
| | | | | | requirements and may be fully exempted if it is impossible to meet these requirements | | | | | | |
| C10 | Tyre safety and environmental performance | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X |
| C11 | Spare wheels and run-flat systems (IF) | Regulation (EU) 2019/2144 | not in scope | not in scope | X | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| C12 | Retreaded tyres | Regulation (EU) 2019/2144 | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment |
| C13 | Tyre pressure monitoring for light-duty vehicles | Regulation (EU) 2019/2144 | not in scope | not in scope | A | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| C14 | Tyre pressure monitoring for heavy-duty vehicles | Regulation (EU) 2019/2144 | X | X | not in scope | X | X | not in scope | not in scope | X | X |
| C15 | Tyre installation | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X |
| C16 | Replacement wheels | Regulation (EU) 2019/2144 | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment | equipment |
| D | ON-BOARD INSTRUMENTS, ELECTRICAL SYSTEM, VEHICLE LIGHTING AND PROTECTION AGAINST UNAUTHORISED USE, INCLUDING CYBERATTACKS | | | | | | | | | | |
| D1 | Audible warning | Regulation (EU) 2019/2144 | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| D2 | Radio interference (electromagnetic compatibility) | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X |
| D3 | Protection against unauthorised | Regulation (EU) 2019/2144 | IF G | IF G | X | IF G | IF G | not in scope | not in scope | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|---|---------------------------|--|--|--|--|--|----------------|----------------|----------------|----------------|
| | use, immobiliser and alarm systems | | | | | | | | | | |
| D4 | Protection of vehicle against cyberattacks | Regulation (EU) 2019/2144 | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| D5 | Speedometer | Regulation (EU) 2019/2144 | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| D6 | Odometer | Regulation (EU) 2019/2144 | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| D7 | Speed limitation devices | Regulation (EU) 2019/2144 | X | X | not in scope | X | X | not in scope | not in scope | not in scope | not in scope |
| D8 | Intelligent speed assistance | Regulation (EU) 2019/2144 | A May be partly exempted if non-removable equipment on the front of the cab prevents full compliance with the requirements and may be fully exempted if it is impossible to meet these requirements | A May be partly exempted if non-removable equipment on the front of the cab prevents full compliance with the requirements and may be fully exempted if it is impossible to meet these requirements | A May be partly exempted if non-removable equipment on the front of the cab prevents full compliance with the requirements and may be fully exempted if it is impossible to meet these requirements | A May be partly exempted if non-removable equipment on the front of the cab prevents full compliance with the requirements and may be fully exempted if it is impossible to meet these requirements | A May be partly exempted if non-removable equipment on the front of the cab prevents full compliance with the requirements and may be fully exempted if it is impossible to meet these requirements | not in scope | not in scope | not in scope | not in scope |
| D9 | Identification of controls, tell-tales and indicators | Regulation (EU) 2019/2144 | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| D10 | Heating systems | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X |

| Item | Subject | Regulatory act | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|--|---------------------------|---|---|---|---|---|---|---|---|---|
| D11 | Light signalling devices | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X |
| D12 | Road illumination devices | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X |
| D13 | Retro-reflective devices | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X |
| D14 | Light sources | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X |
| D15 | Installation of light signalling, road illumination and retro-reflective devices | Regulation (EU) 2019/2144 | A Provided that all mandatory lighting devices are installed and that the geometric visibility is not affected | A Provided that all mandatory lighting devices are installed and that the geometric visibility is not affected | A Provided that all mandatory lighting devices are installed and that the geometric visibility is not affected | A Provided that all mandatory lighting devices are installed and that the geometric visibility is not affected | A Provided that all mandatory lighting devices are installed and that the geometric visibility is not affected | A Provided that all mandatory lighting devices are installed and that the geometric visibility is not affected | A Provided that all mandatory lighting devices are installed and that the geometric visibility is not affected | A Provided that all mandatory lighting devices are installed and that the geometric visibility is not affected | A Provided that all mandatory lighting devices are installed and that the geometric visibility is not affected |
| D16 | Emergency stop signal | Regulation (EU) 2019/2144 | X Only for vehicles fitted with electronically controlled anti-lock braking system | X Only for vehicles fitted with electronically controlled anti-lock braking system | X Only for vehicles fitted with electronically controlled anti-lock braking system | X Only for vehicles fitted with electronically controlled anti-lock braking system | X Only for vehicles fitted with electronically controlled anti-lock braking system | not in scope | not in scope | not in scope | not in scope |
| D17 | Headlamp cleaners (IF) | Regulation (EU) 2019/2144 | IF | IF | IF | IF | IF | not in scope | not in scope | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|--|---------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|----------------|----------------|----------------|----------------|
| D18 | Gear shift indicator | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| E | DRIVER AND SYSTEM BEHAVIOUR | | | | | | | | | | |
| E1 | Alcohol interlock installation facilitation | Regulation (EU) 2019/2144 | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| E2 | Driver drowsiness and attention warning | Regulation (EU) 2019/2144 | A | A | A | A | A | not in scope | not in scope | not in scope | not in scope |
| E3 | Advanced driver distraction warning | Regulation (EU) 2019/2144 | no requirement yet | no requirement yet | no requirement yet | no requirement yet | no requirement yet | not in scope | not in scope | not in scope | not in scope |
| E4 | Driver availability monitoring system (in case of automated vehicles) | Regulation (EU) 2019/2144 | not in scope | not in scope | IF | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| E5 | Event data recorder | Regulation (EU) 2019/2144 | no requirement yet | no requirement yet | A | no requirement yet | no requirement yet | not in scope | not in scope | not in scope | not in scope |
| E6 | Systems to replace driver's control (in case of automated vehicles) | Regulation (EU) 2019/2144 | no requirement yet | no requirement yet | no requirement yet | no requirement yet | no requirement yet | not in scope | not in scope | not in scope | not in scope |
| E7 | Systems to provide the vehicle with information on state of vehicle and surrounding area (in case of automated vehicles) | Regulation (EU) 2019/2144 | no requirement yet | no requirement yet | no requirement yet | no requirement yet | no requirement yet | not in scope | not in scope | not in scope | not in scope |
| E8 | Platooning (IF) | Regulation (EU) | no | no | no | no requirement | no | not in | not in | not in | not in |

| Item | Subject | Regulatory act | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|----------|---|---------------------------|--------------------|--------------------|---|--------------------|--------------------|----------------|----------------|----------------|----------------|
| | | 2019/2144 | requirement yet | requirement yet | requirement yet | yet | requirement yet | scope | scope | scope | scope |
| E9 | Systems to provide safety information to other road users (in case of automated vehicles) | Regulation (EU) 2019/2144 | no requirement yet | no requirement yet | no requirement yet | no requirement yet | no requirement yet | not in scope | not in scope | not in scope | not in scope |
| F | GENERAL VEHICLE CONSTRUCTION AND FEATURES | | | | | | | | | | |
| F1 | Registration plate space | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X |
| F2 | Reversing motion | Regulation (EU) 2019/2144 | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| F3 | Door latches and hinges | Regulation (EU) 2019/2144 | not in scope | not in scope | X | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| | | | | | Application limited to doors giving access to seats designated for normal use when the vehicle is used on a public road and where the distance between the R-point of the seat and the average plane of the door surface, measured perpendicular to the | | | | | | |

| Item | Subject | Regulatory act | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|--|---------------------------|----------------|----------------|---|----------------|----------------|----------------|----------------|----------------|----------------|
| | | | | | longitudinal medium plane of the vehicle, does not exceed 500 mm. | | | | | | |
| F4 | Door entry steps, handholds and running boards | Regulation (EU) 2019/2144 | X | X | B | B | B | not in scope | not in scope | not in scope | not in scope |
| F5 | External projections | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| F6 | External projections of commercial vehicle cabs | Regulation (EU) 2019/2144 | not in scope | not in scope | X | X | X | not in scope | not in scope | not in scope | not in scope |
| F7 | Statutory plate and vehicle identification number | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X |
| F8 | Towing devices | Regulation (EU) 2019/2144 | A | A | A | A | A | not in scope | not in scope | not in scope | not in scope |
| F9 | Wheel guards | Regulation (EU) 2019/2144 | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| F10 | Spray suppression systems | Regulation (EU) 2019/2144 | not in scope | not in scope | X | X | X | X | X | X | X |
| F11 | Masses and dimensions | Regulation (EU) 2019/2144 | X | X | X | X | X | X | X | X | X |
| F12 | Mechanical couplings | Regulation (EU) 2019/2144 | IF X | IF X | IF X | IF X | IF X | X | X | X | X |
| F13 | Vehicles intended for the transportation of dangerous goods (IF) | Regulation (EU) 2019/2144 | not in scope | not in scope | X | X | X | X | X | X | X |
| F14 | General bus construction | Regulation (EU) 2019/2144 | X | X | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|---|-----------------------------|---|---|---|--|---|----------------|----------------|----------------|----------------|
| F15 | Bus strength of superstructure | Regulation (EU) 2019/2144 | X | X | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| F16 | Flammability in buses | Regulation (EU) 2019/2144 | not in scope | X | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| G | ENVIRONMENTAL PERFORMANCE AND EMISSIONS | | | | | | | | | | |
| G1 | Sound level | Regulation (EU) No 540/2014 | G Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test. | G Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test. | G Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test. | G Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test. | G Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test. | not in scope | not in scope | not in scope | not in scope |
| G2 | Tailpipe emissions of vehicle in lab | Regulation (EC) No 715/2007 | X Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test. | not in scope | X Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test. Alternatively, Regulation (EU) 2016/1628 may also apply to vehicles with hydrostatic | X Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test. Alternatively, Regulation (EU) 2016/1628 may also apply to vehicles with hydrostatic drive. | not in scope | not in scope | not in scope | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|---|-----------------------------|---|---|--|--|--|----------------|----------------|----------------|----------------|
| | | | | | drive. | | | | | | |
| G2a | Determination of specific CO ₂ emissions and fuel consumption of vehicle and device for monitoring on board the vehicle the consumption of fuel and/or electric energy | Regulation (EC) No 715/2007 | Not in scope | Not in scope | Not in scope | Not in scope | Not in scope | Not in scope | Not in scope | Not in scope | Not in scope |
| G3 | Tailpipe emissions of engine in lab | Regulation (EC) No 595/2009 | X Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test. | X Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test. | X Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test. Alternatively, Regulation (EU) 2016/1628 may also apply to vehicles with hydrostatic drive. | X Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test. Alternatively, Regulation (EU) 2016/1628 may also apply to vehicles with hydrostatic drive. | X Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test. Alternatively, Regulation (EU) 2016/1628 may also apply to vehicles with hydrostatic drive. | not in scope | not in scope | not in scope | not in scope |
| G3a | Determination of specific CO ₂ | Regulation (EC) No 595/2009 | Not in scope | Not in scope | Not in scope | Not in scope | Not in scope | Not in scope | Not in scope | Not in scope | Not in scope |

| Item | Subject | Regulatory act | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|--|--|---|---|--|--|--|----------------|----------------|----------------|----------------|
| | emissions and fuel consumption of vehicle | | | | | | | | | | |
| G3b | Determination of specific energy efficiency performance of trailer | Regulation (EC) No 595/2009 | Not in scope | Not in scope | Not in scope | Not in scope | Not in scope | Not in scope | Not in scope | Not in scope | Not in scope |
| G4 | Tailpipe emissions on the road | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | X Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test. | X Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test. | X Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test. Alternatively, Regulation (EU) 2016/1628 may also apply to vehicles with hydrostatic drive. | X Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test. Alternatively, Regulation (EU) 2016/1628 may also apply to vehicles with hydrostatic drive. | X Modification of exhaust system length after the last silencer not exceeding 2.0 m is permissible without any further test. Alternatively, Regulation (EU) 2016/1628 may also apply to vehicles with hydrostatic drive. | not in scope | not in scope | not in scope | not in scope |
| G5 | Durability of tailpipe emissions | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | X Modification of exhaust system length after the last | X Modification of exhaust system length after the last | X Modification of exhaust system length after the last | X Modification of exhaust system length after the last silencer not | X Modification of exhaust system length after the last | not in scope | not in scope | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|---|--|---|---|---|--|---|----------------|----------------|----------------|----------------|
| | | | silencer not exceeding 2.0 m is permissible without any further test. | silencer not exceeding 2.0 m is permissible without any further test. | silencer not exceeding 2.0 m is permissible without any further test. | exceeding 2.0 m is permissible without any further test. | silencer not exceeding 2.0 m is permissible without any further test. | | | | |
| G6 | Crankcase emissions | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| G7 | Evaporative emissions | Regulation (EC) No 715/2007 | X | not in scope | X | X | not in scope | not in scope | not in scope | not in scope | not in scope |
| G8 | Low-temperature tailpipe emissions in lab | Regulation (EC) No 715/2007 | X | not in scope | X | X | not in scope | not in scope | not in scope | not in scope | not in scope |
| G9 | On-board diagnostics | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| G10 | Absence of defeat device | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| G11 | Auxiliary emissions strategies | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| G12 | Anti-tampering | Regulation (EC) No 715/2007 Regulation (EC) No 595/2009 | X | X | X | X | X | not in scope | not in scope | not in scope | not in scope |
| G13 | Recyclability | Directive 2005/64/EC | not in scope | not in scope | n/a However, Annex V on prohibition of reuse of the specified | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |

| Item | Subject | Regulatory act | M ₂ | M ₃ | N ₁ | N ₂ | N ₃ | O ₁ | O ₂ | O ₃ | O ₄ |
|------|--|--|----------------|----------------|------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | | | | component parts shall apply. | | | | | | |
| G14 | Air-conditioning systems | Directive 2006/40/EC | not in scope | not in scope | X | not in scope | not in scope | not in scope | not in scope | not in scope | not in scope |
| H | ACCESS TO VEHICLE INFORMATION AND SOFTWARE UPDATE | | | | | | | | | | |
| H1 | Access to vehicle OBD information and vehicle repair and maintenance information | Regulation (EU) 2018/858, Articles 61 to 66 and Annex X | X | X | X | X | X | X | X | X | X |
| H2 | Software update | Regulation (EU) 2018/858, Annex IV UN Regulation No 156 | X | X | X | X | X | X | X | | |

Appendix 5
Mobile cranes

| <i>Item</i> | <i>Subject</i> | <i>Regulatory act</i> | <i>N₃</i> |
|-------------|--|---------------------------|--|
| A | RESTRAINT SYSTEMS, CRASH TESTING, FUEL SYSTEM INTEGRITY AND HIGH VOLTAGE ELECTRICAL SAFETY | | |
| A1 | Interior fittings | Regulation (EU) 2019/2144 | not in scope |
| A2 | Seats and head restraints | Regulation (EU) 2019/2144 | X Application limited to seats designated for normal use when the vehicle is used on a public road. Seats that are not designated as such shall be clearly and permanently identified to users, either by means of a pictogram or a sign with an appropriate text. |
| A3 | Bus seats | Regulation (EU) 2019/2144 | not in scope |
| A4 | Safety-belt anchorages | Regulation (EU) 2019/2144 | X Application limited to seats designated for normal use when the vehicle is used on a public road. |
| A5 | Safety-belts and restraint systems | Regulation (EU) 2019/2144 | X Application limited to seats designated for normal use when the vehicle is used on a public road. |
| A6 | Safety-belt reminders | Regulation (EU) 2019/2144 | X |
| A7 | Partitioning systems | Regulation (EU) 2019/2144 | equipment |
| A8 | Child restraint anchorages | Regulation (EU) 2019/2144 | IF B |
| A9 | Child restraint systems (IF) | Regulation (EU) 2019/2144 | equipment |
| A10 | Enhanced child restraint systems (IF) | Regulation (EU) 2019/2144 | equipment |
| A11 | Front underrun protection | Regulation (EU) 2019/2144 | A Not required for vehicles meeting the provisions Annex I, Part A, point 4.3(b)(ii) and (iii), as well as point 4.3(c). |
| A12 | Rear underrun protection | Regulation (EU) 2019/2144 | A |
| A13 | Lateral protection | Regulation (EU) | A |

| <i>Item</i> | <i>Subject</i> | <i>Regulatory act</i> | <i>N₃</i> |
|-------------|---|---------------------------|----------------------|
| | | 2019/2144 | |
| A14 | Fuel tank safety (IF) | Regulation (EU) 2019/2144 | A |
| A15 | Liquified petroleum gas safety (IF) | Regulation (EU) 2019/2144 | X |
| A16 | Compressed and liquified natural gas safety (IF) | Regulation (EU) 2019/2144 | X |
| A17 | Hydrogen safety (IF) | Regulation (EU) 2019/2144 | X |
| A18 | Hydrogen system material qualification (IF) | Regulation (EU) 2019/2144 | X |
| A19 | In-use electric safety (IF) | Regulation (EU) 2019/2144 | X |
| A20 | Frontal off-set impact | Regulation (EU) 2019/2144 | not in scope |
| A21 | Frontal full-width impact | Regulation (EU) 2019/2144 | not in scope |
| A22 | Protective steering | Regulation (EU) 2019/2144 | not in scope |
| A23 | Replacement airbag | Regulation (EU) 2019/2144 | equipment |
| A24 | Cab impact | Regulation (EU) 2019/2144 | A |
| A25 | Side impact | Regulation (EU) 2019/2144 | not in scope |
| A26 | Pole side impact | Regulation (EU) 2019/2144 | not in scope |
| A27 | Rear impact | Regulation (EU) 2019/2144 | not in scope |
| A28 | 112-based eCall in-vehicles systems | Regulation (EU) 2015/758 | not in scope |
| B | VULNERABLE ROAD USERS, VISION AND VISIBILITY | | |
| B1 | Pedestrian leg and head protection | Regulation (EU) 2019/2144 | not in scope |
| B2 | Enlarged head impact zone | Regulation (EU) 2019/2144 | not in scope |

| <i>Item</i> | <i>Subject</i> | <i>Regulatory act</i> | <i>N₃</i> |
|-------------|---|-----------------------------|--|
| B3 | Frontal protection system | Regulation (EU) 2019/2144 | equipment |
| B4 | Advanced emergency braking for pedestrians and cyclists ahead | Regulation (EU) 2019/2144 | not in scope |
| B5 | Pedestrian and cyclist collision warning | Regulation (EU) 2019/2144 | A |
| B6 | Blind spot information system | Regulation (EU) 2019/2144 | A |
| B7 | Reversing detection | Regulation (EU) 2019/2144 | A |
| B8 | Forward vision | Regulation (EU) 2019/2144 | not in scope |
| B9 | Heavy-duty vehicles direct vision | Regulation (EU) 2019/2144 | no requirements yet |
| B10 | Safety glazing | Regulation (EU) 2019/2144 | X For all glazing other than the windscreen and side windows located forward of the driver's eye points, the material may be either of safety glass or rigid plastic glazing. |
| B11 | Defrost/demist | Regulation (EU) 2019/2144 | X Vehicles shall be fitted with an adequate windscreen defrosting and demisting device |
| B12 | Wash/wipe | Regulation (EU) 2019/2144 | X Vehicles shall be fitted with adequate windscreen washing and wiping devices |
| B13 | Indirect vision devices | Regulation (EU) 2019/2144 | X |
| B14 | Acoustic Vehicle Alerting Systems | Regulation (EU) No 540/2014 | X |
| C | VEHICLE CHASSIS, BRAKING, TYRES AND STEERING | | |
| C1 | Steering equipment | Regulation (EU) 2019/2144 | X Crab steering allowed |
| C2 | Lane departure warning | Regulation (EU) 2019/2144 | n/a |
| C3 | Emergency lane keeping | Regulation (EU) 2019/2144 | not in scope |
| C4 | Braking | Regulation (EU) | G |

| Item | Subject | Regulatory act | N ₃ |
|------|---|---------------------------|---|
| | | 2019/2144 | Test to be performed only with the complete/completed vehicle. Vehicles up to 4 axles shall comply with all the requirements laid down in the relevant regulatory acts. Derogations are admitted for vehicles having more than 4 axles, provided that: (a) they are justified by the particular construction; and (b) all the braking performances, related to parking, service and secondary braking laid down in the relevant regulatory act are fulfilled. Anti-lock braking system is not mandatory for vehicles with hydrostatic drive. |
| C5 | Replacement braking parts | Regulation (EU) 2019/2144 | equipment |
| C6 | Brake assist | Regulation (EU) 2019/2144 | not in scope |
| C7 | Stability control | Regulation (EU) 2019/2144 | n/a |
| C8 | Advanced emergency braking on heavy-duty vehicles | Regulation (EU) 2019/2144 | n/a |
| C9 | Advanced emergency braking on light-duty vehicles | Regulation (EU) 2019/2144 | not in scope |
| C10 | Tyre safety and environmental performance | Regulation (EU) 2019/2144 | X |
| C11 | Spare wheels and run-flat systems (IF) | Regulation (EU) 2019/2144 | not in scope |
| C12 | Retreaded tyres | Regulation (EU) 2019/2144 | equipment |
| C13 | Tyre pressure monitoring for light-duty vehicles | Regulation (EU) 2019/2144 | not in scope |
| C14 | Tyre pressure monitoring for heavy-duty vehicles | Regulation (EU) 2019/2144 | n/a |
| C15 | Tyre installation | Regulation (EU) 2019/2144 | X |
| C16 | Replacement wheels | Regulation (EU) 2019/2144 | equipment |
| D | ON-BOARD INSTRUMENTS, ELECTRICAL SYSTEM, VEHICLE LIGHTING AND PROTECTION AGAINST UNAUTHORISED USE, INCLUDING CYBERATTACKS | | |
| D1 | Audible warning | Regulation | X |

| Item | Subject | Regulatory act | N ₃ |
|------|--|---------------------------|---|
| | | (EU) 2019/2144 | |
| D2 | Radio interference (electromagnetic compatibility) | Regulation (EU) 2019/2144 | X |
| D3 | Protection against unauthorised use, immobiliser and alarm systems | Regulation (EU) 2019/2144 | IF G |
| D4 | Protection of vehicle against cyberattacks | Regulation (EU) 2019/2144 | X n/a in case of complete vehicle |
| D5 | Speedometer | Regulation (EU) 2019/2144 | X |
| D6 | Odometer | Regulation (EU) 2019/2144 | X |
| D7 | Speed limitation devices | Regulation (EU) 2019/2144 | X |
| D8 | Intelligent speed assistance | Regulation (EU) 2019/2144 | A Only to be applied in case of a chassis-cab base vehicle and n/a in all other cases. |
| D9 | Identification of controls, tell-tales and indicators | Regulation (EU) 2019/2144 | X |
| D10 | Heating systems | Regulation (EU) 2019/2144 | X |
| D11 | Light signalling devices | Regulation (EU) 2019/2144 | X |
| D12 | Road illumination devices | Regulation (EU) 2019/2144 | X |
| D13 | Retro-reflective devices | Regulation (EU) 2019/2144 | X |
| D14 | Light sources | Regulation (EU) 2019/2144 | X |
| D15 | Installation of light signalling, road illumination and retro-reflective devices | Regulation (EU) 2019/2144 | A Provided that all mandatory lighting devices are installed |
| D16 | Emergency stop signal | Regulation (EU) 2019/2144 | X Only for vehicles fitted with electronically controlled anti-lock braking system |
| D17 | Headlamp cleaners | Regulation | IF |

| <i>Item</i> | <i>Subject</i> | <i>Regulatory act</i> | <i>N₃</i> |
|-------------|--|---------------------------------|---|
| | (IF) | (EU) 2019/2144 | |
| D18 | Gear shift indicator | Regulation (EU) 2019/2144 | not in scope |
| E | DRIVER AND SYSTEM BEHAVIOUR | | |
| E1 | Alcohol interlock installation facilitation | Regulation (EU) 2019/2144 | A Only to be applied in case of a chassis-cab base vehicle and n/a in all other cases. |
| E2 | Driver drowsiness and attention warning | Regulation (EU) 2019/2144 | n/a |
| E3 | Advanced driver distraction warning | Regulation (EU) 2019/2144 | no requirement yet |
| E4 | Driver availability monitoring system (in case of automated vehicles) | Regulation (EU) 2019/2144 | not in the scope |
| E5 | Event data recorder | Regulation (EU) 2019/2144 | no requirement yet |
| E6 | Systems to replace driver's control (in case of automated vehicles) | Regulation (EU) 2019/2144 | no requirement yet |
| E7 | Systems to provide the vehicle with information on state of vehicle and surrounding area (in case of automated vehicles) | Regulation (EU) 2019/2144 | no requirement yet |
| E8 | Platooning (IF) | Regulation (EU) 2019/2144 | no requirement yet |
| E9 | Systems to provide safety information to other road users (in case of automated vehicles) | Regulation (EU) 2019/2144 | no requirement yet |
| F | GENERAL VEHICLE CONSTRUCTION AND FEATURES | | |
| F1 | Registration plate space | Regulation (EU) 2019/2144 | X |
| F2 | Reversing motion | Regulation (EU) 2019/2144 | X |
| F3 | Door latches and | Regulation | not in scope |

| Item | Subject | Regulatory act | N ₃ |
|------|--|------------------------------|--|
| | hinges | (EU) 2019/2144 | |
| F4 | Door entry steps, handholds and running boards | Regulation (EU) 2019/2144 | A |
| F5 | External projections | Regulation (EU) 2019/2144 | not in scope |
| F6 | External projections of commercial vehicle cabs | Regulation (EU) 2019/2144 | A |
| F7 | Statutory plate and vehicle identification number | Regulation (EU) 2019/2144 | X |
| F8 | Towing devices | Regulation (EU) 2019/2144 | A |
| F9 | Wheel guards | Regulation (EU) 2019/2144 | not in scope |
| F10 | Spray suppression systems | Regulation (EU) 2019/2144 | A Not required for vehicles meeting the provisions Annex I, Part A, point 4.3(b)(ii) and (iii), as well as point 4.3(c). |
| F11 | Masses and dimensions | Regulation (EU) 2019/2144 | A |
| F12 | Mechanical couplings | Regulation (EU) 2019/2144 | IF X |
| F13 | Vehicles intended for the transportation of dangerous goods (IF) | Regulation (EU) 2019/2144 | n/a |
| F14 | General bus construction | Regulation (EU) 2019/2144 | not in scope |
| F15 | Bus strength of superstructure | Regulation (EU) 2019/2144 | not in scope |
| F16 | Flammability in buses | Regulation (EU) 2019/2144 | not in scope |
| G | ENVIRONMENTAL PERFORMANCE AND EMISSIONS | | |
| G1 | Sound level | Regulation (EU) No 540/2014 | G Test to be performed only with the complete/completed vehicle. The vehicle can be tested in accordance with Directive 70/157/EEC, UN Regulation No 51.02 or Regulation (EC) No 540/2014. The following limit values are applicable, irrespective of the vehicle |

| Item | Subject | Regulatory act | N ₃ |
|------|---|-----------------------------|---|
| | | | conditions such as engine type, gearbox type and any sub-classifications: (a) 81 dB(A) for vehicles with an engine power of less than 75 kW; (b) 83 dB(A) for vehicles with an engine power of not less than 75 kW but less than 150 kW; (c) 84 dB(A) for vehicles with an engine power of not less than 150 kW. |
| G2 | Tailpipe emissions of vehicle in lab | Regulation (EC) No 715/2007 | not in scope |
| G2a | Determination of specific CO ₂ emissions and fuel consumption of vehicle and device for monitoring on board the vehicle the consumption of fuel and/or electric energy | Regulation (EC) No 715/2007 | not in scope |
| G3 | Tailpipe emissions of engine in lab | Regulation (EC) No 595/2009 | X Alternatively, Regulation (EU) 2016/1628 may apply. |
| G3a | Determination of specific CO ₂ emissions and fuel consumption of vehicle | Regulation (EC) No 595/2009 | Not in scope |
| G3b | Determination of specific energy efficiency performance of trailer | Regulation (EC) No 595/2009 | Not in scope |
| G4 | Tailpipe emissions on the road | Regulation (EC) No 595/2009 | X Alternatively, Regulation (EU) 2016/1628 may apply. |
| G5 | Durability of tailpipe emissions | Regulation (EC) No 595/2009 | not in scope |
| G6 | Crankcase emissions | Regulation (EC) No 595/2009 | X Alternatively, Regulation (EU) 2016/1628 may apply. |
| G7 | Evaporative emissions | Regulation (EC) No 715/2007 | not in scope |
| G8 | Low-temperature tailpipe emissions in lab | Regulation (EC) No 715/2007 | not in scope |
| G9 | On-board diagnostics | Regulation (EC) No 595/2009 | X Alternatively, Regulation (EU) 2016/1628 may apply. |

| <i>Item</i> | <i>Subject</i> | <i>Regulatory act</i> | <i>N₃</i> |
|-------------|--|--|--|
| G10 | Absence of defeat device | Regulation (EC) No 595/2009 | X Alternatively, Regulation (EU) 2016/1628 may apply. |
| G11 | Auxiliary emissions strategies | Regulation (EC) No 595/2009 | X Alternatively, Regulation (EU) 2016/1628 may apply. |
| G12 | Anti-tampering | Regulation (EC) No 595/2009 | X Alternatively, Regulation (EU) 2016/1628 may apply. |
| G13 | Recyclability | Directive 2005/64/EC | not in scope |
| G14 | Air-conditioning systems | Directive 2006/40/EC | not in scope |
| H | ACCESS TO VEHICLE INFORMATION AND SOFTWARE UPDATE | | |
| H1 | Access to vehicle OBD information and vehicle repair and maintenance information | Regulation (EU) 2018/858, Articles 61 to 66 and Annex X | X |
| H2 | Software update | Regulation (EU) 2018/858, Annex IV UN Regulation No 156 | X |

Appendix 6

Exceptional load transport vehicles

| Item | Subject | Regulatory acts | N ₃ | O ₄ |
|------|--|---------------------------|--|----------------|
| A | RESTRAINT SYSTEMS, CRASH TESTING, FUEL SYSTEM INTEGRITY AND HIGH VOLTAGE ELECTRICAL SAFETY | | | |
| A1 | Interior fittings | Regulation (EU) 2019/2144 | not in scope | not in scope |
| A2 | Seats and head restraints | Regulation (EU) 2019/2144 | X Application limited to seats designated for normal use when the vehicle is used on a public road. Seats that are not designated as such shall be clearly and permanently identified to users, either by means of a pictogram or a sign with an appropriate text. | not in scope |
| A3 | Bus seats | Regulation (EU) 2019/2144 | not in scope | not in scope |
| A4 | Safety-belt anchorages | Regulation (EU) 2019/2144 | X Application limited to seats designated for normal use when the vehicle is used on a public road. | not in scope |
| A5 | Safety-belts and restraint systems | Regulation (EU) 2019/2144 | X Application limited to seats designated for normal use when the vehicle is used on a public road. | not in scope |
| A6 | Safety-belt reminders | Regulation (EU) 2019/2144 | X | not in scope |
| A7 | Partitioning systems | Regulation (EU) 2019/2144 | equipment | equipment |
| A8 | Child restraint anchorages | Regulation (EU) 2019/2144 | IF B | not in scope |
| A9 | Child restraint systems (IF) | Regulation (EU) 2019/2144 | equipment | equipment |
| A10 | Enhanced child restraint systems (IF) | Regulation (EU) 2019/2144 | equipment | equipment |
| A11 | Front underrun protection | Regulation (EU) 2019/2144 | A | not in scope |
| A12 | Rear underrun protection | Regulation (EU) 2019/2144 | A | A |
| A13 | Lateral protection | Regulation (EU) 2019/2144 | X | A |

| <i>Item</i> | <i>Subject</i> | <i>Regulatory acts</i> | <i>N₃</i> | <i>O₄</i> |
|-------------|---|---------------------------|----------------------|----------------------|
| A14 | Fuel tank safety (IF) | Regulation (EU) 2019/2144 | A | A |
| A15 | Liquified petroleum gas safety (IF) | Regulation (EU) 2019/2144 | X | not in scope |
| A16 | Compressed and liquified natural gas safety (IF) | Regulation (EU) 2019/2144 | X | not in scope |
| A17 | Hydrogen safety (IF) | Regulation (EU) 2019/2144 | X | not in scope |
| A18 | Hydrogen system material qualification (IF) | Regulation (EU) 2019/2144 | X | not in scope |
| A19 | In-use electric safety (IF) | Regulation (EU) 2019/2144 | X | not in scope |
| A20 | Frontal off-set impact | Regulation (EU) 2019/2144 | not in scope | not in scope |
| A21 | Frontal full-width impact | Regulation (EU) 2019/2144 | not in scope | not in scope |
| A22 | Protective steering | Regulation (EU) 2019/2144 | not in scope | not in scope |
| A23 | Replacement airbag | Regulation (EU) 2019/2144 | equipment | equipment |
| A24 | Cab impact | Regulation (EU) 2019/2144 | A | not in scope |
| A25 | Side impact | Regulation (EU) 2019/2144 | not in scope | not in scope |
| A26 | Pole side impact | Regulation (EU) 2019/2144 | not in scope | not in scope |
| A27 | Rear impact | Regulation (EU) 2019/2144 | not in scope | not in scope |
| A28 | 112-based eCall in-vehicles systems | Regulation (EU) 2015/758 | not in scope | not in scope |
| B | VULNERABLE ROAD USERS, VISION AND VISIBILITY | | | |
| B1 | Pedestrian leg and head protection | Regulation (EU) 2019/2144 | not in scope | not in scope |
| B2 | Enlarged head impact zone | Regulation (EU) 2019/2144 | not in scope | not in scope |
| B3 | Frontal protection system | Regulation (EU) 2019/2144 | equipment | equipment |
| B4 | Advanced emergency braking for pedestrians and cyclists ahead | Regulation (EU) 2019/2144 | not in scope | not in scope |
| B5 | Pedestrian and cyclist collision warning | Regulation (EU) 2019/2144 | X | not in scope |
| B6 | Blind spot information system | Regulation (EU) 2019/2144 | X | not in scope |

| <i>Item</i> | <i>Subject</i> | <i>Regulatory acts</i> | <i>N₃</i> | <i>O₄</i> |
|-------------|---|-----------------------------|---|---|
| B7 | Reversing detection | Regulation (EU) 2019/2144 | X | not in scope |
| B8 | Forward vision | Regulation (EU) 2019/2144 | not in scope | not in scope |
| B9 | Heavy-duty vehicles direct vision | Regulation (EU) 2019/2144 | no requirements yet | not in scope |
| B10 | Safety glazing | Regulation (EU) 2019/2144 | X | X Glazing material may be either of safety glass or rigid plastic glazing. |
| B11 | Defrost/demist | Regulation (EU) 2019/2144 | X Vehicles shall be fitted with an adequate windscreen defrosting and demisting device | not in scope |
| B12 | Wash/wipe | Regulation (EU) 2019/2144 | X Vehicles shall be fitted with adequate windscreen washing and wiping devices | not in scope |
| B13 | Indirect vision devices | Regulation (EU) 2019/2144 | X | not in scope |
| B14 | Acoustic Vehicle Alerting Systems | Regulation (EU) No 540/2014 | X | not in scope |
| C | VEHICLE CHASSIS, BRAKING, TYRES AND STEERING | | | |
| C1 | Steering equipment | Regulation (EU) 2019/2144 | X Crab steering allowed | X |
| C2 | Lane departure warning | Regulation (EU) 2019/2144 | n/a | not in scope |
| C3 | Emergency lane keeping | Regulation (EU) 2019/2144 | not in scope | not in scope |
| C4 | Braking | Regulation (EU) 2019/2144 | G Test to be performed only with the complete/completed vehicle. Vehicles up to 4 axles shall comply with all the requirements laid down in the relevant regulatory acts. Derogations are admitted for vehicles having more than 4 axles, provided that: (a) they are justified by the particular construction; and (b) all the braking performances, related to parking, service and secondary braking laid down in the relevant regulatory act are fulfilled. Anti-lock braking system is not | X |

| <i>Item</i> | <i>Subject</i> | <i>Regulatory acts</i> | <i>N₃</i> | <i>O₄</i> |
|-------------|---|---------------------------|--|---|
| | | | mandatory for vehicles with hydrostatic drive. | |
| C5 | Replacement braking parts | Regulation (EU) 2019/2144 | equipment | equipment |
| C6 | Brake assist | Regulation (EU) 2019/2144 | not in scope | not in scope |
| C7 | Stability control | Regulation (EU) 2019/2144 | n/a | X |
| C8 | Advanced emergency braking on heavy-duty vehicles | Regulation (EU) 2019/2144 | n/a | not in scope |
| C9 | Advanced emergency braking on light-duty vehicles | Regulation (EU) 2019/2144 | not in scope | not in scope |
| C10 | Tyre safety and environmental performance | Regulation (EU) 2019/2144 | X | X Tyres are to be type-approved in accordance with the requirements set out in UN Regulation No 117 even if the design speed of the vehicle is less than 80 km/h. |
| C11 | Spare wheels and run-flat systems (IF) | Regulation (EU) 2019/2144 | not in scope | not in scope |
| C12 | Retreaded tyres | Regulation (EU) 2019/2144 | equipment | equipment |
| C13 | Tyre pressure monitoring for light-duty vehicles | Regulation (EU) 2019/2144 | not in scope | not in scope |
| C14 | Tyre pressure monitoring for heavy-duty vehicles | Regulation (EU) 2019/2144 | A | A |
| C15 | Tyre installation | Regulation (EU) 2019/2144 | X | X Tyres are to be type-approved in accordance with the requirements set out in UN Regulation No 54 even if the design speed of the vehicle is less than 80 km/h. The load capacity may be adjusted in relation to the maximum design speed of the trailer in agreement with the tyre manufacturer. |
| C16 | Replacement wheels | Regulation (EU) 2019/2144 | equipment | equipment |
| D | ON-BOARD INSTRUMENTS, ELECTRICAL SYSTEM, VEHICLE LIGHTING AND PROTECTION AGAINST UNAUTHORISED USE, INCLUDING CYBERATTACKS | | | |

| <i>Item</i> | <i>Subject</i> | <i>Regulatory acts</i> | <i>N₃</i> | <i>O₄</i> |
|-------------|--|---------------------------|---|---|
| D1 | Audible warning | Regulation (EU) 2019/2144 | X | not in scope |
| D2 | Radio interference (electromagnetic compatibility) | Regulation (EU) 2019/2144 | X | X |
| D3 | Protection against unauthorised use, immobiliser and alarm systems | Regulation (EU) 2019/2144 | IF G | not in scope |
| D4 | Protection of vehicle against cyberattacks | Regulation (EU) 2019/2144 | X | not in scope |
| D5 | Speedometer | Regulation (EU) 2019/2144 | X | not in scope |
| D6 | Odometer | Regulation (EU) 2019/2144 | X | not in scope |
| D7 | Speed limitation devices | Regulation (EU) 2019/2144 | X | not in scope |
| D8 | Intelligent speed assistance | Regulation (EU) 2019/2144 | X | not in scope |
| D9 | Identification of controls, tell-tales and indicators | Regulation (EU) 2019/2144 | X | not in scope |
| D10 | Heating systems | Regulation (EU) 2019/2144 | X | X |
| D11 | Light signalling devices | Regulation (EU) 2019/2144 | X | X |
| D12 | Road illumination devices | Regulation (EU) 2019/2144 | X | X |
| D13 | Retro-reflective devices | Regulation (EU) 2019/2144 | X | X |
| D14 | Light sources | Regulation (EU) 2019/2144 | X | X |
| D15 | Installation of light signalling, road illumination and retro-reflective devices | Regulation (EU) 2019/2144 | X | A Provided that all mandatory lighting devices are installed and that the geometric visibility is not affected |
| D16 | Emergency stop signal | Regulation (EU) 2019/2144 | X Only for vehicles fitted with electronically controlled anti-lock braking system | not in scope |
| D17 | Headlamp cleaners (IF) | Regulation (EU) 2019/2144 | IF | not in scope |
| D18 | Gear shift indicator | Regulation (EU) 2019/2144 | not in scope | not in scope |
| E | DRIVER AND SYSTEM BEHAVIOUR | | | |
| E1 | Alcohol interlock installation facilitation | Regulation (EU) 2019/2144 | X | not in scope |

| <i>Item</i> | <i>Subject</i> | <i>Regulatory acts</i> | <i>N₃</i> | <i>O₄</i> |
|-------------|--|---------------------------|----------------------|----------------------|
| E2 | Driver drowsiness and attention warning | Regulation (EU) 2019/2144 | A | not in scope |
| E3 | Advanced driver distraction warning | Regulation (EU) 2019/2144 | No requirement yet | not in scope |
| E4 | Driver availability monitoring system (in case of automated vehicles) | Regulation (EU) 2019/2144 | Not in the scope | not in scope |
| E5 | Event data recorder | Regulation (EU) 2019/2144 | No requirement yet | not in scope |
| E6 | Systems to replace driver's control (in case of automated vehicles) | Regulation (EU) 2019/2144 | No requirement yet | not in scope |
| E7 | Systems to provide the vehicle with information on state of vehicle and surrounding area (in case of automated vehicles) | Regulation (EU) 2019/2144 | No requirement yet | not in scope |
| E8 | Platooning (IF) | Regulation (EU) 2019/2144 | No requirement yet | not in scope |
| E9 | Systems to provide safety information to other road users (in case of automated vehicles) | Regulation (EU) 2019/2144 | No requirement yet | not in scope |
| F | GENERAL VEHICLE CONSTRUCTION AND FEATURES | | | |
| F1 | Registration plate space | Regulation (EU) 2019/2144 | X | X |
| F2 | Reversing motion | Regulation (EU) 2019/2144 | X | not in scope |
| F3 | Door latches and hinges | Regulation (EU) 2019/2144 | not in scope | not in scope |
| F4 | Door entry steps, handholds and running boards | Regulation (EU) 2019/2144 | X | not in scope |
| F5 | External projections | Regulation (EU) 2019/2144 | not in scope | not in scope |
| F6 | External projections of commercial vehicle cabs | Regulation (EU) 2019/2144 | A | not in scope |

| <i>Item</i> | <i>Subject</i> | <i>Regulatory acts</i> | <i>N₃</i> | <i>O₄</i> |
|-------------|--|-----------------------------|--|----------------------|
| F7 | Statutory plate and vehicle identification number | Regulation (EU) 2019/2144 | X | X |
| F8 | Towing devices | Regulation (EU) 2019/2144 | A | not in scope |
| F9 | Wheel guards | Regulation (EU) 2019/2144 | not in scope | not in scope |
| F10 | Spray suppression systems | Regulation (EU) 2019/2144 | X | A |
| F11 | Masses and dimensions | Regulation (EU) 2019/2144 | A | A |
| F12 | Mechanical couplings | Regulation (EU) 2019/2144 | IF X | X |
| F13 | Vehicles intended for the transportation of dangerous goods (IF) | Regulation (EU) 2019/2144 | X | X |
| F14 | General bus construction | Regulation (EU) 2019/2144 | not in scope | not in scope |
| F15 | Bus strength of superstructure | Regulation (EU) 2019/2144 | not in scope | not in scope |
| F16 | Flammability in buses | Regulation (EU) 2019/2144 | not in scope | not in scope |
| G | ENVIRONMENTAL PERFORMANCE AND EMISSIONS | | | |
| G1 | Sound level | Regulation (EU) No 540/2014 | G Test to be performed only with the complete/completed vehicle. The vehicle can be tested in accordance with Directive 70/157/EEC, UN Regulation No 51.02 or Regulation (EC) No 540/2014. The following limit values are applicable, irrespective of the vehicle conditions such as engine type, gearbox type and any sub-classifications: (a) 81 dB(A) for vehicles with an engine power of less than 75 kW; (b) 83 dB(A) for vehicles with an engine power of not less than 75 kW but less than 150 kW; (c) 84 dB(A) for vehicles with an engine power of not less than 150 kW. | not in scope |
| G2 | Tailpipe emissions of vehicle in lab | Regulation (EC) No 715/2007 | not in scope | not in scope |
| G2a | Determination of | Regulation (EC) No | not in scope | not in scope |

| <i>Item</i> | <i>Subject</i> | <i>Regulatory acts</i> | <i>N₃</i> | <i>O₄</i> |
|-------------|--|-----------------------------|---|----------------------|
| | specific CO ₂ emissions and fuel consumption of vehicle and device for monitoring on board the vehicle the consumption of fuel and/or electric energy | 715/2007 | | |
| G3 | Tailpipe emissions of engine in lab | Regulation (EC) No 595/2009 | X Alternatively, Regulation (EU) 2016/1628 may also apply to vehicles with hydrostatic drive | not in scope |
| G3a | Determination of specific CO ₂ emissions and fuel consumption of vehicle | Regulation (EC) No 595/2009 | not in scope | not in scope |
| G3b | Determination of specific energy efficiency performance of trailer | Regulation (EC) No 595/2009 | not in scope | not in scope |
| G4 | Tailpipe emissions on the road | Regulation (EC) No 595/2009 | X Alternatively, Regulation (EU) 2016/1628 may also apply to vehicles with hydrostatic drive | not in scope |
| G5 | Durability of tailpipe emissions | Regulation (EC) No 595/2009 | X | not in scope |
| G6 | Crankcase emissions | Regulation (EC) No 595/2009 | X | not in scope |
| G7 | Evaporative emissions | Regulation (EC) No 715/2007 | not in scope | not in scope |
| G8 | Low-temperature tailpipe emissions in lab | Regulation (EC) No 715/2007 | not in scope | not in scope |
| G9 | On-board diagnostics | Regulation (EC) No 595/2009 | X Alternatively, Regulation (EU) 2016/1628 may also apply to vehicles with hydrostatic drive | not in scope |
| G10 | Absence of defeat device | Regulation (EC) No 595/2009 | X Alternatively, Regulation (EU) 2016/1628 may also apply to vehicles with hydrostatic drive | not in scope |
| G11 | Auxiliary emissions strategies | Regulation (EC) No 595/2009 | X Alternatively, Regulation (EU) 2016/1628 may also apply to | not in scope |

| <i>Item</i> | <i>Subject</i> | <i>Regulatory acts</i> | <i>N₃</i> | <i>O₄</i> |
|-------------|--|--|---|----------------------|
| | | | vehicles with hydrostatic drive | |
| G12 | Anti-tampering | Regulation (EC) No 595/2009 | X Alternatively, Regulation (EU) 2016/1628 may also apply to vehicles with hydrostatic drive | not in scope |
| G13 | Recyclability | Directive 2005/64/EC | not in scope | not in scope |
| G14 | Air-conditioning systems | Directive 2006/40/EC | not in scope | not in scope |
| H | ACCESS TO VEHICLE INFORMATION AND SOFTWARE UPDATE | | | |
| H1 | Access to vehicle OBD information and vehicle repair and maintenance information | Regulation (EU) 2018/858, Articles 61 to 66 and Annex X | X | X |
| H2 | Software update | Regulation (EU) 2018/858, Annex IV UN Regulation No 156 | X | X |

ANNEX III

In Annex IV to Regulation (EU) 2018/858, the following point 5 is added:

‘5. Arrangements concerning software update

The software update management system of the manufacturer as well as the whole vehicle type shall comply with the requirements as set out in UN Regulation 156.’

ANNEX IV

In paragraph 1 of Annex V to Regulation (EU) 2018/858, the table is replaced by the following:

| 'Category | Units |
|---------------------------------|---|
| M ₁ | 1500 |
| M ₂ , M ₃ | 0 until the date of application of the delegated acts referred to in Article 41(5). For fully automated vehicles produced in small series: 1500 from [OP please insert the date of entry into force of this Regulation] |
| N ₁ | 1500 |
| N ₂ , N ₃ | 0 until the date of application of the delegated acts referred to in Article 41(5). For fully automated vehicles produced in small series: 1500 from [OP please insert the date of entry into force of this Regulation] |
| O ₁ , O ₂ | 0 |
| O ₃ , O ₄ | 0 |