

# ZEVRA Product Approval Information Document



## 1. General

- 1.1. Vehicle make (trade name of manufacturer):
- 1.2. Vehicle type:
- 1.3. Category of vehicle:
- 1.4. Class of vehicle (Class I, Class II, Class III, Class A, Class B) (Note 1):
- 1.5. Left or right hand drive:
- 1.6. Name and address of repower manufacturer:
  - 1.6.1. Name and address of authorised representative, if any:
- 1.7. Address(es) of assembly plant(s):

## 2. General Construction Characteristics of the Vehicle

- 2.1. Photograph(s) and/or drawing(s) of a representative vehicle:
- 2.2. Position and arrangement of the main repower components:
- 2.3. The number and arrangement of the axles;
- 2.4. Number and position of axles with double wheels:
- 2.5. Number and position of steered axles:
- 2.6. Details of any pre-existing vehicle systems. Does the original vehicle have fitted:
  - 2.6.1. Traction control: Y/N
  - 2.6.2. Dynamic stability control: Y/N
  - 2.6.3. Automatics Steering Functions: Y/N
  - 2.6.4. Automated Lane Keeping Systems: Y/N
  - 2.6.5. Antilock Brake Systems: Y/N
  - 2.6.6. Emergency Braking Systems: Y/N
  - 2.6.7. Other: Y/N If yes then give details.

## 3. MASSES AND DIMENSIONS (in kg and mm) (refer to drawing(s) where applicable)

- 3.1. Wheel base(s) (fully loaded) (Note 2):
- 3.2. Range of vehicle dimensions (overall)
  - 3.2.1. Length (Note 3):
  - 3.2.2. Width (Note 4):
  - 3.2.3. Height (in running order) (Note 5) (for suspension adjustable for height, indicate normal running position):
  - 3.2.4. Front overhang (Note 6):
  - 3.2.5. Rear overhang (Note 7):

- 3.3. Position of centre of gravity of the vehicle at its technically permissible maximum laden mass in the longitudinal, transverse and vertical directions.
- 3.4. Mass of the vehicle with bodywork, with coupling device if fitted by the manufacturer, in running order (including liquids, tools, spare wheel and driver, and, for buses and coaches, a crew member if there is a crew seat in the vehicle) (Note 8) (maximum and minimum for each variant):
  - 3.4.1. Distribution of this mass among the axles and, in the case of a semi-trailer or centre axle trailer, load on the coupling point (maximum and minimum for each variant):
- 3.5. Technically permissible maximum laden mass stated by the manufacturer (Note 9) (maximum and minimum for each variant):
  - 3.5.1. Distribution of this mass among the axles (maximum and minimum for each variant):
- 3.6. Technically permissible maximum laden load/mass on each axle:
- 3.7. Technically permissible maximum mass on the coupling point:

## **4. Brakes**

- 4.1. Unladen mass;
- 4.2. The maximum mass, as defined in ECE Regulation 13 Paragraph 2.16.
- 4.3. The distribution of mass among the axles;
- 4.4. The maximum design speed;
- 4.5. Type of braking equipment including reference to the presence or otherwise of equipment for braking a trailer or any presence of an electric regenerative braking system;
- 4.6. Regenerative braking system category (Note 10): A/B
- 4.7. The number and ratios of gears;
- 4.8. The final drive ratios;
- 4.9. The tyre dimensions;
- 4.10. A list of the components, duly identified, constituting the braking system;
- 4.11. A diagram of assembled braking system and an indication of the position of its components on the vehicle;
- 4.12. Detailed drawings of each component to enable it to be easily located and identified.

## **5. EMC**

- 5.1. Power Plant
  - 5.1.1. Manufacturer:
  - 5.1.2. Electric motor:
  - 5.1.3. Make(s):
  - 5.1.4. Type(s):

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- 5.1.5. Manufacturer's engine code as marked on the:
- 5.1.6. Type (winding, excitation):
- 5.1.7. Operating voltage:
- 5.2. Transmission
  - 5.2.1. Type (mechanical, hydraulic, electric, etc.):
  - 5.2.2. A brief description of the electrical/electronic components (if any):
- 5.3. Suspension
  - 5.3.1. A brief description of the electrical/electronic components (if any):
- 5.4. Steering
  - 5.4.1. A brief description of the electrical/electronic components (if any):
- 5.5. Brakes
  - 5.5.1. Anti-lock braking system: yes/no/optional(1)
  - 5.5.2. For vehicles with anti-lock systems, description of system operation (including any electronic parts), electric block diagram, hydraulic or pneumatic circuit plan:
- 5.6. Bodywork
  - 5.6.1. Type of bodywork:
  - 5.6.2. Materials used and methods of construction:
  - 5.6.3. Windscreen and other windows:
  - 5.6.4. A brief description of the electrical/electronic components (if any) of the window lifting mechanism:
  - 5.6.5. Devices for indirect vision in the scope of ECE Regulation No. 46:
  - 5.6.6. A brief description of the electrical/electronic components (if any):
  - 5.6.7. Safety belts and/or other restraint systems:
  - 5.6.8. A brief description of the electrical/electronic components (if any):
  - 5.6.9. Suppression of radio interference:
  - 5.6.10. Description and drawings/photographs of the shapes and constituent materials of the part of the body forming the "engine" compartment and the part of the passenger compartment nearest to it:
  - 5.6.11. Drawings or photographs of the position of the metal components housed in the engine compartment (e.g. heating appliances, spare wheel, air filter, steering mechanism, etc.):
  - 5.6.12. Table and drawing of radio interference control equipment:
  - 5.6.13. Particulars of the nominal value of the direct current resistance and, in the case of resistive ignition cables, of their nominal resistance per metre:
- 5.7. Lighting and Light Signalling Devices

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- 5.7.1. A brief description of electrical/electronic components:
- 5.8. Miscellaneous
  - 5.8.1. Devices to prevent unauthorised use of the vehicle:
  - 5.8.2. A brief description of the electrical/electronic components (if any):
  - 5.8.3. Table of installation and use of RF transmitters in the vehicle(s), if applicable (see Paragraph 3.1.8. of this ECE Regulation 10):

Frequency Bands [Hz] Max. Output Power [W]	Antenna Position at Vehicle,	Specific Conditions for Installation and/or use

- 5.8.4. Vehicle equipped with 24GHz short-range radar equipment: yes/no/optional (Note 11).
- 5.8.5. The applicant for type approval shall also supply, where appropriate:
  - 5.8.5.1. Appendix 1: A list with make(s) and type(s) of all electrical and/or electronic components concerned by ECE Regulation 10 (see Paragraphs 2.9. and 2.10. of ECE Regulation 10) and not previously listed.
  - 5.8.5.2. Appendix 2: Schematics or drawing of the general arrangement of electrical and/or electronic components (concerned by this Regulation) and the general wiring harness arrangement.
  - 5.8.5.3. Appendix 3: Description of vehicle chosen to represent the type:
    - 5.8.5.3.1. Body style:
    - 5.8.5.3.2. Wheelbase:
    - 5.8.5.3.3. Left or right hand drive:
  - 5.8.5.4. Appendix 4: Relevant test report(s) supplied by the manufacturer from a test laboratory accredited to ISO 17025 and recognized by the Approval Authority for the purpose of drawing up the accreditation certificate.
- 5.8.6. Charger: on board/external/without: (Note 11)
- 5.8.7. Charging current: direct current/alternating current (number of phases/frequency) (Note 11):
- 5.8.8. Maximal nominal current (in each mode if necessary):
- 5.8.9. Nominal charging voltage:
- 5.8.10. Basic vehicle interface functions: ex: L1/L2/L3/N/E/control pilot:
- 5.8.11. Minimum  $R_{SCE}$  value (see ECE Regulation 10 Paragraph 7.3.)
- 5.8.12. Charging harness delivered with the vehicle: yes/no (Note 11)
- 5.8.13. If charging harness delivered with the vehicle:
  - 5.8.13.1. Length (m):

5.8.13.2. Cross sectional area (mm<sup>2</sup>):

## 6. Tilt

6.1. Number of passengers (seated and standing):

6.1.1. Total (Note 11, 12):

6.1.2. Upper deck (Note 11, 12):

6.1.3. Lower deck (Note 11, 12):

6.2. Number of passengers (seated):

6.2.1. Total (Note 11, 12):

6.2.2. Upper deck (Note 11, 12):

6.2.3. Lower deck (Note 11, 12):

6.3. Crew seat: yes/no (Note 11)

6.4. Number of service doors:

6.5. Number of emergency exits (doors, windows, escape hatches, intercommunication staircase and half staircase):

6.5.1. Total:

6.5.2. Upper deck:

6.5.3. Lower deck:

6.6. Volume of baggage compartments (m<sup>3</sup>):

6.7. Area for baggage transportation on the roof (m<sup>2</sup>):

6.8. Technical devices facilitating the access to vehicles (e.g. ramp, lifting platform, kneeling system), if fitted:

## 7. AVAS

7.1. Number, make and type(s) of sound emitting devices (hardware) of AVAS fitted on the vehicle.

7.2. Position of the AVAS on the vehicle including details of fitting method and surrounding bodywork.

## 8. Steering Effort

8.1. A description of the steering equipment with a diagram of the steering equipment as a whole, showing:

8.1.1. the position on the vehicle of the various devices influencing the steering:

8.1.2. a schematic of the hydraulic system (if applicable)

8.2. In the case of full power steering systems and systems to which Annex 6 of ECE Regulation 79 applies, an overview of the system indicating the philosophy of the system and the fail-safe procedures, redundancies and warning systems necessary to ensure safe operation in the vehicle.

The necessary technical files relating to such systems shall be made available for discussion with the type approval authority and/or technical service. Such files will be discussed on a confidential basis.

9. Masses and Dimensions
  - 9.1. In the case of a vehicle with increased maximum mass relative to the original registered vehicle mass, applicable information required to enable an engineering assessment of the vehicle's ability to cope with the additional mass. This assessment should cover the entire load path from vehicle to ground. Information provided shall include at least details of:
    - 9.1.1. vehicle chassis and structure,
    - 9.1.2. suspension
    - 9.1.3. axle
    - 9.1.4. wheels
    - 9.1.5. tyres including load and speed rating
    - 9.1.6. any restrictions on vehicle operating speed.
- 10. Power**
  - 10.1. Copy of relevant ECE Regulation 39 approval or:
  - 10.2. GENERAL
    - 10.2.1. Drive (Note 11): Monomotor/multimotors/(number):
    - 10.2.2. Transmission arrangement: parallel/transaxial/others, to precise:
    - 10.2.3. Test voltage (V):
    - 10.2.4. Basic motor rotation (rpm):
    - 10.2.5. Motor crankshaft maximum speed (rpm): (or by default): reducer/gearbox outlet shaft (Note 14) (rpm)
    - 10.2.6. Maximum power speed (Note 15) (specified by the manufacturer) (rpm):
    - 10.2.7. Maximum power (specified by the manufacturer) (kW):
    - 10.2.8. Maximum 30min power (specified by the manufacturer) (kW):
    - 10.2.9. Flexible range (where  $P \geq 90\%$  of max. power):
      - Speed at beginning of the range (rpm)
      - Speed at the end of the range (rpm)
  - 10.3. MOTOR
    - 10.3.1. Make
    - 10.3.2. Type
    - 10.3.3. Working principle
    - 10.3.4. Direct current (DC)/alternating current (AC) (Note 11) number of phases:

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- 10.3.5. Excitation/separate/series/compound (Note 11)
- 10.3.6. Synchron/asynchrony (Note 11)
- 10.3.7. Rotor coiled/with permanent magnets/with housing (Note 11)
- 10.3.8. Number of poles of the motor:
- 10.3.9. Inertia mass:
- 10.4. POWER CONTROLLER
  - 10.4.1. Make:
  - 10.4.2. Type:
  - 10.4.3. Control principle: vectorial/open loop/closed/other, to be specified (Note 11):
  - 10.4.4. Maximum effective current supplied to the motor (note 15): (A)  
during ..... seconds
  - 10.4.5. Voltage range use (V):
- 10.5. COOLING SYSTEM:
  - 10.5.1. Motor : liquid/air (Note 11)
  - 10.5.2. Controller : liquid/air (Note 11)
  - 10.5.3. Liquid-cooling equipment characteristics:
    - 10.5.3.1. Nature of the liquid:
    - 10.5.3.2. Circulating pumps: yes/no (Note 11)
    - 10.5.3.3. Characteristics or make(s) and type(s) of the pump:
    - 10.5.3.4. Thermostat: setting (°C):
    - 10.5.3.5. Radiator: drawing(s) or make(s) and type(s):
    - 10.5.3.6. Relief valve: pressure setting:
    - 10.5.3.7. Fan: characteristics or make(s) and type(s):
    - 10.5.3.8. Fan duct:
  - 10.5.4. Air-cooling equipment characteristics:
    - 10.5.4.1. Blower: characteristics or make(s) and type(s):
    - 10.5.4.2. Standard air ducting:
    - 10.5.4.3. Temperature regulating system: yes/no (Note 11)
    - 10.5.4.4. Brief description:
    - 10.5.4.5. Air filter make(s) and type(s):
  - 10.5.5. Temperatures permitted by the manufacturer
  - 10.5.6. Motor outlet: (max.) °C :

- 10.5.7. Controller inlet: (max) °C :
- 10.5.8. At motor reference point(s): (max.) °C :
- 10.5.9. At controller reference point(s): (max.) °C :
- 10.6. INSULATING CATEGORY:
  - 10.6.1. Description of insulation characteristics of the motor and power controller:
- 10.7. INTERNATIONAL PROTECTION (IP)-CODE:
  - 10.7.1. IP codes of the motor and power controller:
- 10.8. LUBRICATION SYSTEM PRINCIPLE (Note 11):
  - Bearings: friction/ball
  - Lubricant: Grease/Oil
  - Seal: Yes/No
  - Circulation: with/without
- 10.9. Details to allow a comparison of installed power/torque of the repowered vehicle to the power/torque of the original vehicle powertrain.
- 11. ID of controls**
- 12. Copy of relevant ECE Regulation 121 approval or:
  - 12.1. A list of items specified by Regulation 121 in Table 1 and prescribed by the manufacturer for the vehicle as controls, tell-tales or indicators;
  - 12.2. Graphical design of symbols identifying controls, tell-tales and indicators; and
  - 12.3. Drawings and/or photographs showing the layout of controls and location of tell-tales and indicators in the vehicle
- 13. Heating, Ventilation and Air Conditioning plus Defrost/Demist**
- 14. Copy of relevant ECE Regulation 122 approval or:
  - 14.1. HVAC
    - 14.1.1. A brief description of the vehicle with regard to the heating system:
    - 14.1.2. Layout of the heating system showing its position in the vehicle:
    - 14.1.3. Layout drawing of the heat exchanger for heating systems:
    - 14.1.4. Sectional drawing of the heat exchanger or the parts respectively where the heat exchange takes place, indicating the thickness of the wall, materials used and the characteristics of the surface:
    - 14.1.5. Specifications shall be given for further important components of the heating system, such as the heater fan, with regard to their method of construction and technical data
    - 14.1.6. Maximum electrical consumption (kW):
  - 14.2. Defrost/Demist



- 14.2.1. A brief description of the vehicle with regard to the Defrost/demist system (if not included in section 14 including:
- 14.2.2. For warm air systems:
  - 14.2.2.1. Fan / heater make and type:
  - 14.2.2.2. Details of warm air outlets with drawing showing positions relative to screen.
  - 14.2.2.3. Power consumption (kW):
- 14.2.3. For electric screen heating systems:
  - 14.2.3.1. Make:
  - 14.2.3.2. Type:
  - 14.2.3.3. Nominal voltage:
  - 14.2.3.4. Power consumption (kW):
- 15. **Speedometer and reverse gear**
- 16. Copy of relevant ECE Regulation 39 approval or:
  - 16.1. The type of speedometer:
  - 16.2. Range of wheel / tyre sizes fitted
  - 16.3. The overall transmission ratio, including any reduction drives, to the speedometer;
  - 16.4. The type of speedometer as characterised by:
    - 16.4.1. The tolerances of the speedometers measuring mechanism;
    - 16.4.2. The technical constant of the speedometer;
    - 16.4.3. The range of speeds displayed (mph and km/h) including a drawing of the analogue display or details of the resolution of a digital display.
- 17. **Speed Limiter**
  - 17.1. Copy of relevant ECE Regulation 89 Part I and Part II approval or:
  - 17.2. If a vehicle does not require a speed limiter either:
    - 17.2.1. Documentary evidence from the manufacturer/converter that the vehicle is unable to reach the speed due to the overall gearing of the drive train, or
    - 17.2.2. Documentary evidence from a speed limiter or Tachograph calibration centre, or
    - 17.2.3. Evidence to show that the finished vehicle will be exempt by nature of its use, (vehicles used by the emergency services)
  - 17.3. If a speed limiter is required:
    - 17.3.1. Description of the speed limiter system including:
    - 17.3.2. How the speed limiter control is achieved including speed pick-up, set speed, speed control methodology including interaction with regenerative brakes and/or service brakes,

- 17.3.3. Security precautions to prevent unauthorised adjustments or tampering,
- 17.3.4. Vset (km/h):
- 17.3.5. Description of the revised speed limiter plate fitted to the vehicle.
- 18. **Lighting installation**
- 18.1. Copy of relevant ECE Regulation 48 approval or:
- 18.2. The type of headlamp-levelling system;
- 18.3. The type of suspension system.
- 18.4. A list of the devices prescribed by the manufacturer for the lighting and light-signalling assembly. The list may include several types of device for each operation. Each type shall be duly identified (component, type-approval mark, name of manufacturer, etc.); in addition the list may include in respect of each function the additional annotation "or equivalent devices";
- 18.5. A layout drawing of the lighting and light-signalling equipment as a whole, showing the position of the various devices on the vehicle;
- 18.6. If necessary, in order to verify the conformity to the prescriptions of the present Regulation, layout drawing(s) for each individual lamp showing the illuminating surface as defined in ECE Regulation 48 Paragraph 2.10.3., the light-emitting surface as defined in Paragraph 2.10.2., the axis of reference as defined in Paragraph 2.10.5. and the centre of reference as defined in Paragraph 2.12. 2.10.6. This information is not necessary in the case of the rear registration plate lamp (Paragraph 2.5.5.);
- 18.7. A statement of the method used for the definition of the apparent surface (see ECE Regulation 48 Paragraph 2.10.4.).  
  
The method used to determine the apparent surface shall be declared for each lamp, as defined in Paragraph 2.5., and recorded in Item 10.2. of Annex 1.
- 18.8. Where an Adaptive front lighting system (AFS) is fitted on the vehicle, the applicant shall submit a detailed description providing the following information:
  - 18.8.1. The lighting functions and modes for which the AFS has been approved;
  - 18.8.2. The related AFS control signals and their technical characteristics as defined according to Annex 10 to UN Regulation No. 123 or Annex 14 to UN Regulation No. 149.
  - 18.8.3. The provisions being applied to adapt automatically the front lighting functions and modes according to Paragraph 6.22.7.4. of ECE Regulation 48;
  - 18.8.4. Special instruction, if any, for the inspection of the light sources and the visual observation of the beam;
  - 18.8.5. The documents according to Paragraph 6.22.9.2. of ECE Regulation 48;
  - 18.8.6. The lamps that are grouped or combined with or reciprocally incorporated in the AFS;
  - 18.8.7. Lighting units which are designed to comply with the requirements of Paragraph 6.22.5. of ECE Regulation 48.

- 18.9. For vehicles of M and N Categories a description of the electric power supply conditions for the devices indicated in ECE Regulation 48 Paragraphs 2.5.1., 2.5.2., 2.5.4., 2.5.6. and 2.5.7. above, including, if applicable, information on a special power supply/electronic light source control gear, or variable intensity control.
- 18.10. At the discretion of the manufacturer, a statement indicating whether lamps approved for and equipped with LED substitute light sources are allowed to be installed on the vehicle or not and, if this is allowed, which lamps.
- 19. **Electrical Safety**
  - 19.1. Copy of relevant ECE Regulation 100 Part I and Part II approval or:
  - 19.2. Vehicle – Reg 100 Part 1
    - 19.2.1. Make (trade name of manufacturer):
    - 19.2.2. Type:
    - 19.2.3. Vehicle category:
    - 19.2.4. Commercial name(s) if available:
    - 19.2.5. Manufacturer's name and address:
    - 19.2.6. If applicable, name and address of manufacturer's representative:
    - 19.2.7. Drawing and/or photograph of the vehicle:
    - 19.2.8. Approval number of the REESS:
    - 19.2.9. ELECTRIC MOTOR (Traction Motor)
      - 19.2.9.1. Type (winding, excitation):
      - 19.2.9.2. Maximum net power and/or maximum 30min power (kW):
    - 19.2.10. REESS
      - 19.2.10.1. Trade name and mark of the REESS:
      - 19.2.10.2. Indication of all types of cells:
        - 19.2.10.2.1. The cell chemistry:
        - 19.2.10.2.2. Physical dimensions:
        - 19.2.10.2.3. Capacity of the cell (Ah):
      - 19.2.10.3. Description of drawing(s) or picture(s) of the REESS explaining:
        - 19.2.10.3.1. Structure:
        - 19.2.10.3.2. Configuration (number of cells, mode of connection, etc.):
        - 19.2.10.3.3. Dimensions:
        - 19.2.10.3.4. Casing (construction, materials and physical dimensions):
      - 19.2.10.4. Electrical Specification
        - 19.2.10.4.1. Nominal voltage (V):

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- 19.2.10.4.2. Working voltage (V):
- 19.2.10.4.3. Capacity (Ab):
- 19.2.10.4.4. Maximum current (A):
- 19.2.10.5. Gas combination rate (in %):
- 19.2.10.6. Description or drawing (s) or picture(s) of the installation of the REESS in the vehicle:
  - 19.2.10.6.1. Physical support:
  - 19.2.10.7. Type of thermal management:
  - 19.2.10.8. Electronic control:
- 19.2.11. FUEL CELL (IF ANY):
  - 19.2.11.1. Trade name and mark of the fuel cell:
  - 19.2.11.2. Types of fuel cell:
  - 19.2.11.3. Nominal voltage (V):
  - 19.2.11.4. Number of cells:
  - 19.2.11.5. Type of cooling system (if any):
  - 19.2.11.6. Max Power (kW):
- 19.2.12. FUSE AND/OR CIRCUIT BREAKER:
  - 19.2.12.1. Type:
  - 19.2.12.2. Diagram showing the functional range:
- 19.2.13. POWER WIRING HARNESS:
  - 19.2.13.1. Type:
- 19.2.14. PROTECTION AGAINST ELECTRIC SHOCK:
  - 19.2.14.1. Description of the protection concept:
- 19.2.15. ADDITIONAL DATA:
  - 19.2.15.1. Brief description of the power circuit components installation or drawings/pictures showing the location of the power circuit components installation:
  - 19.2.15.2. Schematic diagram of all electrical functions included in power circuit:
  - 19.2.15.3. Working voltage (V):
- 19.3. REESS
  - 19.3.1. Trade name and mark of the REESS:
  - 19.3.2. Type of REESS
  - 19.3.3. Indication of all types of cells:
  - 19.3.4. The cell chemistry:
  - 19.3.5. Physical dimensions:

- 19.3.6. Capacity of the cell (Ah):
- 19.3.7. DESCRIPTION OR DRAWING(S) OR PICTURE(S) OF THE REESS EXPLAINING
- 19.3.8. Structure:
- 19.3.9. Configuration (number of cells, mode of connection, etc.):
- 19.3.10. Dimensions:
- 19.3.11. Casing (construction, materials and physical dimensions):
- 19.3.12. ELECTRICAL SPECIFICATION
- 19.3.13. Nominal voltage (V):
- 19.3.14. Working voltage (V):
- 19.3.15. Capacity (Ah):
- 19.3.16. Maximum current (A):
- 19.3.17. Gas combination rate (in %):
- 19.3.18. Description or drawing(s) or picture(s) of the installation of the REESS in the vehicle:
- 19.3.19. Physical support:
- 19.3.20. Type of thermal management:
- 19.3.21. Electronic control:
- 19.3.22. Category of vehicles on which the REESS can be installed:
- 20. Hydrogen and Fuel Cell Safety**
- 20.1. TBD
- 21. Charging**
- 21.1. Drawing showing type(s) and location(s) of all charging points.
- 22. Statutory Plates**
- 22.1. Drawing showing content and layout of updated statutory plate including character size and colours.
- 22.2. Drawing showing location of updated statutory plate including its relation to the existing vehicle plate.
- 22.3. Details of the material and fixing method used for the updated statutory plate.
- 23. Telematics**
- 24. Detailed description of the telematics system including:
- 25. Make:
- 26. Type:
- 26.1. System used for data transmission:
- 26.2. Duration of sim card activation (if applicable):

- 26.3. Drawing showing location of key elements of the telematics system:
- 26.4. List of data to be provided including update rates and duration of availability.
- 26.5. Details of telematics portal to be made available to the vehicle operator and other authorised users including screenshots of system in use.
- 27. End of Life**
- 27.1. Description of the End-of-Life processes.
- 28. Fire Suppression**
- 28.1. Make and type of the fire suppression system:
- 28.2. Type approval number of the fire suppression system, if applicable:
- 28.3. Fire suppression system for a specific engine compartment, if applicable (Note 16)
- 28.4. Extinguishing agent (make and type):
- 28.5. Mass of extinguishing agent:
- 28.6. Type of discharge point(s):
- 28.7. Number of discharge points(s):
- 28.8. Type of propellant gas, if applicable:
- 28.9. Reference temperature for the detection system (per ECE Regulation 107 Paragraph 7.5.1.5.1.):
- 29. Bus safety information standard**
- 29.1. TBD
- 30. Labelling of fill ports**
- 30.1. Drawing showing label(s) applied to every fill port on the vehicle relating to the repower.
- 30.2. Details of the material and fixing method used for the fill port label(s).
- 31. Energy Efficiency**
- 31.1. TBD

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- Note 1: As defined in ECE Regulation 107 paragraph 2.1
- Note 2: ISO Standard 612 - 1978, Term No. 6.4.
- Note 3: ECE Regulation 107, Annex 11, Paragraph 2.2.1
- Note 4: ECE Regulation 107, Annex 11, Paragraph 2.2.2
- Note 5: ECE Regulation 107, Annex 11, Paragraph 2.2.3
- Note 6: ISO Standard 612 - 1978, Term No. 6.6.
- Note 7: ISO Standard 612 - 1978, Term No. 6.7.
- Note 8: The mass of the driver and, if applicable, of the crew member is assessed at 75kg (subdivided into 68kg occupant mass and 7kg luggage mass according to ISO Standard 2416 - 1992), the fuel tank is filled to 90% and the other liquid containing systems (except those for used water) to 100% of the capacity specified by the manufacturer.
- Note 9: For trailer or a semi-trailer, which exert a significant vertical load on the coupling device or the fifth wheel, this load, divided by standard acceleration of gravity, is included in the maximum technically permissible mass.
- Note 10: As defined in ECE Regulation 13 Paragraph 2.21
- Note 11: Delete as applicable
- Note 12: In the case of an articulated vehicle, specify the number of seats in each rigid section
- Note 13: If the vehicle is equipped to carry wheelchairs, indicate here the maximum number to be carried. If passenger capacity is dependent on the number of wheelchairs to be carried, indicate permissible combinations of seated, standing and wheelchair passengers.
- Note 14: Gear engaged.
- Note 15: Specify tolerances.
- Note 16: When applicable, the documentation required according to ECE Regulation 107 Annex 13, Part 2, Paragraph 1.3. shall also be added.