Official Journal of the European Union

L 279

English edition

Legislation

Volume 59

15 October 2016

Contents

[1] Text with EEA relevance

EN

Acts whose titles are printed in light type are those relating to day-to-day management of agricultural matters, and are generally valid for a limited period.

The titles of all other acts are printed in bold type and preceded by an asterisk.

II

(Non-legislative acts)

REGULATIONS

COMMISSION DELEGATED REGULATION (EU) 2016/1824

of 14 July 2016

amending Delegated Regulation (EU) No 3/2014, Delegated Regulation (EU) No 44/2014 and Delegated Regulation (EU) No 134/2014 with regard, respectively, to vehicle functional safety requirements, to vehicle construction and general requirements and to environmental and propulsion unit performance requirements

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EU) No 168/2013 of the European Parliament and of the Council of 15 January 2013 on the approval and market surveillance of two- or three-wheel vehicles and quadricycles ([1]), and in particular Articles 18(3), 20(2), 21(5), 22(5), 23(12), 24(3), 25(8) and 54(3) thereof,

Whereas:

(1) The Commission has kept track of issues encountered and pointed out by approval authorities and stakeholders in Regulation (EU) No 168/2013, as well as Commission Delegated Regulation (EU) No 3/2014 ([2]), Commission Delegated Regulation (EU) No 44/2014 ([3]) and Commission Delegated Regulation (EU) No 134/2014 ([4]) supplementing Regulation (EU) No 168/2013; in order to ensure accurate application of those Regulations, some of the issues identified should be addressed by way of amendments.

(2) In order to ensure consistency and effectiveness of the EU type-approval system for L-category vehicles, it is necessary to continuously improve the technical requirements and test procedures set out in those delegated acts and adapt them to technical progress. It is also necessary improve the clarity of those delegated acts.

(3) The following amendments to Delegated Regulation (EU) No 3/2014 with regard to technical requirements and test procedures in the area of vehicle functional safety should be included in the Annexes to that Delegated Regulation with a view to improving its consistency and clarity: the list set out in Annex I to Delegated Regulation (EU) No 3/2014 containing the applicable UNECE regulations should be updated and its Annex XV on tyre installation should be further clarified by adding the provisions on the manufacturer declaration with respect to the permissibility of the 'category of use' with checks performed accordingly. Further clarifications should be

([1]) OJ L 60, 2.3.2013, p. 52.

([2]) Commission Delegated Regulation (EU) No 3/2014 of 24 October 2013 supplementing Regulation (EU) No 168/2013 of the European Parliament and of the Council with regard to vehicle functional safety requirements for the approval of two- or three-wheel vehicles and quadricycles (OJ L 7, 10.1.2014, p. 1).

([3]) Commission Delegated Regulation (EU) No 44/2014 of 21 November 2013 supplementing Regulation (EU) No 168/2013 of the European Parliament and of the Council with regard to the vehicle construction and general requirements for the approval of two- or three- wheel vehicles and quadricycles (OJ L 25, 28.1.2014, p. 1).

([4]) Commission Delegated Regulation (EU) No 134/2014 of 16 December 2013 supplementing Regulation (EU) No 168/2013 of the European Parliament and of the Council with regard to environmental and propulsion unit performance requirements and amending Annex V thereof (OJ L 53, 21.2.2014, p. 1).

added to Annex XVII to Delegated Regulation (EU) No 3/2014 regarding interior fittings, to its Annex XVIII with regard to maximum power limitation and to its Annex XIX with respect to structural integrity requirements, in particular those for powered cycles in the scope of Regulation (EU) No 168/2013.

(4) For the purposes of completeness and accuracy, it is appropriate that the list of UNECE regulations that apply on a compulsory basis set-out in Annex I to Delegated Regulation (EU) No 3/2014 includes UNECE Regulations Nos 1, 3, 6, 7, 8, 16, 19, 20, 28, 37, 38, 39, 43, 46, 50, 53, 56, 57, 60, 72, 74, 75, 78, 81, 82, 87, 90, 98, 99, 112 and 113.

(5) The following amendments to Delegated Regulation (EU) No 44/2014 should be made in order to improve consistency and accuracy: Annex I to Delegated Regulation (EU) No 44/2014 contains a list of applicable UNECE regulations, which should be updated; Annex II to Regulation (EU) No 44/2014 should be supplemented with respect to marking requirements for parts, equipment and components for the purposes of identification and prevention of tampering; Annex III to that Delegated Regulation should be amended to provide clarifications on the requirements concerning the conversion of vehicles of subcategories L3e/L4e-A2 into A3 motorcycles and vice versa; certain amendments should be made in Annex XI to Delegated Regulation (EU) No 44/2014 on masses and dimensions, in particular relating to the ground clearance definition of subcategories L3e-AxE (Enduro motorcycle) and L3e-AxT (Trial motorcycle); Annex XII to Delegated Regulation (EU) No 44/2014 should be amended as regards the standardised on-board diagnostics connection interface; and certain clarifications should be made in Annex XVI to the same Delegated Regulation on stands for these motorcycle subcategories.

(6) On-board diagnostics ('OBD') is essential for effective and efficient repair and maintenance of vehicles. Accurate diagnostics allow the repairer to identify fast which smallest exchangeable unit has to be repaired or replaced. In order to address the rapid technical developments in the area of propulsion control systems it is appropriate to review the list of devices monitored for electric circuit malfunctions in 2017. By 31 December 2018, it should be established whether additional devices and malfunctions should be added to the list set out in Appendix 2 to Annex XII to Delegated Regulation (EU) No 44/2014 provide sufficient time to the Member States, vehicle manufacturers, their suppliers and the repair industry to adapt before the entry into force of OBD stage II. PID $1C on the applicable on-board diagnostic system may be programmed to $00 or $FF as long as its value has not been standardised for L-category vehicles. For the purposes of consistency and completeness, as the publication date of the revised standard ISO 15031-5:20xx containing such a standardised value dedicated to L-category vehicles, this standardised value should be programmed as response to the PID $1C request of a generic scan tool.

(7) For the purposes of completeness and consistency, certain equations should be adapted in Annexes II and V to Delegated Regulation (EU) No 134/2014; in Annex VI to that Delegated Regulation regarding the durability of pollution control devices, the classification criteria of the SRC-LeCV distance accumulation cycle should be adapted to technical progress; finally, Annex IX to Delegated Regulation (EU) No 134/2014 should be amended to take into account some of the anti-tampering provisions set out in UNECE Regulations Nos 9, 41, 63 and 92 in the area of sound approval, in particular for multi-mode sound systems.

(8) One of the measures against excessive hydrocarbon emissions from L-category vehicles is to limit the evaporative emissions to the hydrocarbon mass limits laid down in Annex VI(C) to Regulation (EU) No 168/2013. For this purpose, a type IV test has to be conducted at type-approval in order to measure the evaporative emissions of a vehicle. One of the requirements of the type IV Sealed House evaporative Emission Determination (SHED) test is to fit either a rapidly aged carbon canister or alternatively to apply an additive deterioration factor when fitting a degreened carbon canister. It will be investigated in the environmental effect study referred to in Article 23(4) of Regulation (EU) No 168/2013 whether or not it is cost beneficial to maintain this deterioration factor as alternative to fitting a representative and rapidly aged carbon canister. If the result of the study demonstrates that this method is not cost-beneficial a proposal will follow in due course to delete this alternative and should become applicable beyond the Euro 5 step.

(9) A standardised method for measuring vehicles' energy efficiency (fuel or energy consumption, carbon dioxide emissions as well as electric range) is necessary to ensure that no technical barriers to trade arise between Member States and also to ensure that customers and users are supplied with objective and precise information. Until a harmonised test procedure is agreed upon for category L1e vehicles designed to pedal, referred to in Annex I to Regulation (EU) No 168/2013 and in point 1.1.2 of Annex XIX to Delegated Regulation (EU) No 3/2014, those category L1e vehicles should be exempted from the electric range test.

(10) Delegated Regulation (EU) No 3/2014, Delegated Regulation (EU) No 44/2014 and Delegated Regulation (EU) No 134/2014 should therefore be amended accordingly.

(11) Given that Regulation (EU) No 168/2013, Delegated Regulation (EU) No 3/2014, Delegated Regulation (EU) No 44/2014 and Delegated Regulation (EU) No 134/2014 are already applicable and that the amendments to those acts include number of corrections, this Regulation should enter into force as soon as possible,

HAS ADOPTED THIS REGULATION:

Article 1

Delegated Regulation (EU) No 3/2014 is amended as follows:

(1) in Article 3(2), 'Manufacturers' is replaced by 'Manufacturers of parts and equipment';

(2) the Annexes are amended in accordance with Annex I to this Regulation.

Article 2

Delegated Regulation (EU) No 44/2014 is amended as follows:

(1) in Article 3(2), 'Manufacturers' is replaced by 'Manufacturers of parts and equipment';

(2) the Annexes are amended in accordance with Annex II to this Regulation.

Article 3

Delegated Regulation (EU) No 134/2014 is amended as follows:

(1) Article 2 is amended as follows

(a) in point (16), 'ehaust' is replaced by 'exhaust';

(b) point (42) is replaced by the following:

'(42) "maximum thirty minutes speed" of a vehicle means the maximum achievable vehicle speed measured during 30 minutes as a result of the 30 minute power set out in UNECE regulation No 85 (*);

(*) OJ L 326, 24.11.2006, p. 55.';

(2) in Article 3(4), 'manufacturer' is replaced by 'manufacturer of parts and equipment';

(3) the Annexes are amended in accordance with Annex III to this Regulation.

Article 4

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

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

Done at Brussels, 14 July 2016.

For the Commission
The President
Jean-Claude JUNCKER

ANNEX I

Amendments to Delegated Regulation (EU) No 3/2014

The Annexes to Delegated Regulation (EU) No 3/2014 are amended as follows:

(1) Annex I is replaced by the following:

'ANNEX I

List of UNECE regulations which apply on a compulsory basis

UNECE regulation No	Subject	Series of amendments	OJ reference	Applicability
1	Headlamps for motor vehicles (R2, HS1)	02	OJ L 177, 10.7.2010, p. 1.	L1e, L2e, L3e, L4e, L5e, L6e and L7e
3	Retro-reflectors	Supplement 12 to the 02 series of amendments	OJ L 323, 6.12.2011, p. 1.	L1e, L2e, L3e, L4e, L5e, L6e and L7e
6	Direction indicators	Supplement 25 to the 01 series of amendments	OJ L 213, 18.7.2014, p. 1.	L1e, L2e, L3e, L4e, L5e, L6e and L7e
7	Front and rear position lamps and stop lamps	Supplement 23 to the 02 series of amendments	OJ L 285, 30.9.2014, p. 1.	L1e, L2e, L3e, L4e, L5e, L6e and L7e
8	Head lamps for motor vehicles (H1, H2, H3, HB3, HB4, H7, H8, H9, H11, HIR1, HIR2)	05	OJ L 177, 10.7.2010, p. 71.	L1e, L2e, L3e, L4e, L5e, L6e and L7e
16	Safety belts, restraint systems and child restraint systems	Supplement 5 to the 06 series of amendments	OJ L 304, 20.11.2015, p. 1.	L2e, L4e, L5e, L6e and L7e
19	Front fog lamps	Supplement 6 to the 04 series of amendments	OJ L 250, 22.8.2014, p. 1.	L3e, L4e, L5e and L7e
20	Headlamps for motor vehicles (H4)	03	OJ L 177, 10.7.2010, p. 170.	L1e, L2e, L3e, L4e, L5e, L6e and L7e
28	Audible warning devices	Supplement 3 to the 00 series of amendments	OJ L 323, 6.12.2011, p. 33.	L3e, L4e and L5e
37	Filament bulbs	Supplement 42 to the 03 series of amendments	OJ L 213, 18.7.2014, p. 36.	L1e, L2e, L3e, L4e, L5e, L6e and L7e

UNECE regulation No	Subject	Series of amendments	OJ reference	Applicability
38	Rear fog lamps	Supplement 15 to the 00 series of amendments	OJ L 4, 7.1.2012, p. 20.	L3e, L4e, L5e and L7e
39	Uniform provisions concerning the approval of vehicles with regard to the speedometer equipment including its installation	Supplement 5 to the original version of the Regulation	OJ L 120, 13.5.2010, p. 40.	L1e, L2e, L3e, L4e, L5e, L6e and L7e
43	Safety glazing	Supplement 2 to the 01 series of amendments	OJ L 42, 12.2.2014, p. 1.	L1e, L2e, L3e, L4e, L5e, L6e and L7e
46	Devices for indirect vision (rear-view mirrors)	Supplement 1 to the 04 series of amendments	OJ L 237, 8.8.2014, p. 24.	L2e, L5e, L6e and L7e
50	Lighting components for vehicles of category L	Supplement 16 to the 00 series of amendments	OJ L 97, 29.3.2014, p. 1.	L1e, L2e, L3e, L4e, L5e, L6e and L7e
53	Installation of lighting (motorcycle)	Supplement 14 to the 01 series of amendments	OJ L 166, 18.6.2013, p. 55.	L3e
56	Headlamps for mopeds and vehicles treated as such	01	OJ L 89, 25.3.2014, p. 1.	L1e, L2e and L6e
57	Headlamps for motorcycles and vehicles treated as such	02	OJ L 130, 1.5.2014, p. 45.	L3e, L4e, L5e and L7e
60	Identification of controls telltales and indicators	Supplement 4 to the 00 series of amendments	OJ L 297, 15.10.2014, p. 23.	L1e and L3e
72	Headlamps for motorcycles and vehicles treated as such (HS1)	01	OJ L 75, 14.3.2014, p. 1.	L3e, L4e, L5e and L7e
74	Installation of lighting (moped)	Supplement 7 to the 00 series of amendments	OJ L 166, 18.6.2013, p. 88.	L1e
75	Tyres	Supplement 13 to the 01 series of amendments	OJ L 84, 30.3.2011, p. 46.	L1e, L2e, L3e, L4e and L5e
78	Braking, including anti-lock and combined brake systems	Corrigendum 2 to the 03 series of amendments	OJ L 24, 30.1.2015, p. 30.	L1e, L2e, L3e, L4e and L5e
81	Rear-view mirrors	Supplement 2 to the 00 series of amendments	OJ L 185, 13.7.2012, p. 1.	L1e, L2e, L3e, L4e, L5e, L6e and L7e

UNECE regulation No	Subject	Series of amendments	OJ reference	Applicability
82	Headlamps for mopeds and vehicles treated as such (HS2)	01	OJ L 89, 25.3.2014, p. 92.	L1e, L2e and L6e
87	Daytime running lamps	Supplement 15 to the 00 series of amendments	OJ L 4, 7.1.2012, p. 24.	L1e, L2e, L3e, L4e, L5e, L6e and L7e
90	Replacement brake lining assemblies and drum brake linings	02	OJ L 185, 13.7.2012, p. 24.	L1e, L2e, L3e, L4e, L5e, L6e and L7e
98	Headlamps with gas-discharge light sources	Supplement 4 to the 01 series of amendments	OJ L 176, 14.6.2014, p. 64.	L3e
99	Gas-discharge light sources	Supplement 9 to the 00 series of amendments	OJ L 285, 30.9.2014, p. 35.	L3e
112	Headlamps with asymmetrical beams	Supplement 4 to the 01 series of amendments	OJ L 250, 22.8.2014, p. 67.	L1e, L2e, L3e, L4e, L5e, L6e and L7e
113	Headlamps with symmetrical beams	Supplement 3 to the 01 series of amendments	OJ L 176, 14.6.2014, p. 128.	L1e, L2e, L3e, L4e, L5e, L6e and L7e

Explanatory note: The fact that a component is included in this list does not make its installation mandatory. For certain components, however, mandatory installation requirements are laid down in other annexes to this Regulation.';

(2) Annex IV is amended as follows:

(a) point 4.1.4. is replaced by the following:

'4.1.4. If the on-board REESS can be externally charged by the driver, vehicle movement by its own propulsion system shall be impossible as long as the connector of the external electric power supply is physically connected to the vehicle inlet. For vehicles of category L1e with a mass in running order ≤ 35 kg vehicle movement by its own propulsion system shall be inhibited as long as the connector of the battery charger is physically connected to the external electric power supply. Compliance with this requirement shall be demonstrated by using the connector or battery charger specified by the vehicle manufacturer. In case of permanently connected charge cables, the requirement above is deemed to be met when use of the charge cable obviously prevents the use of the vehicle (e.g. cable is always routed over operator controls, rider's saddle, driver's seat, handle bar or steering wheel, or the seat covering the cable storage space needs to remain in open position).';

(b) point 4.3. is replaced by the following:

'4.3 Driving backwards

It shall not be possible to activate the vehicle reverse control function in an uncontrolled manner whilst the vehicle is in forward motion, insofar as such activation could cause a sudden and strong deceleration or wheel lock. However, it may be possible for the vehicle reverse control function to be activated in such a way that it may slow down the vehicle gradually.';

(3) in Annex VII, in Part 1, point 1.1.1. is replaced by the following:

'1.1.1. All safety glazing fitted to the vehicle shall be type-approved in accordance with UNECE regulation No 43 (*).

(*) OJ L 42, 12.2.2014, p. 1.';

(4) Annex VIII is amended as follows:

(a) points 1.1.1.1. and 1.1.1.2. are replaced by the following:

'1.1.1.1. It shall be ensured that no deviations in the shape and orientation of the provided symbols are permitted, notably that any customised appearance of the provided symbols shall be prohibited.

1.1.1.2. Small irregularities concerning line thickness, the marking application and other relevant production tolerances shall be accepted, as provided in paragraph 4 of ISO 2575:2010/Amd1:2011 (design principles).';

(b) point 2.1.3. is replaced by the following:

'2.1.3. It shall be ensured that no deviations in the shape and orientation of the provided symbols are permitted, notably that any customised appearance of the provided symbols shall be prohibited.

Small irregularities concerning line thickness, the marking application and other relevant production tolerances shall be accepted, as provided in paragraph 4 of ISO 2575:2010/Amd1:2011 (design principles).';

(5) Annex IX is amended as follows:

(a) point 1.12 is replaced by the following:

'1.12 Where automatically switched-on headlamp or daytime running lamp activation is linked to the running of an engine, this shall be construed, for vehicles with electric or other alternative propulsion unit systems and vehicles equipped with an automatic stop/start system of the propulsion unit, as being linked to the master control switch having been activated with the vehicle in normal operation mode.';

(b) point 2.3.11.8. is replaced by the following:

'2.3.11.8. Other requirements:

— in the absence of prescriptions for reversing lamp lighting devices which can be type-approved for vehicles of category L, the reversing lamp shall be type-approved according to UNECE regulation No 23 (*).

(*) OJ L 237, 8.8.2014, p. 1';

(c) point 2.3.15.8. is replaced by the following:

'2.3.15.8. Other requirements:

— in the absence of prescriptions for side marker lamp lighting devices which can be type-approved for vehicles of category L, the lamps shall be type-approved according to UNECE regulation No 91 (*).

(*) OJ L 4, 7.1.2012, p. 27';

(6) Annex XV is amended as follows:

(a) points 1.1. and 1.1.1. are replaced by the following:

'1.1. Subject to the provisions of points 1.1.1. to 1.1.2., all tyres fitted to vehicles, including any spare tyre, shall be type-approved according to UNECE regulation No 75.

1.1.1. Where a vehicle is designed for conditions of use which are incompatible with the characteristics of tyres type-approved according to UNECE regulation No 75 as applicable in the Union legislation at the time of type-approval testing of the vehicle and it is therefore necessary to fit tyres with different characteristics, the requirements of point 1.1. do not apply, provided that the following conditions are met:

— the tyres are type-approved according to Council Directive 92/23/EEC (*), Regulation (EC) No 661/2009 of the European Parliament and of the Council (**) or UNECE regulation No 106; and

— the approval authority and technical service are satisfied that the tyres fitted are suitable for the operating conditions of the vehicle. The nature of this exemption and reasons for acceptance shall be clearly stated in the test report.

(*) Council Directive 92/23/EEC of 31 March 1992 on tyres for motor vehicles and their trailers (OJ L 129, 14.5.1992, p. 95).

(**) Regulation (EC) No 661/2009 of the European Parliament and of the Council of 13 July 2009 concerning type-approval requirements for the general safety of motor vehicles, their trailers and systems, components and separate technical units intended therefor (OJ L 200, 31.7.2009, p. 1).';

(b) point 1.2. is deleted;

(c) point 2.2. is replaced by the following:

'2.2. The vehicle manufacturer may restrict the category of use of original and replacement tyres that may be installed on the vehicle. In this case, the categories of use of tyres that may be fitted to the vehicle shall be clearly stated in the vehicle's instruction manual.';

(d) point 2.2.1. is deleted;

(e) point 2.3 is replaced by the following:

'2.3. The space in which each wheel revolves shall be such as to allow unrestricted movement when using the maximum permissible size of tyres and rim widths, taking into account the minimum and maximum wheel off-sets if applicable, within the minimum and maximum suspension and steering constraints as declared by the vehicle manufacturer. This shall be verified by performing the checks for the largest and the widest tyre in each space, taking into account the applicable rim size and the maximum allowed section width and outer diameter of the tyre, in relation to the tyre size designation as specified in the applicable legislation. The checks shall be performed by rotating a representation of the tyre's permissible overall dimensions in the form of a maximum envelope, not just the actual tyre, in the space for the wheel in question.';

(f) the following points 2.3.1., 2.3.2. and 2.4 are inserted:

'2.3.1. All tyres that may be fitted to the vehicle in accordance with point 2.2. shall be taken into account for the determination of the permissible overall dimensions (i.e. the maximum envelope) of the relevant tyre, as applicable in the Union legislation at the time of type-approval testing of the vehicle. For this purpose, either the specifications as provided for in Annex 5 of UNECE Regulation No 75 or the permitted percentages as provided for sizes not included in that Annex shall be taken into account (e.g. overall width of multiservice tyres (MST) + 25 %, normal and snow service tyres + 10 % in case of rim diameter code 13 and above and + 8 % in case of rim diameter codes up to 12 inclusive).

2.3.2. In addition, the permissible dynamic growth of the height of bias and bias/belted construction tyres which are type-approved according to UNECE regulation No 75 depends on the speed category and the category of use of the tyre. To ensure an appropriate selection of bias and bias/belted replacement tyres for the end-user of the vehicle, the vehicle manufacturer shall take into account both the permitted categories of use as well as the speed category that is compatible with the maximum design vehicle speed, for the determination of the permitted tolerance laid down in point 4.1. of Annex 9 to UNECE regulation No 75 (i.e. H_{dyn} = H × 1,10 up to H_{dyn} = H × 1,18). More stringent categories may be taken into account at the discretion of the vehicle manufacturer.

2.4. The technical service may agree to an alternative test procedure (e.g. virtual testing) to verify that the requirements of point 2.3. to 2.3.2. are met, provided that the clearance between the tyre's maximum envelope and vehicle structure exceeds 10 mm at all points.';

(g) point 4.2.2. is replaced by the following:

'4.2.2. In the case of vehicles normally equipped with ordinary tyres and occasionally fitted with snow tyres, where the speed category symbol of the snow tyre shall correspond to a speed either greater than the maximum design vehicle speed or not less than 130 km/h (or both). However, if the maximum design vehicle speed is greater than the speed corresponding to the lowest speed category symbol of the fitted snow tyres, a maximum speed warning label, specifying the lowest value of the maximum speed capability of the fitted snow tyres or the manufacturer's recommended speed for the vehicle (whichever is lower), shall be displayed inside the vehicle in a prominent position or, if the vehicle does not have an interior, as close as possible to the instrument cluster, readily and permanently visible to the driver.';

(7) Annex XVI is amended as follows:

(a) point 2.1 is replaced by the following:

'2.1. All characters on the plate shall be formed by retro-reflective material type-approved as Class D, E or D/E according to UNECE regulation No 104 (*).

(*) OJ L 75, 14.3.2014, p. 29';

(b) point 3.3.1. is replaced by the following:

'3.3.1. The plate shall be perpendicular, ± 5°, to the longitudinal plane of the vehicle.';

(c) in point 3.6.1, the first indent is replaced by the following:

'— the two vertical planes touching the two lateral edges of the plate and forming an angle measured outwards to the left and to the right of the plate of 30° in relation to the longitudinal plane, parallel to the longitudinal median plane of the vehicle, passing through the centre of the plate;';

(d) in point 3.6.2, the first indent is replaced by the following:

'— the two vertical planes touching the two lateral edges of the plate and forming an angle measured outwards to the left and to the right of the plate of 30° in relation to the longitudinal plane, parallel to the longitudinal median plane of the vehicle, passing through the centre of the plate;';

(8) Annex XVII is amended as follows:

(a) the following point 1.1.6.3.1. is inserted:

'1.1.6.3.1. However, in case the level of the instrument panel is located above the level of the horizontal plane coinciding with the R-point of the seating position of the driver, a knee-form testing apparatus shall be used above the upper horizontal boundary of interior zone 2 to assess contactable edges of the

instrument panel, as well as any elements mounted directly onto it, located below the level of the instrument panel. The technical service shall clearly indicate in the test report which parts of the interior are deemed to be instrument panel and relevant elements, in agreement with the type-approval authority. The steering control shall be disregarded for the determination of the level of the instrument panel.';

(b) the following point 2.1.8. is inserted:

'2.1.8. Contactable edges of type-approved interior rear-view mirrors (Class I) are deemed to comply with the requirements of this Annex.';

(c) point 2.2.1. is replaced by the following:

'2.2.1. In this zone, as well as that covered by point 1.1.6.3.1., a knee-form testing apparatus shall be moved from any given starting location in a horizontal and forward direction, while the orientation of the X-axis of the device may be varied within the specified limits. All contactable edges, except those mentioned below, shall be rounded with a radius of curvature of at least 3.2 mm. Contacts made with the rear face of the device shall be disregarded.';

(d) the following points 2.4., 2.4.1. and 2.4.2. are added:

'2.4. Interior zones 1, 2 and 3

2.4.1. Radii of contactable edges that cannot be determined accurately with the use of conventional measuring tools (e.g. radius gauge) due to oblique corners, limited protrusions, character or style lines, ribs and bumps as well as surface graining, are deemed in compliance with the requirements provided that such edges are at least blunted.

2.4.2. The vehicle manufacturer may as an alternative choose to apply in full all relevant requirements of UNECE regulation No 21 (*) as prescribed for vehicle category M1, covering the entire, not just portions, of the interior.

(*) OJ L 188, 16.7.2008, p. 32.';

(9) Annex XVIII is amended as follows:

(a) point 1.1.2.1.1. is replaced by the following:

'1.1.2.1.1. Adjustment of the spark properties, including timing and/or presence, in order to limit the maximum design vehicle speed and/or maximum power shall be allowed for (sub)categories L3e-A2 (only if maximum net power ≥ 20 kW), L3e-A3, L4e-A, L5e, L6eB and L7eC. It may also be allowed for other (sub)categories provided that the adjustment concept does not negatively affect emission of gaseous pollutants, CO_2 emissions and fuel consumption while at maximum design vehicle speed and/or maximum power conditions which shall be verified by the technical service.';

(b) point 1.1.2.5. is replaced by the following:

'1.1.2.5. At least two of the limitation methods used, as referred to in points 1.1.2.1 to 1.1.2.4., shall operate independently of each other, be different in nature and have different design philosophies, although they may apply similar elements (e.g. both methods based on the notion of rotation speed as a criterion, but one measured inside a motor and the other in the drive-train's transmission). Failure of one method to work as intended (e.g. due to tampering) shall not impair the limitation function of other methods. In this case, the maximum power and/or vehicle speed which can be attained may be lower than under normal conditions. Without prejudice to the conformity of production tolerance set

out in point 4.1.4. of Annex IV to Regulation (EU) No 44/2014, the maximum power and/or vehicle speed may not be higher than demonstrated at type-approval, if one out of the two redundant limitation methods is eliminated.';

(c) the following points 1.1.2.6. to 1.1.2.9. are inserted:

'1.1.2.6. The vehicle manufacturer shall be allowed to make use of limitation methods other than those listed in points 1.1.2.1 to 1.1.2.4. if the manufacturer can prove to the technical service and to the satisfaction of the type approval authority that those alternative limitation methods meet the principles of redundancy set out in point 1.1.2.5. and provided that at least one of the parameters listed in points 1.1.2.1., 1.1.2.2. or 1.1.2.3. (e.g. limitation of fuel mass, air mass, spark delivery and drivetrain rotation limitation) is applied in one of the limitation methods.

1.1.2.7. The manufacturer shall be allowed to combine two or more of the individual limitation methods referred to in points 1.1.2.1 to 1.1.2.4. as part of a limitation strategy. Such combination of limitation methods shall be regarded as a single limitation method within the meaning of point 1.1.2.5.

1.1.2.8. Individual limitation methods or combinations of the limitation methods referred to in points 1.1.2.1 to 1.1.2.4. may be applied more than once provided that their multiple uses operate independently of each other, as required by point 1.1.2.5., so that failure of one of the methods to work as intended (e.g. due to tampering) does not impair the functioning in another application, of the same limitation method or combination of methods.

1.1.2.9. A limitation strategy that in case of failure (e.g. due to tampering) includes the activation of a special operating (e.g. 'limp home') mode with substantially reduced maximum vehicle speed and/or maximum power not suitable for normal operation or that activates an ignition interlock preventing the engine from running for as long as the failure remains, shall be regarded as one limitation method.';

(d) point 1.1.4. is replaced by the following:

'1.1.4. The provision and use of any other means enabling the vehicle operator to directly or indirectly adjust, set, select or alter the maximum propulsion unit performance determined on the basis of the information submitted in accordance with Annex I, Part B, point 2.8., items 1.8.2. to 1.8.9. of Regulation (EU) No 901/2014 (e.g. high performance switch, special encoded recognition transponder in ignition key, physical or electronic jumper setting, selectable option through electronic menu, programmable feature of control unit) resulting in exceedance is prohibited.';

(e) point 2.1. is replaced by the following:

'2.1. The vehicle manufacturer shall demonstrate compliance with the specific requirements of points 1.1 to 1.1.2.9 by proving that two or more of the methods implemented, by integrating specific devices and/or functions in the vehicle propulsion system, ensure the required maximum continuous rated or net power and/or maximum vehicle speed limitation and that each method does so in a fully independent manner.';

(10) Annex XIX is amended as follows:

(a) point 1.1.1. of is replaced by the following:

'1.1.1. Vehicles of category L1e-A and cycles designed to pedal of vehicle category L1e-B shall be designed and constructed as to conform with all prescriptions regarding requirements and test methods laid down for handlebar stem-assembly, seat-post, front forks and frames as encompassed in standard ISO 4210:2014, irrespective of any scope mismatch in that technical standard. The minimum value of the required test forces shall be in accordance with Table 19-1 in point 1.1.1.1.';

(b) the following point 1.1.1.1. is inserted:

'1.1.1.1. *Table 19-1*

Test and minimum forces or number of test cycles for vehicles of category L1e-A and cycles designed to pedal of vehicle category L1e-B

Subject	Name of test	Reference of test which shall be used	Minimum value of the required test force or minimum number of test cycles
Handlebar and stem	Lateral bending test (static test)	ISO 4210-5:2014, test method 4.3	800 N (= Force, F_2)
	Fatigue test (Stage 1 — Out of phase loading)	ISO 4210-5:2014, test method 4.9	270 N (= Force, F_6)
	Fatigue test (Stage 2 — In phase loading)	ISO 4210-5:2014, test method 4.9	2014, test method 4.9 370 N (= Force, F_7)
Frame	Fatigue test with pedalling forces	ISO 4210-6:2014, test method 4.3	1 000 N (= Force, F_1)
	Fatigue test with horizontal forces	ISO 4210-6:2014, test method 4.4	C1 = 100 000 (= Number of test cycles)
	Fatigue test with a vertical force	ISO 4210-6:2014, test method 4.5	1 100 N (= Force, F_4)
Front fork	Static bending test	ISO 4210-6:2014, test method 5.3	1 500 N (= Force, F_5)
Seat-post	Stage 1, fatigue test	ISO 4210-9:2014, test method 4.5.2	1 100 N (= Force, F_3)
	Stage 2, static strength test	ISO 4210-9:2014, test method 4.5.3	2 000 N (= Force, F_4)'

(c) in point 1.2, 'drivetrain' is replaced by 'powertrain'.

ANNEX II

Amendments to Delegated Regulation (EU) No 44/2014

The Annexes to Delegated Regulation (EU) No 44/2014 are amended as follows:

(1) Annex I is replaced by the following:

'ANNEX I

List of UNECE regulations which apply on a compulsory basis

UNECE regulation No	Subject	Series of amendments	OJ reference	Applicability
10	Electromagnetic compatibility (EMC)	Supplement 1 to the 04 series of amendments	OJ L 254, 20.9.2012, p. 1.	L1e, L2e, L3e, L4e, L5e, L6e and L7e
62	Protection against unauthorised use	Supplement 2 to the 00 series of amendments	OJ L 89, 27.3.2013, p. 37.	L1e, L2e, L3e, L4e, L5e, L6e and L7e

Explanatory note: The fact that a component is included in this list does not make its installation mandatory. For certain components, however, mandatory installation requirements are laid down in other annexes to this Regulation.';

(2) Annex II is amended as follows:

(a) in point 2.3.1.1., 'cylinder/piston combination' is replaced by 'cylinder, piston';

(b) in point 2.3.1.2., 'cylinder/piston combination' is replaced by 'cylinder, piston';

(c) point 3.2.1.3. is replaced by the following:

'3.2.1.3. A marking with indication of the vehicle (sub-) category as defined in Articles 2 and 4 of, and Annex I to, Regulation (EU) No 168/2013 shall be legible on the pipes.';

(d) the following point 3.2.2.5. is inserted:

'3.2.2.5. For two-stroke engines, the maximum thickness of any gasket between the base of the cylinder and the crankcase, if any, may not exceed 0,5 mm, after mounting.';

(e) the following points 3.3., 3.3.1. and 3.3.2. are inserted:

'3.3. Continuous Variable Transmission (CVT)

3.3.1. CVT Transmission covers, if available, shall be fixed by means of at a minimum 2 shear bolts or be disassembled only by using special tools.

3.3.2. The CVT mechanism intended to limit the drive ratio by limitation of the effective distance between two discs shall be fully integrated in one or both discs in such a way that it is impossible to modify the effective distance beyond a limit that would result in an increase of the maximum vehicle speed of more than 10 % of this maximum permissible vehicle speed without destroying the disc system. If the manufacturer employs interchangeable spacer rings in the CVT to adjust the maximum vehicle speed, the complete removal of these rings shall not increase the maximum vehicle speed with more than 10 %.';

(f) points 3.5., 3.5.1 and 3.5.2. are deleted;

(g) points 4. to 4.2.3. are replaced by the following:

'4. **Additional specific requirements for (sub-) categories L3e-A1 and L4e-A1**

4.1 Subcategory L3e-A1 and L4e-A1 vehicles shall comply with the requirements of either points 4.2. to 4.2.3., or points 4.3., 4.3.1. and 4.3.2., or points 4.4., 4.4.1. and 4.4.2., and with points 4.5., 4.6. and 4.7. In addition, they shall comply the requirements of points 3.2.2.1., 3.2.2.3., 3.2.2.4., 3.2.2.5., 3.2.3.1. and 3.2.3.3.

4.2. An irremovable sleeve must be located in the inlet conduit. If such a sleeve is located in the intake pipe, the latter shall be fixed to the engine block by means of shear-bolts or bolts removable only using special tools.

4.2.1. The sleeve shall have a minimum hardness of 60 HRC. In the restricted section it shall not exceed 4 mm in thickness.

4.2.2. Any interference with the sleeve aimed at removing or modifying it shall lead to either the destruction of the sleeve and its support or complete and permanent malfunctioning of the engine until it is restored to its approved condition.

4.2.3. A marking with indication of the vehicle (sub-) category as defined in Articles 2 and 4 of, and Annex I to, Regulation (EU) No 168/2013 shall be legible on the surface of the sleeve or not far from it.';

(h) points 4.2.4. to 4.2.12. are deleted;

(i) the following points 4.3. to 4.7. are inserted:

'4.3. Each intake pipe shall be fixed with shear-bolts or bolts removable only using special tools. A restricted section, indicated on the outside, shall be located inside the pipes; at that point the wall shall be less than 4 mm in thickness, or 5 mm if composed of a flexible material such as rubber.

4.3.1. Any interference with the pipes aimed at modifying the restricted section shall lead to either the destruction of the pipes or complete and permanent malfunctioning of the engine until they are restored to their approved condition.

4.3.2. A marking with indication of the vehicle (sub-) category as defined in Articles 2 and 4 of, and Annex I to, Regulation (EU) No 168/2013 shall be legible on the pipes.

4.4. The part of the inlet conduit located in the cylinder head shall have a restricted section. In the whole inlet passage, there shall not be a more restricted section (except the valve-seat section).

4.4.1. Any interference with the conduit aimed at modifying the restricted section shall lead to either the destruction of the pipe or complete and permanent malfunctioning of the engine until it is restored to its approved condition.

4.4.2. A marking with indication of the vehicle category as defined in Articles 2 and 4 of, and Annex I to, Regulation (EU) No 168/2013 shall be legible on the cylinder head.

4.5. The diameter of the restricted sections referred to in point 4.2. may vary according to the (sub-) category vehicle concerned.

4.6. The manufacturer shall supply the diameter(s) of the restricted section(s) and demonstrate to the approval authority and technical service that this restricted section is the most critical for the passage of gases, and that there is no other section which, if modified, could increase propulsion unit performance.

4.7. After mounting, the maximum thickness of a cylinder-head gasket shall not exceed 1,6 mm.';

(j) point 5.1. is replaced by the following:

'5.1 Any variant or version under the same type of vehicle of subcategory L3e-A2 or of subcategory L4e-A2 complying with the conversion requirements set out in point 4 of Annex III, shall not be derived from a L3e-A3 or L4e-A3 type, variant or version with a maximum net engine power and/or maximum continuous rated power more than twice the values set out in the classification of subcategories L3e-A2 or L4e-A2 in Annex I to Regulation (EU) No 168/2013 (e.g. 70 kW to 35 kW or lower, 50 kW to 35 kW or lower).';

(k) the following point 5.2.2. is inserted:

'5.2.2. fuel feed and delivery system';

(l) points 5.2.3. to 5.2.6. are replaced by the following:

'5.2.3. air intake system including air filter(s) (modification or removal);

5.2.4. the drive train;

5.2.5. the control unit(s) that control(s) the propulsion unit performance of the powertrain;

5.2.6. removal of any component (mechanical, electrical, structural, etc.) which limits full engine load leading to any change in the propulsion unit performance approved in accordance with Annex II(A) to Regulation (EU) No 168/2013.';

(m) point 5.2.7. is deleted;

(n) the following points 6 to 6.5.2. are added:

'6. **Additional requirements for (sub)categories L1e, L2e, L3e-A1, L4e-A1 and L6e**

6.1. The parts, equipment and components listed below shall be durably and indelibly marked with code number(s) and symbols assigned for identification purposes either by the vehicle manufacturer or by the manufacturer of such (replacement) parts, equipment or components. Such marking may take the form of a label provided that it remains legible in normal use and cannot be detached without being destroyed.

6.2. The marking referred to in point 6.1. shall in principle be visible without dismantling the part in question or other parts of the vehicle. Where the bodywork or other parts of the vehicle obscure a marking, the vehicle manufacturer shall provide the competent authorities with indications for opening or dismantling the parts in question and the location of the marking.

6.3. The characters, figures or symbols used shall be at least 2,5 mm in height and be easily legible.

6.4. The parts, equipment and components referred to in point 6.1. are the following, for all (sub) categories:

6.4.1. any electrical/electronic device for the purpose of combustion engine or electric propulsion motor management (ECU ignition module, injectors, intake air temperature etc.),

6.4.2. carburettor or equivalent device,

6.4.3. catalytic converter(s) (only if not integrated in the silencer),

6.4.4. crankcase,

6.4.5. cylinder,

6.4.6. cylinder head,

6.4.7. exhaust pipe(s) (if separate from the silencer),

6.4.8. inlet pipe (if cast separately from the carburettor or cylinder or crankcase),

6.4.9. intake silencer (air filter),

6.4.10. restricted section (sleeve or other),

6.4.11. noise abatement device (silencer(s)),

6.4.12. transmission driven part (rear chain wheel (sprocket) or pulley),

6.4.13. transmission driving part (front chain wheel (sprocket) or pulley).

6.5. In addition, for categories L1e, L2e, and L6e, the following parts, equipment and components shall be marked in accordance with point 6.1.:

6.5.1. transmission CVT,

6.5.2. transmission controller.';

(3) Annex III is amended as follows:

(a) points 4.2.5., 4.2.6. and 4.2.7. are replaced by the following:

'4.2.5. All other type-approval requirements than the ones listed in point 4.2.2., 4.2.3 and 4.2.4. and which are set out in Annex II to Regulation (EU) No 168/2013 shall be regarded as common and equal between the (L3e/L4e)-A2 and (L3e/L4e)-A3 motorcycle configurations and shall therefore only be tested and reported once for both performance configurations. In addition, test reports related to systems, components, separate technical units, and parts or equipment of the vehicle fulfilling the same type-approval requirements on both configurations shall be accepted for the type-approval of any of these configurations.

4.2.6. One WVTA shall be issued for the category (L3e/L4e)-A2 configuration motorcycle having a unique type-approval number.

4.2.7. One WVTA shall be issued for the category (L3e/L4e)-A3 configuration motorcycle having a unique type-approval number. Both type-approval numbers referred to in point 4.2.6. and in this point shall be stamped into the statutory plate in accordance with Article 39 of Regulation (EU) No 168/2013 and with Annex V to Regulation (EU) No 901/2014. In order to facilitate the conversion of subcategory (L3e/L4e)-A2 into the (L3e/L4e)-A3 configuration motorcycle and vice versa, a template for a corresponding vehicle manufacturer's statement shall be attached to the information folder in accordance with Appendix 24 of part B of Annex I to Regulation (EU) No 901/2014. In addition, the dedicated entries for both the L3e-A2 and L3e-A3 configurations on the certificate of conformity shall be provided by the vehicle manufacturer in accordance with the template set out in Annex IV of Regulation (EU) No 901/2014.';

(b) points 4.2.10. and 4.2.11. are replaced by the following:

'4.2.10. The Certificate of Conformity (CoC) shall be filled out in accordance with the requirements set out in point 1.7. of Annex IV to Regulation (EU) No 901/2014.

4.2.11. Only one vehicle identification number (VIN) of the (L3e/L4e)-A2 and A3 motorcycle configuration shall be assigned to motorcycles which can be converted from subcategories (L3e/L4e)-A2 to (L3e/L4e)-A3 or vice versa. The statutory plate fitted on the vehicle shall contain this VIN and shall bear a clear indication of the stationary noise levels in both configurations as well as the maximum net or maximum continuous rated power in the (L3e/L4e)-A2 configuration.';

(c) point 4.4.2 is deleted;

(d) in point 6.1., the row relating to the requirement listed in Section (A2) of Annex II of Regulation (EU) No 168/2013 is replaced by the following:

'Section (A2) of Annex II	Self-testing	Testing procedures on maximum design vehicle speed	Only for subcategories L3e, L4e and L5e and does not include any other propulsion unit performance testing.';

(4) Annex IV is amended as follows:

(a) in point 4.1.1.3.1., 'tailpipe and CO_2 emissions' is replaced by 'tailpipe pollutant and CO_2 emissions';

(b) in point 4.1.1.3.1.1., 'tailpipe and CO_2 emissions' is replaced by 'tailpipe pollutant and CO_2 emissions';

(c) point 4.1.1.3.1.1.1.1.1 is replaced by the following:

'If the durability method set out in Article 23(3a) of Regulation (EU) No 168/2013 is applicable, the deterioration factors shall be calculated from the type I emission test results up to and including full mileage referred to in Annex VII(A) to Regulation (EU) No 168/2013 and in accordance with the linear calculation method referred to in point 4.1.1.3.1.1.1.1.2. resulting in slope and offset values per emission constituent. The CoP pollutant emission results shall be calculated with the formula:

Equation 4-1:

$$\text{if } x \leq b \text{ then } y = a \cdot x + b;$$

$$\text{if } x > b \text{ then } y = x$$

where:

a = slope value determined according to test type V according to Annex V(A) to Regulation (EU) No 168/2013;

b = offset value determined according to test type V according to Annex V(A) to Regulation (EU) No 168/2013;

x = pollutant emission (HC, CO, NO_x, NMHC and PM if applicable) test result per emission constituent of a degreened vehicle (maximum accumulated 100 km after the first start on the production line) in mg/km.

y = CoP emission result per pollutant emission constituent in mg/km. The average CoP results shall be lower than the pollutant emission limits set out in Annex VI(A) of Regulation (EU) No 168/2013.';

(d) in point 4.1.1.3.1.1.1.3., 'tailpipe and CO_2 emissions' is replaced by 'tailpipe pollutant and CO_2 emissions';

(e) in point 4.1.1.3.1.1.2.2., 'tailpipe and CO_2 emissions' is replaced by 'tailpipe pollutant and CO_2 emissions';

(f) in point 4.1.1.3.1.1.2.3., 'tailpipe and CO_2 emissions' is replaced by 'tailpipe pollutant and CO_2 emissions';

(g) in point 4.1.1.3.2.1., 'tailpipe and CO_2 emissions' is replaced by 'tailpipe pollutant and CO_2 emissions';

(h) in point 4.1.1.3.2.3., 'the tailpipe emission limits' is replaced by 'tailpipe pollutant emission limits';

(i) in point 4.1.1.3.2.4., 'Equation 4-2:' is replaced by 'Equation 4-3:';

(j) in point 4.1.1.3.3.1., 'tailpipe and CO_2 emissions' is replaced by 'tailpipe pollutant and CO_2 emissions';

(k) in point 4.1.1.3.3.3., 'tailpipe and CO_2 emissions' is replaced by 'tailpipe pollutant and CO_2 emissions';

(l) in point 4.1.1.3.3.4., 'Equations 4-3:' is replaced by 'Equations 4-4:';

(m) in point 4.1.1.3.3.6., 'Equations 4-4:' is replaced by 'Equations 4-5:';

(n) in point 4.1.1.4., in the second, third and fifth subparagraph, 'tailpipe and CO_2 emissions' is replaced by 'tailpipe pollutant and CO_2 emissions';

(5) Annex VIII is amended as follows:

(a) the following points 1.1.1., 1.1.1.1. and 1.1.1.2. are inserted:

'1.1.1. Vehicles of categories L1e, L3e and L4e shall meet the following general requirements:

1.1.1.1. Vehicles shall incorporate no pointed, sharp or protruding parts, pointing outwards, of such a shape, dimension, angle of direction and hardness that they increase the risk or seriousness of body lesions and lacerations suffered by any person struck or grazed by the vehicle in the event of an accident. Vehicles shall be designed so that parts and edges with which vulnerable road users such as pedestrians are likely to come into contact in the event of an accident comply with the requirements in points 1 to 1.3.8.

1.1.1.2. All contactable projections or edges which are made of or covered with material such as soft rubber or soft plastic having a hardness of less than 60 Shore (A) are considered to meet the requirements in points 1.3 to 1.3.8. The hardness measurement shall be carried out with the material fitted to the vehicle as intended.';

(b) Points 1.1.2. to 1.1.3.2. are replaced by the following:

'1.1.2. Specific provisions for vehicles of categories L1e, L3e and L4e

1.1.2.1. Vehicles shall be assessed in accordance with the provisions in points 1.2 to 1.2.4.1.

1.1.2.2. In the case of vehicles fitted with a form of structure or panels intended to partially or fully enclose the rider, passenger or luggage or to cover certain vehicle components, the vehicle manufacturer may as an alternative choose to apply the relevant requirements of UNECE regulation No 26 (*) as prescribed for vehicle category M1, covering either specific external projections or the full external surface of the vehicle. In such cases, particular attention shall be given to the required radii whereas the amount of projection of handles, hinges, push-buttons and aerials do not need to be checked.

The relevant external projections assessed in conformity with this clause shall be clearly identified in the information document and any remaining external surface shall comply with the requirements of points 1. to 1.3.8.

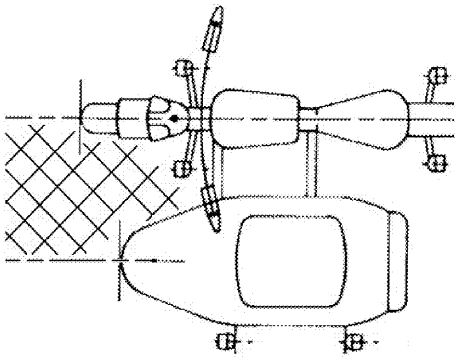
(*) OJ L 215, 14.8.2010, p. 27.

1.1.3. Specific provisions for vehicles of category L4e

1.1.3.1. When the side-car is connected to the motorcycle, either permanently or in a detachable way, the space between the motorcycle and the side-car is exempted from assessment (see Figure 8-1).

Figure 8-1

Top-down view of category L4e motorcycle with side-car



1.1.3.2. If the side-car can be detached from the motorcycle so that the motorcycle can be used without it, the motorcycle itself shall fulfil the requirements for solo motorcycles in points 1 to 1.3.8.';

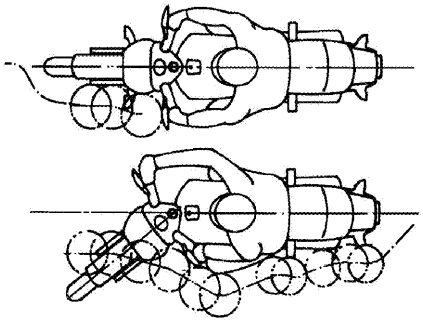
(c) points 1.1.4. to 1.1.4.2. are deleted;

(d) points 1.2.3. to 1.2.3.2. are replaced by the following:

'1.2.3. The testing device shall be moved from the front towards the rear of the vehicle, in a smooth motion, on both sides of it. If the testing device contacts the steering control or any parts mounted on it, it shall be rotated away into its fully locked position, during and after which the test continues. The testing device shall remain in contact with the vehicle or rider during the test (see Figure 8-2).

Figure 8-2

Test device movement zones



1.2.3.1. The front of the vehicle shall be the first point of contact and the testing device shall move sideways in an outward direction following the contour of the vehicle and the rider if applicable. The testing device shall also be allowed to move inward at a rate not exceeding the rate of rearward movement (i.e. at an angle of 45° in relation to the longitudinal median plane of the vehicle).

1.2.3.2. The hands and feet of the rider shall be pushed away by the testing device if it comes into direct contact with them and any relevant supports (e.g. foot supports) shall be allowed to freely rotate, fold, bend or flex as a result of contact with the testing device and assessed in all resulting intermediate positions.';

(e) point 1.3.3.2. is replaced by the following:

'1.3.3.2. If a radius is applied to the upper edge, it shall not be larger than 0,70 times the thickness of the windscreen or fairing, as measured at the upper edge.';

(f) point 1.3.5.2. is replaced by the following:

'1.3.5.2. The radius as applied to the leading edge of the front mudguard shall not be larger than 0,70 times the thickness of the mudguard, as measured at the leading edge (e.g. in case of a round bead on the edge of sheet metal, the diameter of the bead is taken as the relevant thickness).';

(g) in point 2.1.2.1.1., the following second subparagraph is inserted:

'In accordance with the first subparagraph, some portions of the kinds of vehicle concerned may be assessed with the external projections testing device (see Appendix 1) and the remaining portions shall be assessed with the sphere measuring 100 mm in diameter (see UNECE Regulation No 26). In such cases, particular attention shall be given to the required radii whereas the amount of projection of handles, hinges, push-buttons and aerials does not need to be checked.';

(6) Annex IX is amended as follows:

(a) point 2.2.1. is replaced by the following:

'2.2.1. The tank shall be subjected to a hydraulic internal pressure test which shall be carried out on an isolated unit complete with all its accessories. The tank shall be completely filled with a non-flammable liquid having a density and a viscosity close to those of the fuel normally used, or with water. After all communication with the outside has been cut off, the pressure shall be gradually increased, through the pipe connection through which fuel is fed to the engine, to the internal pressure specified in point 1.2.9. and this pressure shall be maintained for at least 60 seconds.';

(b) point 3.2.1. is replaced by the following:

'3.2.1. The permeability test as part of type IV testing referred to in Part A of Annex V to Regulation (EU) No 168/2013 without having to take into account any diffusion measurements for the purpose of the test in accordance with this Annex, shall be carried out on a sufficient number of tanks for the purpose of testing in accordance with points 3.3 to 3.7.5.1. The total duration of the preconditioning procedure shall be composed of a pre-storage period of at least four weeks followed by a subsequent eight-week stabilised condition storage period.';

(c) point 3.3.1. is replaced by the following:

'3.3.1. The fuel tank is filled up to its total rated capacity with a mixture of 50 % water and 50 % ethylene glycol or with any other coolant which does not deteriorate the fuel tank material, the cryoscopic point of which is lower than 243 ± 2 K (– 30 ± 2 °C).

The temperature of the substances contained in the fuel tank during the test shall be 253 ± 2 K (– 20 ± 2 °C). The tank is cooled down to a corresponding ambient temperature. The fuel tank may also be filled with a suitably refrigerated liquid provided that it is left at the test temperature for at least an hour.

A pendulum is used for the test. Its impact head shall have the form of an equilateral triangular pyramid with a radius of curvature of 3,0 mm at its peak and edges. The freely moving mass of the pendulum shall have a mass of 15 kg ± 0,5 kg and the exerted pendulum's energy shall not be less than 30,0 J for each impact on the fuel tank.

The technical service may select any number of points on the fuel tank to be tested and these points shall reflect locations which are considered at risk as a result of the fitting of the tank and its position on the vehicle. Non-metal shielding shall be disregarded and frame tubing or chassis sections may be taken into account for the assessment of risk.

More than one fuel tank may be used for the completion of all impacts, provided that all fuel tanks to be used have undergone the permeability test.

There shall be no leakage of liquid following a single impact at any one of the tested points.';

(d) point 3.4.1. is replaced by the following:

'3.4.1. The fuel tank shall be filled up to its total rated capacity, the test liquid used being water at 326 ± 2 K (53 ± 2 °C). The tank shall then be subjected to an internal pressure equal to twice the relative service pressure (design pressure) or an overpressure of 30 kPa, whichever is higher. The tank shall remain closed and pressurised for a period of not less than five hours at an ambient temperature of 326 ± 2 K (53 ± 2 °C).

The fuel tank shall not show signs of leakage and any temporary or permanent deformation which may arise shall not render it unusable. Account shall be taken of specific fitting conditions if the deformation of the tank is to be assessed.';

(e) point 3.5.1. is replaced by the following:

'3.5.1. Six tensile test-pieces of approximately the same thickness are taken from flat or nearly flat faces of the completely new fuel tank. Their tensile strength and elastic limits are established at 296 ± 2 K (23 ± 2 °C) at an elongation rate of 50 mm/min. The obtained values shall then be compared with the tensile strength and elasticity values obtained from similar tests carried out using a fuel tank which has undergone the permeability test. The material shall be considered to be acceptable if the tensile strength differs by no more than 25 %.';

(f) point 3.6.1. is replaced by the following:

'3.6.1. The fuel tank shall be fitted to a representative part of the vehicle and filled to 50 % of its total rated capacity with water at 293 ± 2 K (20 ± 2 °C). The test setup including the fuel tank shall then be placed in an ambient temperature of 343 ± 2 K (70 ± 2 °C) for 60 minutes, after which the fuel tank shall not display any permanent deformation or leaks and shall be in fully usable condition.';

(g) point 3.7.4.3. is replaced by the following:

'3.7.4.3. The average combustion time (ACT) and average combustion length (ACL) shall be calculated if no sample out of ten or no more than one out of 20 has burnt up to the 100 mm mark.

Equation 9-1:

$$\mathrm{ACT\ (s)} = \sum_{i=1}^{n} \cdot((t_i - 30)/(n))$$

(*note:* n = number of samples)

The result is rounded up or down to the nearest five-second increment. However, an ACT of 0 seconds shall not be used. (i.e. if the combustion lasts between less than 2 seconds and 7 seconds, the ACT is 5 seconds; if the combustion lasts between 8 and 12 seconds, the ACT is 10 seconds; if the combustion lasts between 13 and 17 seconds, the ACT is 15 seconds, etc.).

Equation 9-2:

$$\mathrm{ACL\ (mm)} = \sum_{i=1}^{n} \cdot((100 - \ \mathrm{unburnt\ length}_i)/(n))$$

(*note:* n = number of samples)

The result is expressed in relation to the nearest 5 mm increment (i.e. 'less than 5 mm' shall be stated if the combustion length is less than 2 mm and thus in no case can an ACL of 0 mm be given).

Where a single sample out of 20 burns up to or beyond the 100 mm mark, the combustion length (i.e. the value of (100 – unburnt length$_i$) for that sample) shall be taken as 100 mm.

Equation 9-3:

$$n_{average\_combustion\_speed} = \frac{ACL}{ACT} \text{ in } \frac{mm}{s}$$

This value shall be compared against the requirement as laid down in points 3.7.5. to 3.7.5.1.';

(7) In Annex XI, in Appendix 1, point 1.6. is replaced by the following:

'1.6. Ground clearance

1.6.1. For the purpose of measuring the ground clearance of an L-category vehicle type, the test vehicle shall be loaded to the actual mass.

1.6.2. As an exception to point 1.6.1., for the purpose of measuring the ground clearance of a subcategory L3e-AxE vehicle type (x = 1, 2 or 3, two-wheel Enduro motorcycle) or a subcategory L3e- AxT vehicle type (x = 1, 2 or 3, two-wheel Trial motorcycle), the test Enduro or Trial motorcycle shall be loaded to its mass in running order.

1.6.3. Any manually or automatically adjustable suspension system fitted to the vehicle, possibly resulting in a variable ground clearance, shall be put to its minimum setting allowing the minimum distance between vehicle and ground plane.

1.6.4. The shortest distance between the ground plane and the lowest fixed point of the vehicle shall be measured between the axles and under the axle(s), if applicable in accordance with Appendix 1 to Annex II to Directive of the European Parliament and of the Council 2007/46/EC (*). That minimum measured distance shall be regarded as the ground clearance of the vehicle.

(*) Directive 2007/46/EC of the European Parliament and of the Council of 5 September 2007 establishing a framework for the approval of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles (Framework Directive) (OJ L 263, 9.10.2007, p. 1).';

(8) Annex XII is amended as follows:

(a) in point 2.2.2., Table 12-1 is replaced by the following:

'Table 12-1

OBD stage II functions and associated requirements in the points of this Annex and Appendix 1

Topic	Point in this Annex and in Appendix 1
General disable criterion for degradation type of diagnostics in OBD stage II	3.2.1.1.
Catalytic converter monitoring	3.3.2.1.; 3.3.3.1.
EGR efficiency/flow monitoring	3.3.3.4.
In-use performance monitoring	2nd sub point of point 3.3. of Appendix 1, point 4 of Appendix 1
General OBD stage II requirement	3.3. of Appendix 1

Topic	Point in this Annex and in Appendix 1
Misfire detection	3.2.2.; 3.3.2.2.; 3.5.3.; 3.6.2.; 3.7.1.; 3.1.2. of Appendix 1
NOx after-treatment system monitoring	3.3.3.5.; 3.3.3.6.
Oxygen sensor deterioration monitoring	3.3.2.3.
Particulate filter monitoring	3.3.3.2.
Particulate matter (PM) emission monitoring	3.3.2.5.'

(b) points 3.2.2.1. and 3.2.2.1. are replaced by the following:

'3.2.2.1. Manufacturers may adopt higher misfire percentage malfunction criteria than those declared to the authority, under specific engine speed and load conditions where it can be demonstrated to the authority that the detection of lower levels of misfire would be unreliable. In terms of OBD monitoring, it is that percentage of misfires out of a total number of firing events (as declared by the manufacturer) that would result in emissions exceeding the OBD thresholds set out in Section (B) of Annex VI to Regulation (EU) No 168/2013, or that percentage that could lead to an exhaust catalyst, or catalysts, overheating, causing irreversible damage.

3.2.2.2. When a manufacturer can demonstrate to the authority that the detection of higher levels of misfire percentages is still not feasible, or that misfire cannot be distinguished from other effects (e.g. rough roads, transmission shifts, after engine starting, etc.), the misfire monitoring system may be disabled when such conditions exist.';

(c) in point 3.6., the last sentence is replaced by the following:

'A fault code shall also be stored in the cases referred to in points 3.3.5. and 3.3.6.';

(d) point 3.6.1. is replaced by the following:

'The distance travelled by the vehicle while the MI is activated shall be available at any moment through the serial port on the standardised diagnostic connector. By means of derogation for vehicles equipped with a mechanically operating odometer that does not allow input to the electronic control unit including such vehicles equipped with a CVT that does not allow for an accurate input to the electronic control unit, "distance travelled" may be replaced with "engine operation time" and shall be made available at any moment through the serial port on the standardised diagnostic connector.'

(e) points 4.3. and 4.4. are replaced by the following:

'4.3. In the identified order of deficiencies, those relating to points 3.3.2.1, 3.3.2.2 and 3.3.2.3 for positive-ignition engines and points 3.3.3.1, 3.3.3.2 and 3.3.3.3 for compression-ignition engines shall be identified first.

4.4. Prior to, or at the time of, type-approval, no deficiency shall be granted with regard to the requirements set out in point 3. of Appendix 1, except the requirements laid down in point 3.11. of Appendix 1.';

(f) the following point 4.7. is added:

'The vehicle family criteria laid down in table 11-1 in point 3.1. of Annex XI to Regulation (EU) No 134/2014 with regard to test type VIII shall also be applicable for the functional on-board diagnostic requirements set out in this Annex.';

(g) in Appendix 1, point 3.13. is replaced by the following:

'Until a standardised connection interface for L-category vehicles has been adopted and published at ISO or CEN level and the reference of that technical standard is included in this Regulation, an alternative connection interface may be installed at the request of the vehicle manufacturer. Where such an alternative connection interface is installed, the vehicle manufacturer shall make available to test equipment manufacturers the details of the vehicle connector pin configuration free of charge. The vehicle manufacturer shall provide an adapter enabling connection to a generic scan tool. Such an adapter shall be of suitable quality for professional workshop use. It shall be provided upon request to all independent operators in a non-discriminating manner. Manufacturers may charge a reasonable and proportionate price for this adapter, taking into account the additional costs caused for the customer by this choice of the manufacturer. The connection interface and the adapter may not include any specific design elements which would require validation or certification before use, or which would restrict the exchange of vehicle data when using a generic scan tool.';

(h) in Appendix 2, in point 2.1., in Table Ap2-1, 'Device operational/Device present' is replaced by 'Device not operational/Device not present';

(i) in Appendix 2, point 2.6.2. is replaced by the following:

'2.6.2. monitoring of some of the items listed in Table Ap2-1 is physically not possible and a deficiency has been granted for this incomplete monitor. The comprehensive, technical justification why such an OBD monitor cannot run shall be added to the information folder.';

(9) In Annex XIII the following point 1.4. is added:

'1.4. The maximum pressures mentioned in points 1.2.1., 1.2.2., 1.2.3. and 1.3.1. may be exceeded during testing upon agreement with the vehicle manufacturer.';

(10) In Annex XIV, point 1.5.1.5.1. is replaced by the following:

'1.5.1.5.1. The plate shall be visible in the whole space within the following four planes:

— the two vertical planes touching the two lateral edges of the plate and forming an angle measured outwards to the left and to the right of the plate of 30° in relation to the longitudinal plane, parallel to the longitudinal median plane of the vehicle, passing through the centre of the plate;

— the plane touching the upper edge of the plate and forming an angle measured upwards of 15° to the horizontal;

— the horizontal plane through the lower edge of the plate.';

(11) in Annex XVI, the following point 2.3.5.1. is inserted:

'2.3.5.1. However, by way of derogation from points 1.2.1. and 2.3.5. a prop stand fitted to a vehicle of category L3e-A1E, L3e-A2E, L3e-A3E, L3e-A1T, L3e-A2T or L3e-A3T may swing back automatically when the prop stand is not being held or supported by a person.'.

ANNEX III

Amendments to Delegated Regulation (EU) No 134/2014

The Annexes to Delegated Regulation (EU) No 134/2014 are amended as follows:

(1) Annex II is amended as follows:

(a) points 4.5.5.2.1.1. and 4.5.5.2.1.2. are replaced by the following:

'4.5.5.2.1.1. Step 1 — Calculation of shift speeds

Upshift speeds ($v_{1\rightarrow2}$ and $v_{i\rightarrow i+1}$) in km/h during acceleration phases shall be calculated using the following formulae:

Equation 2-3:

$$v_{1\rightarrow2} = \left[(0{,}5753 \times e^{(-1{,}9\times\frac{P_n}{m_k})} - 0{,}1) \times (s - n_{idle}) + n_{idle}\right] \times \frac{1}{ndv_1}$$

Equation 2-4:

$$v_{i\rightarrow i-1} = \left[(0{,}5753 \times e^{(-1{,}9\times\frac{P_n}{m_k})}) \times (s - n_{idle}) + n_{idle}\right] \times \frac{1}{ndv_{i-2}}, \; i = 2 \text{ to } ng - 1$$

where:

'i' is the gear number (≥ 2)

'ng' is the total number of forward gears

'P_n' is the rated power in kW

'm_k' is the reference mass in kg

'n_{idle}' is the idling speed in min^{-1}

's' is the rated engine speed in min^{-1}

'ndv_i' is the ratio between engine speed in min^{-1} and vehicle speed in km/h in gear 'i'

4.5.5.2.1.2. Downshift speeds ($v_{i\rightarrow i-1}$) in km/h during cruise or deceleration phases in gears 4 (4th gear) to ng shall be calculated using the following formula:

Equation 2-5:

$$v_{i\rightarrow i-1} = \left[(0{,}5753 \times e^{(-1{,}9\times\frac{P_n}{m_k})}) \times (s - n_{idle}) + n_{idle}\right] \times \frac{1}{ndv_{i-2}}, \; i = 4 \text{ to } ng$$

where:

i is the gear number (≥ 4)

ng is the total number of forward gears

P_n is the rated power in kW

m_k is the reference mass in kg

n_{idle} is the idling speed in min^{-1}

s is the rated engine speed in min^{-1}

ndv_{i-2} is the ratio between engine speed in min^{-1} and vehicle speed in km/h in gear i – 2

The downshift speed from gear 3 to gear 2 ($v_{3\rightarrow2}$) shall be calculated using the following equation:

Equation 2-6:

$$v_{3\rightarrow2} = \left[(0{,}5753 \times e^{(-1{,}9\times\frac{P_n}{m_k})} - 0{,}1) \times (s - n_{idle}) + n_{idle}\right] \times \frac{1}{ndv_1}$$

where:

P_n is the rated power in kW

m_k is the reference mass in kg

n_{idle} is the idling speed in min^{-1}

s is the rated engine speed in min^{-1}

ndv_1 is the ratio between engine speed in min^{-1} and vehicle speed in km/h in gear 1

The downshift speed from gear 2 to gear 1 ($v_{2\rightarrow1}$) shall be calculated using the following equation:

Equation 2-7:

$$v_{2\rightarrow1} = \left[0{,}03 \times (s - n_{idle}) + n_{idle}\right] \times \frac{1}{ndv_2}$$

where:

ndv_2 is the ratio between engine speed in min^{-1} and vehicle speed in km/h in gear 2

Since the cruise phases are defined by the phase indicator, slight speed increases could occur and it may be appropriate to apply an upshift. The upshift speeds ($v_{1\rightarrow2}$, $v_{2\rightarrow3}$ and $v_{i\rightarrow i+1}$) in km/h during cruise phases shall be calculated using the following equations:

Equation 2-7a:

$$v_{1\rightarrow2} = \left[0{,}03 \times (s - n_{idle}) + n_{idle}\right] \times \frac{1}{ndv_2}$$

Equation 2-8:

$$v_{2\rightarrow3} = \left[(0{,}5753 \times e^{(-1{,}9\times\frac{P_n}{m_k})} - 0{,}1) \times (s - n_{idle}) + n_{idle}\right] \times \frac{1}{ndv_1}$$

Equation 2-9:

$$v_{i\rightarrow i+1} = \left[(0{,}5753 \times e^{(-1{,}9\times\frac{P_n}{m_k})}) \times (s - n_{idle}) + n_{idle}\right] \times \frac{1}{ndv_{i-1}}, \text{ i = 3 to ng'}$$

(b) points 6.1.1.4.2. to 6.1.1.4.7. are replaced by the following:

'6.1.1.4.2. Hydrocarbons (HC)

The mass of unburned hydrocarbons emitted by the exhaust of the vehicle during the test shall be calculated using the following formula:

Equation 2-33:

$$HC_m = \frac{1}{S} \cdot V \cdot d_{HC} \cdot \frac{HC_C}{10^6}$$

where:

HC_m is the mass of hydrocarbons emitted during the test part, in mg/km;

S is the distance defined in point 6.1.1.3.;

V is the total volume, defined in point 6.1.1.4.1.;

d_{HC} is the density of the hydrocarbons at reference temperature and pressure (273,2 K and 101,3 kPa);

d_{HC} = $0{,}631 \cdot 10^3$ mg/m³ for petrol (E5) ($C_1H_{1,89}O_{0,016}$);

= $932 \cdot 10^3$ mg/m³ for ethanol (E85) ($C_1H_{2,74}O_{0,385}$);

= $622 \cdot 10^3$ mg/m³ for diesel (B5) ($C_1H_{l,86}O_{0,005}$);

= $649 \cdot 10^3$ mg/m³ for LPG ($C_1H_{2,525}$);

= $714 \cdot 10^3$ mg/m³ for NG/biogas (C_1H_4);

= $\frac{9{,}104 \cdot A + 136}{1\,524{,}152 - 0{,}583 \cdot A} \cdot 10^6$ mg/m³ for H_2NG (with A = NG/biomethane quantity within the H_2NG mixture in (volume %)).

HC_c is the concentration of diluted gases, expressed in parts per million (ppm) of carbon equivalent (e.g. the concentration in propane multiplied by three), corrected to take account of the dilution air by the following equation:

Equation 2-34:

where:

HC_e is the concentration of hydrocarbons expressed in parts per million (ppm) of carbon equivalent, in the sample of diluted gases collected in bag(s) A;

HC_d is the concentration of hydrocarbons expressed in parts per million (ppm) of carbon equivalent, in the sample of dilution air collected in bag(s) B;

DiF is the coefficient defined in point 6.1.1.4.7.

The non-methane hydrocarbon (NMHC) concentration is calculated as follows:

Equation 2-35:

$$C_{NMHC} = C_{THC} - (Rf\ CH_4 \cdot C_{CH4})$$

where:

C_{NMHC} = corrected concentration of NMHC in the diluted exhaust gas, expressed in ppm carbon equivalent;

C_{THC} = concentration of total hydrocarbons (THC) in the diluted exhaust gas, expressed in ppm carbon equivalent and corrected by the amount of THC contained in the dilution air;

C_{CH4} = concentration of methane (CH_4) in the diluted exhaust gas, expressed in ppm carbon equivalent and corrected by the amount of CH_4 contained in the dilution air;

Rf CH_4 is the FID response factor to methane as defined in point 5.2.3.4.1.

6.1.1.4.3. Carbon monoxide (CO)

The mass of carbon monoxide emitted by the exhaust of the vehicle during the test shall be calculated using the following formula:

Equation 2-36:

$$CO_m = \frac{1}{S} \cdot V \cdot d_{CO} \cdot \frac{CO_C}{10^6}$$

where:

CO_m is the mass of carbon monoxide emitted during the test part, in mg/km;

S is the distance defined in point 6.1.1.3.;

V is the total volume defined in point 6.1.1.4.1.;

d_{CO} is the density of the carbon monoxide, d_{CO} = 1,25 · 10^6 mg/m^3 at reference temperature and pressure (273,2 K and 101,3 kPa);

CO_c is the concentration of diluted gases, expressed in parts per million (ppm) of carbon monoxide, corrected to take account of the dilution air by the following equation:

Equation 2-37:

$$CO_c = CO_e - CO_d \cdot \left(1 - \frac{1}{DiF}\right)$$

where:

CO_e is the concentration of carbon monoxide expressed in parts per million (ppm), in the sample of diluted gases collected in bag(s) A;

CO_d is the concentration of carbon monoxide expressed in parts per million (ppm), in the sample of dilution air collected in bag(s) B;

DiF is the coefficient defined in point 6.1.1.4.7.

6.1.1.4.4. Nitrogen oxides (NO_x)

The mass of nitrogen oxides emitted by the exhaust of the vehicle during the test shall be calculated using the following formula:

Equation 2-38:

$$NO_{xm} = \frac{1}{S} \cdot V \cdot d_{NO_2} \cdot \frac{NO_{xc} \cdot K_h}{10^6}$$

where:

NO_{xm} is the mass of nitrogen oxides emitted during the test part, in mg/km;

S is the distance defined in point 6.1.1.3.;

V is the total volume defined in point 6.1.1.4.1.;

d_{NO_2} is the density of the nitrogen oxides in the exhaust gases, assuming that they will be in the form of nitric oxide, d_{NO_2} = 2,05 · 10^6 mg/m^3 at reference temperature and pressure (273,2 K and 101,3 kPa);

NO_{xc} is the concentration of diluted gases, expressed in parts per million (ppm), corrected to take account of the dilution air by the following equation:

Equation 2-39:

$$NO_{xc} = NO_{xe} - NO_{xd} \cdot \left(1 - \frac{1}{DiF}\right)$$

where:

NO_{xe} is the concentration of nitrogen oxides expressed in parts per million (ppm) of nitrogen oxides, in the sample of diluted gases collected in bag(s) A;

NO_{xd} is the concentration of nitrogen oxides expressed in parts per million (ppm) of nitrogen oxides, in the sample of dilution air collected in bag(s) B;

DiF is the coefficient defined in point 6.1.1.4.7.

K_h is the humidity correction factor, calculated using the following formula:

Equation 2-40:

$$K_h = \frac{1}{1 - 0{,}0329 \cdot (H - 10{,}7)}$$

where:

H is the absolute humidity in g of water per kg of dry air:

Equation 2-41:

$$H = \frac{6{,}2111 \cdot U \cdot P_d}{P_a - P_d \cdot \frac{U}{100}}$$

where:

U is the humidity as a percentage;

P_d is the saturated pressure of water at the test temperature, in kPa;

P_a is the atmospheric pressure in kPa.

6.1.1.4.5. Particulate matter mass

Particulate emission Mp (mg/km) is calculated by means of the following equation:

Equation 2-42:

$$M_p = \frac{(V_{mix} + V_{ep}) \cdot P_e}{V_{ep} \cdot d}$$

where exhaust gases are vented outside the tunnel;

Equation 2-43:

$$M_p = \frac{V_{mix} \cdot P_e}{V_{ep} \cdot S}$$

where exhaust gases are returned to the tunnel;

where:

V_{mix} = volume V of diluted exhaust gases under standard conditions;

V_{ep} = volume of exhaust gas flowing through particulate filter under standard conditions;

P_e = particulate mass collected by filter(s) in mg;

S = is the distance defined in point 6.1.1.3.;

M_p = particulate emission in mg/km.

Where correction for the particulate background level from the dilution system has been used, this shall be determined in accordance with point 5.2.1.5. In this case, the particulate mass (mg/km) shall be calculated as follows:

Equation 2-44:

$$M_p = \left[\frac{P_e}{V_{ep}} - \left(\frac{P_a}{V_{ap}} \cdot \left(1 - \frac{1}{DiF}\right)\right)\right] \cdot \frac{(V_{mix} + V_{ep})}{d}$$

where exhaust gases are vented outside the tunnel;

Equation 2-45:

$$M_p = \left[\frac{P_e}{V_{ep}} - \left(\frac{P_a}{V_{ap}} \cdot \left(1 - \frac{1}{DiF}\right)\right)\right] \cdot \frac{V_{mix}}{d}$$

where exhaust gases are returned to the tunnel;

where:

V_{ap} = volume of tunnel air flowing through the background particulate filter under standard conditions;

P_a = particulate mass collected by background filter;

DiF is the coefficient defined in point 6.1.1.4.7.

Where application of a background correction results in a negative particulate mass (in mg/km), the result shall be considered to be zero mg/km particulate mass.

6.1.1.4.6. Carbon dioxide (CO_2)

The mass of carbon dioxide emitted by the exhaust of the vehicle during the test shall be calculated using the following formula:

Equation 2-46:

$$CO_{2m} = \frac{1}{S} \cdot V \cdot d_{CO_2} \cdot \frac{CO_{2c}}{10^2}$$

where:

CO_{2m} is the mass of carbon dioxide emitted during the test part, in g/km;

S is the distance defined in point 6.1.1.3.;

V is the total volume defined in point 6.1.1.4.1.;

d_{CO_2} is the density of the carbon monoxide, d_{CO_2} = 1,964 · 10^3 g/m^3 at reference temperature and pressure (273,2 K and 101,3 kPa);

CO_{2c} is the concentration of diluted gases, expressed as a percentage of carbon dioxide equivalent, corrected to take account of the dilution air by the following equation:

Equation 2-47:

$$CO_{2c} = CO_{2e} - CO_{2d} \times \left(1 - \frac{1}{DiF}\right)$$

where:

CO_{2e} is the concentration of carbon dioxide expressed as a percentage of the sample of diluted gases collected in bag(s) A;

CO_{2d} is the concentration of carbon dioxide expressed as a percentage of the sample of dilution air collected in bag(s) B;

DiF is the coefficient defined in point 6.1.1.4.7.

6.1.1.4.7. Dilution factor (DiF)

The dilution factor is calculated as follows:

For each reference fuel, except hydrogen:

Equation 2-48:

$$DiF = \frac{X}{C_{CO_2} + (C_{HC} + C_{CO}) \cdot 10^{-4}}$$

For a fuel of composition $C_xH_yO_z$, the general formula is:

Equation 2-49:

$$X = 100 \cdot \frac{x}{x + \frac{y}{2} + 3{,}76 \cdot \left(x + \frac{y}{4} - \frac{z}{2}\right)}$$

For H_2NG, the formula is:

Equation 2-50:

$$X = \frac{65{,}4 \cdot A}{4{,}922 \cdot A + 195{,}84}$$

For hydrogen, the dilution factor is calculated as follows:

Equation 2-51:

$$DiF = \frac{X}{C_{H_2O} - C_{H_2O\,-\,DA} + C_{H_2} \cdot 10^{-4}}$$

For the reference fuels contained in Appendix x, the values of 'X' are as follows:

Table 1-8

Factor 'X' in formulae to calculate DiF

Fuel	X
Petrol (E5)	13,4
Diesel (B5)	13,5
LPG	11,9
NG/biomethane	9,5
Ethanol (E85)	12,5
Hydrogen	35,03

In these equations:

C_{CO_2} = concentration of CO_2 in the diluted exhaust gas contained in the sampling bag, expressed in percent by volume,

C_{HC} = concentration of HC in the diluted exhaust gas contained in the sampling bag, expressed in ppm carbon equivalent,

C_{CO} = concentration of CO in the diluted exhaust gas contained in the sampling bag, expressed in ppm,

C_{H_2O} = concentration of H_2O in the diluted exhaust gas contained in the sampling bag, expressed in percent by volume,

$C_{H_2O - DA}$ = concentration of H_2O in the air used for dilution, expressed in percent by volume,

C_{H_2} = concentration of hydrogen in the diluted exhaust gas contained in the sampling bag, expressed in ppm,

A = quantity of NG/biomethane in the H_2NG mixture, expressed in percent by volume.';

(c) in point 6.1.1.5.1.1., 'Weighting of results from UNECE regulation No 40 and regulation No 47 test cycles' is replaced by 'Weighting of results from ECE R40 and ECE R47 test cycles';

(d) in Appendix 1, in Table Ap 1-1, the row relating to symbol 'DF' is replaced by the following:

'DiF	Dilution factor	—'

(e) in Appendix 2, in point 1.1., the second sentence is replaced by the following:

'The fuel specifications in this Appendix are consistent with the reference fuel specifications in Annex 10 to UNECE regulation No 83 Revision 4 (*).

(*) OJ L 42, 12.2.2014, p. 1.';

(f) In Appendix 11, point 3.2.1.3. is replaced by the following:

'3.2.1.3. The operating mode switch shall be positioned in accordance with the table Ap11-2.

Table Ap11-2

Look-up table to determine Condition A or B depending on different hybrid vehicle concepts and on the hybrid mode selection switch position

	Hybrid-modes -›	— Pure electric — Hybrid	— Pure fuel-consuming — Hybrid	— Pure electric — Pure fuel-consuming — Hybrid	— Hybrid mode n (1) — Hybrid mode m (1)
Battery state of charge		**Switch in position**	**Switch in position**	**Switch in position**	**Switch in position**
Condition A **Fully charged**		Hybrid	Hybrid	Hybrid	Most electric hybrid mode (2)
Condition B **Min. state of charge**		Hybrid	Fuel-consuming	Fuel-consuming	Most fuel-consuming mode (3)

(1) For instance: sport, economic, urban, extra-urban position, etc.
(2) Most electric hybrid mode: the hybrid mode which can be proven to have the highest electricity consumption of all selectable hybrid modes when tested in accordance with condition A of point 4 of Annex 10 to UNECE Regulation No 101, to be established based on information provided by the manufacturer and in agreement with the technical service.
(3) Most fuel-consuming mode: the hybrid mode which can be proven to have the highest fuel consumption of all selectable hybrid modes when tested in accordance with condition B of point 4 of Annex 10 to UNECE regulation No 101, to be established based on information provided by the manufacturer and in agreement with the technical service.'

(2) Annex V is amended as follows:

(a) Appendix 2 is amended as follows:

(i) in point 1.1., the following sentence is added:

'In order to satisfy the evaporative emission test requirements set out in Regulation (EU) No 168/2013, only L-vehicle (sub-)categories L3e, L4e, L5e-A, L6e-A and L7e-A shall be tested.';

(ii) in point 4.4., '301,2 ± 2 K (28 ± 5 °C)' is replaced by '301,2 ± 5 K (28 ± 5 °C)';

(b) Appendix 3 is amended as follows:

(i) in point 4.4.1., the first sentence is replaced by the following:

'The fuel tank heating system shall consist of at least two separate heat sources with two temperature controllers.';

(ii) in point 4.7.2., 'Appendix 1' is replaced by 'Appendix 4';

(iii) point 5.2.3. is replaced by the following:

'5.2.3. The vehicle is parked in the test area for the minimum period stated in Table Ap3-1.

Table Ap3-1

SHED test — minimum and maximum soak periods

Engine capacity	Minimum (hours)	Maximum (hours)
< 170 cm^3	6	36
170 cm^3 ≤ engine capacity < 280 cm^3	8	36
≥ 280 cm^3	12	36'

(iv) points 5.3.1.5. and 5.3.1.6. are replaced by the following:

'5.3.1.5. The fuel and vapour may be artificially heated to the starting temperatures of 288,7 K (15,5 °C) and 294,2 K (21,0 °C) ± 1 K respectively. An initial vapour temperature up to 5 °C above 21,0 °C may be used. For this condition, the vapour shall not be heated at the beginning of the diurnal test. When the fuel temperature has been raised to 5,5 °C below the vapour temperature by following the T_f function, the remainder of the vapour heating profile shall be followed.

5.3.1.6. As soon as the fuel temperature reaches 14,0 °C:

(1) Install the fuel filler cap(s);

(2) Turn off the purge blowers, if not already off at that time;

(3) Close and seal enclosure doors.

As soon as the fuel reaches a temperature of 15,5 °C ± 1 °C the test procedure shall continue as follows:

(a) the hydrocarbon concentration, barometric pressure and the temperature shall be measured to give the initial readings C_{HC}, i, p_i and T_i for the tank heat build test;

(b) a linear heat build of 13,8 °C or 20 °C ± 0,5 °C over a period of 60 ± 2 minutes shall begin. The temperature of the fuel and fuel vapour during the heating shall conform to the function below to within ± 1,7 °C, or the closest possible function as described in 4.4:

For exposed type of fuel storage tanks:

Equations B.3.3-1

$T_f = 0{,}3333 \cdot t + 15{,}5\ °C$

$T_v = 0{,}3333 \cdot t + 21{,}0\ °C$

For non-exposed type of fuel storage tanks:

Equations B.3.3-2

$T_f = 0{,}2222 \cdot t + 15{,}5\ °C$

$T_v = 0{,}2222 \cdot t + 21{,}0\ °C$

where:

T_f = required temperature of fuel (°C);

T_v = required temperature of vapour (°C);

t = time from start of the tank heat build in minutes.';

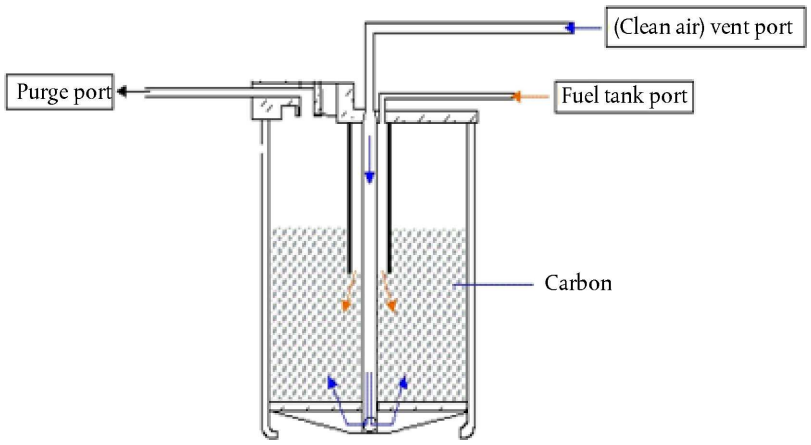
(c) Appendix 3.2 is amended as follows:

(i) point 2 is replaced by the following:

'2. Carbon canister ageing

Figure Ap3.2-1

Carbon canister gas flow diagram and ports



A carbon canister representative of the propulsion family of the vehicle as set out in Annex XI shall be selected as test canister and shall be marked in agreement with the approval authority and the technical service.';

(ii) point 3.1 is replaced by the following:

'3.1 The durability test shall actuate control valves, cables, and linkages, where applicable, and be representative for the operation conditions of these parts during the useful life of the vehicle if used under normal conditions and serviced in accordance with the manufacturer's recommendations. The accumulated distance and operation conditions of the type V durability test may be regarded as representative for the useful life of the vehicle.';

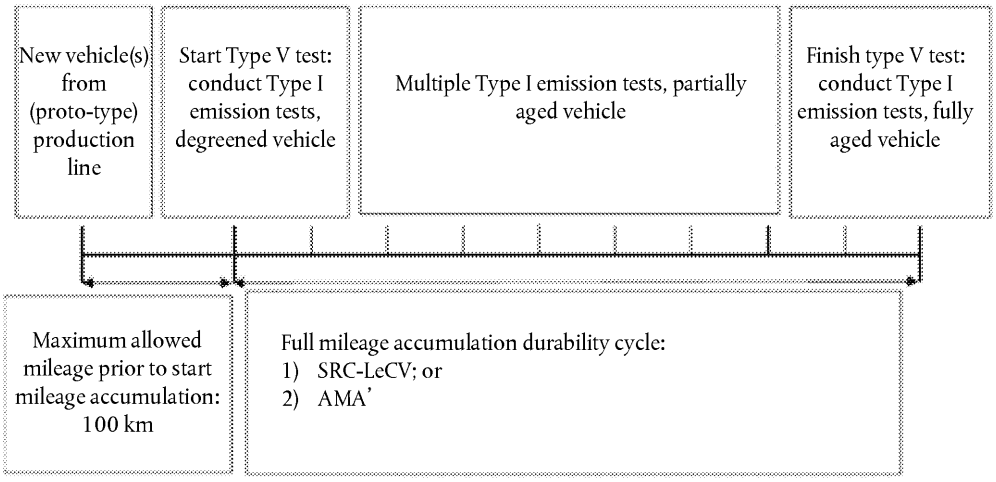
(3) Annex VI is amended as follows:

(a) point 3.1.2 is replaced by the following:

'3.1.2. Multiple type I emission tests shall be conducted during the full distance accumulation phase with a frequency and amount of type I test procedures at the choice of the manufacturer and to the satisfaction of the technical service and approval authority. The type I emission test results shall provide sufficient statistical relevance to identify the deterioration trend, which shall be representative of the vehicle type with regard to environmental performance as placed on the market (see Figure 5-1).

Figure 5-1

Test type V — durability test procedure with full distance accumulation

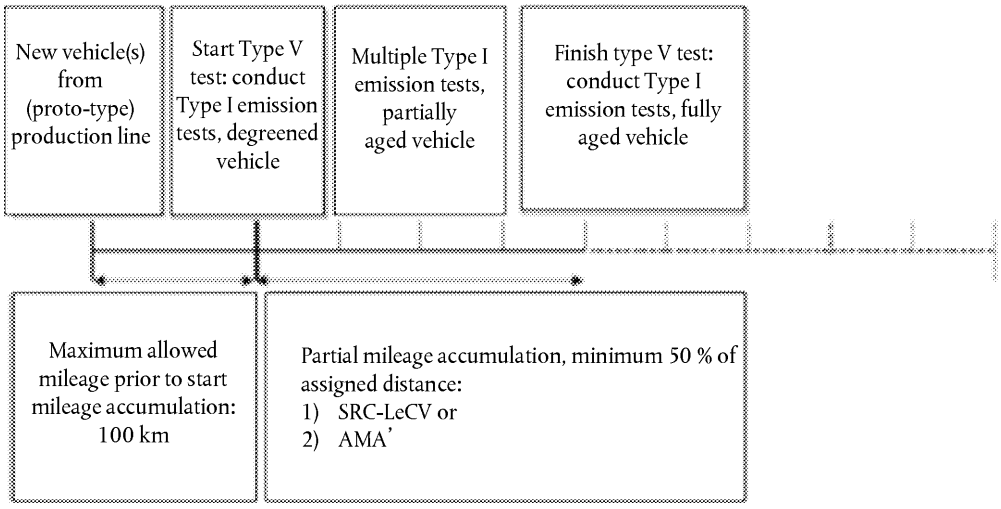


(b) point 3.2.2 is replaced by the following:

'3.2.2. Multiple type I emission tests shall be conducted during the partial distance accumulation phase, with the frequency and number of type I test procedures chosen by the manufacturer. The type I emission test results shall provide sufficient statistical relevance to identify the deterioration trend, which shall be representative of the vehicle type with regard to the environmental performance placed on the market (see Figure 5-2).

Figure 5-2

Test type V — accelerated durability test procedure with partial distance accumulation



(c) Appendix 1 is amended as follows:

(i) point 2.6 is replaced by the following:

'2.6. Vehicle classification for the type V test

2.6.1. For the purpose of accumulating distance in the SRC-LeCV, the L-vehicle categories shall be grouped in accordance with Table Ap1-1.

Table Ap1-1

L-vehicle category groups for the SRC-LeCV

Cycle	WMTC Class	1) Vehicle maximum design speed (km/h)	2) Maximum net or continuous rated power (kW)
1	1	$v_{max} \leq 50$ km/h	≤ 6 kW
2		50 km/h < v_{max} < 100 km/h	< 14 kW
3	2	100 km/h ≤ v_{max} < 130 km/h	≥ 14 kW
4	3	130 km/h ≤ v_{max}	—

where:

V_d = engine displacement volume in cm^3

v_{max} = maximum design vehicle speed in km/h

2.6.2. The application of the vehicle classification criteria in Table Ap1-1 shall be performed by applying the following classification criteria hierarchy:

(1) Maximum design vehicle speed (km/h);

(2) maximum net or continuous rated power (kW).

2.6.3. If

(a) the acceleration capability of the L-category vehicle is not sufficient to carry out the acceleration phases within the prescribed distances; or

(b) the prescribed maximum vehicle speed in the individual cycles cannot be achieved owing to a lack of propulsion power; or

(c) the maximum design vehicle speed is restricted to a vehicle speed lower than the prescribed SRC-LeCV vehicle speed

the vehicle shall be driven with the accelerator device fully open until the vehicle speed prescribed for the test cycle is reached or until the limited maximum design vehicle speed is reached. Subsequently the test cycle shall be carried out as prescribed for the vehicle category. Significant or frequent deviations from the prescribed vehicle speed tolerance band and the associated justification shall be reported to the approval authority and be included in the type V test report.';

(ii) point 2.7.3.4. is replaced by the following:

'2.7.3.4. coast-through deceleration: full let-off of the throttle, clutch engaged and in gear, no foot/hand control actuated, no brakes applied. If the target speed is 0 km/h (idle) and if the actual vehicle speed is ≤ 5 km/h, the clutch may be disengaged, the gear shifted to neutral and the brakes used in order to prevent engine stall and to entirely stop the vehicle. An upshift is not allowed during a coast-through deceleration. The rider may downshift to increase the braking effect of the engine. During gear changes, extra care shall be afforded to ensure that the gear change is performed promptly, with minimum (i.e. < 2 seconds) coasting in neutral gear, clutch and partial clutch use. The vehicle manufacturer may request to extend this time with the agreement of the approval authority if absolutely necessary.';

(4) Annex VII is amended as follows:

(a) the title is replaced by the following:

'Test type VII requirements on energy efficiency: CO_2 emissions, fuel consumption, electric energy consumption and electric range';

(b) in Appendix 1, points 1.4.3.1. and 1.4.3.2. are replaced by the following:

'1.4.3.1. for vehicles with a positive ignition engine fuelled with petrol (E5):

Equation Ap1-1:

$$FC = (0{,}118/D) \cdot ((0{,}848 \cdot HC) + (0{,}429 \cdot CO) + (0{,}273 \cdot CO_2))$$

where HC, CO and CO_2 tailpipe emissions in g/km.

1.4.3.2. for vehicles with a positive ignition engine fuelled with LPG:

Equation Ap1-2:

$$FC_{norm} = (0{,}1212/0{,}538) \cdot ((0{,}825 \cdot HC) + (0{,}429 \cdot CO) + (0{,}273 \cdot CO_2))$$

where HC, CO and CO_2 tailpipe emissions in g/km.

If the composition of the fuel used for the test differs from that assumed for the calculation of normalised consumption, a correction factor (cf) may be applied at the manufacturer's request, as follows:

Equation Ap1-3:

$$FC_{norm} = (0{,}1212/0{,}538) \cdot (cf) \cdot ((0{,}825 \cdot HC) + (0{,}429 \cdot CO) + (0{,}273 \cdot CO_2))$$

where HC, CO and CO_2 tailpipe emissions in g/km.

The correction factor is determined as follows:

Equation Ap1-4:

$$cf = 0{,}825 + 0{,}0693 \cdot n_{actual};$$

where:

n_{actual} = the actual H/C ratio of the fuel used;';

(c) Appendix 3 is amended as follows:

(i) point 3.4.1. is replaced by the following:

'3.4.1. The CO_2 values shall be:

Equation Ap3-5:

$$M_1 = m_1/D_{test1} \text{ (g/km) and}$$

Equation Ap3-6:

$$M_2 = m_2/D_{test2} \text{ (g/km)}$$

where

D_{test1} and D_{test2} = the actual distances driven in the tests performed under Conditions A (point 3.2.) and B (point 3.3.) respectively, and

m_1 and m_2 = test results determined in points 3.2.3.5. and 3.3.2.5. respectively.';

(ii) point 4.4.1. is replaced by the following:

'The CO_2 values shall be:

Equation Ap3-20:

$$M_1 = m_1/D_{test1} \text{ (g/km) and}$$

Equation Ap3-21:

$$M_2 = m_2/D_{test2} \text{ (g/km)}$$

where:

D_{test1} and D_{test2} = the actual distances driven in the tests performed under Conditions A (point 4.2.) and B (point 4.3.) respectively, and

m_1 and m_2 = test results determined in points 4.2.4.5. and 4.3.2.5. respectively.';

(d) in Appendix 3.3., point 1 is replaced by the following:

'1. Measurement of the electric range

1.1. The following test method set out in point 4 shall be used to measure the electric range, expressed in km, of vehicles powered by an electric power train only or the electric range and OVC range of vehicles powered by a hybrid electric powertrain with off-vehicle charging (OVC HEV) as defined in Appendix 3.

1.2. Category L1e vehicles designed to pedal referred to in Annex I to Regulation (EU) No 168/2013 and in point 1.1.2. of Annex XIX to Regulation (EU) No 3/2014 shall be exempted from the electric range test.';

(5) Annex IX is amended as follows:

(a) the following points 2.3. to 2.4.3. are inserted:

'2.3. Multi-mode noise abatement system

2.3.1. L-category vehicles equipped with a manually or electronically controlled, multiple mode, adjustable exhaust silencer system shall be tested in all modes.

2.3.2 For vehicles equipped with a noise abatement system as referred to in point 2.9.1. the reported sound pressure level shall be for the mode having the highest average sound pressure level.

2.4. Requirements related to anti-tampering and manually or electronically adjustable multi-mode exhaust or silencing systems

2.4.1. All exhaust or silencing systems shall be constructed in a way that does not easily permit removal of baffles, exit-cones and other parts functioning primarily as part of the silencing/expansion chambers. Where incorporation of such a part is unavoidable, its method of attachment shall be such that removal is not facilitated (e.g. with conventional threaded fixings) and shall also be attached so that removal causes permanent/irrecoverable damage to the exhaust silencer assembly.

2.4.2. Exhaust or silencing systems with manually or electronically controlled, multiple adjustable operating modes shall meet all applicable requirements in all operating modes. The reported noise levels at type-approval shall be those resulting from the mode with the highest noise levels.

2.4.3. The manufacturer shall not intentionally alter, adjust, or introduce any device or procedure solely for the purpose of fulfilling the sound requirements to obtain type-approval, which will not be operational during typical on-road operation.';

(b) in Appendix 3, point 2.4.1.1. is replaced by the following:

'2.4.1.1. Absorbent fibrous material shall be asbestos-free and may be used in the construction of silencers only if it is held securely in place throughout the service life of the silencer and it meets the requirements of either point 2.4.1.2, 2.4.1.3 or 2.4.1.4.';

(6) Annex X is amended as follows:

(a) Appendix 2.1. is amended as follows:

(i) point 2.1.2. is replaced by the following:

'2.1.2. *Table Ap2.1-1*

Accessories to be fitted during the propulsion unit performance test in order to determine torque and net engine power

No	Accessories	Fitted for the torque and net power test
1	Air intake system — Induction manifold — Air filter — Induction silencer — Crankcase emission-control system — Electrical control device, where fitted	If series-mounted: yes
2	Exhaust system — Manifold — Pipe work (1) — Silencer (1) — Exhaust pipe (1) — Electrical control device, where fitted	If series-mounted: yes
3	Carburettor	If series-mounted: yes
4	Fuel injection system — Upstream filter — Filter — Fuel supply pump and high pressure pump if applicable — Compressed air pump in the case of DI air assist — Pipe work — Injector — Air inlet flap (2), where fitted — Fuel pressure/flow regulator, where fitted	If series-mounted: yes

No	Accessories	Fitted for the torque and net power test
5	Maximum rotational speed-or power governors	If series-mounted: yes
6	Liquid-cooling equipment — Radiator — Fan ([3]) — Water Pump — Thermostat ([4])	If series-mounted: yes ([5])
7	Air cooling — Cowl — Blower ([3]) — Cooling temperature-regulating device(s) — Auxiliary bench blower	If series-mounted: yes
8	Electrical equipment	If series-mounted: yes ([6])
9	Pollution-control devices ([7])	If series-mounted: yes
9	Lubrication system — Oil feeder	If series-mounted: yes

([1]) If it is difficult to use the standard exhaust system, an exhaust system causing an equivalent pressure drop may be fitted for the test with the agreement of the manufacturer. In the test laboratory when the engine is in operation, the exhaust gas extraction system shall not cause in the extraction flue at the point where it is connected to the vehicle's exhaust system a pressure differing from atmospheric pressure by ± 740 Pa (7,40 mbar), unless, before the test, the manufacturer accepts a higher back pressure.

([2]) The air inlet flap shall be that which controls the pneumatic inject pump regulator.

([3]) Where a fan or blower may be disengaged, the net engine power shall first of all be stated with the fan (or blower) disengaged, followed by the net engine power with the fan (or blower) engaged. Where a fixed electrically or mechanically-operated fan cannot be fitted on the test bench, the power absorbed by that fan shall be determined at the same rotational speeds as those used when the engine power is measured. That power is deducted from the corrected power in order to obtain the net power.

([4]) The thermostat may be locked in the fully open position.

([5]) The radiator, fan, fan nozzle, water pump and thermostat shall, on the test bench, occupy as far as possible the same position relative to each other as if they were on the vehicle. If the radiator, fan, fan nozzle, water pump or thermostat have a position on the test bench which is different from that on the vehicle, this shall be described and noted in the test report. The liquid coolant shall be circulated solely by the water pump for the engine. It may be cooled either by the engine radiator or by an outside circuit, provided that the pressure drops within that circuit remain substantially the same as those in the engine cooling system. If fitted, the engine blind shall be open.

([6]) Minimum generator output: the generator supplies the current that is strictly needed to supply the accessories that are essential to the operation of the engine. The battery shall not receive any charge during the test.

([7]) Anti-pollution provisions may include, for example, exhaust-gas recirculation (EGR) system, catalytic converter, thermal reactor, secondary air-supply system and fuel-evaporation protecting system.'

(ii) point 3.4. is replaced by the following:

'3.4. Determination of the correction factor for mechanical efficiency of the transmission α2

Where:

— the measuring point is the output side of the crankshaft, this factor is equal to 1;

— the measuring point is not the output side of the crankshaft, this factor is calculated using the formula:

Equation Ap2.1-3:

$$\alpha_2 = \frac{1}{n_t}$$

where n_t is the efficiency of the transmission located between the crankshaft and the measuring point.

This transmission efficiency n_t is determined from the product (multiplication) of efficiency n_j of each of the components of the transmission:

Equation Ap2.1-4:

$$n_t = n_1 \cdot n_2 \cdot \ldots \cdot n_j';$$

(b) Appendix 4. is amended as follows:

(i) Point 3.3. is replaced by the following:

'3.3. Test procedure to measure the switch-off distance

After stopping with pedalling, the assistance of the motor shall switch off in a driving distance ≤ 3 m. The testing vehicle speed is 90 % of the maximum assistance speed. The measurements shall be taken in accordance with EN 15194:2009. For vehicles fitted with an assistance modulator, it shall not be activated during the test.';

(ii) Points 3.3.1. to 3.3.5.10. are deleted;

(iii) Points 3.4. to 3.4.3. are replaced by the following:

'3.4. Test procedure to measure the maximum assistance factor

3.4.1. The ambient temperature shall be between 278,2 K and 318,2 K.

3.4.2. The test vehicle shall be powered by its corresponding propulsion battery. The propulsion battery with maximum capacity shall be used for this test procedure.

3.4.3. The battery shall be fully charged using the charger to be specified by the vehicle manufacturer.';

(iv) The following points 3.4.4. to 3.4.9. are inserted:

'3.4.4. One motor of the test bench shall be attached to the crank or crank axis of the test vehicle. This test bench crank motor shall simulate the driving action of the rider and shall be capable of running variable rotation speeds and torques. It shall reach a rotation frequency of 90 rpm and a maximum continuous rated torque of 50 Nm.

3.4.5. A brake or a motor simulating the losses and inertia of the vehicle shall be attached to a drum below the rear wheel of the test vehicle.

3.4.6. For vehicles equipped with a motor driving the front wheel, an additional brake or an additional motor shall be attached to a drum below the front wheel, simulating the losses and inertia of the vehicle.

3.4.7. If the assistance level of the vehicle is variable, it has to be set to maximum assistance.

3.4.8. The following points of operation shall be tested:

Table Ap4-1

operation points to test the maximum assistance factor

Point of operation	Simulated rider input power (+/– 10 %) in (W)	Target vehicle speed (1) (+/– 10 %) in (km/h)	Desired pedalling cadence (2) in (rpm)
A	80	20	60
B	120	35	70
C	160	40	80

(1) If the target vehicle speed cannot be reached, the measurement shall be performed at the maximum vehicle speed reached.
(2) Select gear closest to required rpm rate for the point of operation.

3.4.9. The maximum assistance factor shall be calculated according to the following formula:

Equation Ap4-1:

$$Assistance\ factor = \frac{mechanical\ motor\ power\ of\ test\ vehicle}{simulated\ rider\ input\ power}$$

where:

The mechanical motor power of the test vehicle shall be calculated from the sum of the mechanical brake motor power minus the mechanical input power of the test bench crank motor (in W).';

(v) Points 3.5. to 3.5.9. are deleted;

(7) Annex XI is amended as follows:

(a) point 3.1. is replaced by the following:

'3.1. Test types I, II, V, VII and VIII ('X' in Table 11-1 means 'applicable')

Table 11-1

Classification criteria propulsion family with regard to test types I, II, V, VII and VIII

#	Classification criteria description	Test type I	Test type II	Test type V	Test type VII	Test type VIII (1)	
						Stage I	Stage II
1.	**Vehicle**						
1.1.	category;	X	X	X	X	X	X
1.2.	sub-category;	X	X	X	X	X	X

#	Classification criteria description	Test type I	Test type II	Test type V	Test type VII	Test type VIII (1)	
						Stage I	Stage II
1.3.	the inertia of a vehicle variant(s) or version(s) within two inertia categories above or below the nominal inertia category;	X		X	X	X	X
1.4.	overall gear ratios (+/– 8 %);	X		X	X	X	X
2.	**Propulsion family characteristics**						
2.1.	number of engines or electric motors;	X	X	X	X	X	X
2.2.	hybrid operation mode(s) (parallel/sequential/other);	X	X	X	X	X	X
2.3.	number of cylinders of the combustion engine;	X	X	X	X	X	X
2.4.	engine capacity (+/– 2 %) (2) of the combustion engine;	X	X	X	X	X	X
2.5.	number and control (variable cam phasing or lift) of combustion engine valves;	X	X	X	X	X	X
2.6.	monofuel/bifuel/flex fuel H_2NG/multifuel;	X	X	X	X	X	X
2.7.	fuel system (carburettor/scavenging port/port fuel injection/direct fuel injection/common rail/pump-injector/other);	X	X	X	X	X	X
2.8.	fuel storage (3);					X	X
2.9.	type of cooling system of combustion engine;	X	X	X	X	X	X
2.10.	combustion cycle (PI/CI/two-stroke/four-stroke/other);	X	X	X	X	X	X
2.11.	intake air system (naturally aspirated/charged (turbocharger/super-charger)/intercooler/boost control) and air induction control (mechanical throttle/electronic throttle control/no throttle);	X	X	X	X	X	X
3.	**Pollution control system characteristics**						
3.1.	propulsion exhaust (not) equipped with catalytic converter(s);	X	X	X	X		X
3.2.	catalytic converter(s) type;	X	X	X	X		X
3.2.1.	number and elements of catalytic converters;	X	X	X	X		X
3.2.2.	size of catalytic converters (volume of monolith(s) +/– 15 %);	X	X	X	X		X

#	Classification criteria description	Test type I	Test type II	Test type V	Test type VII	Test type VIII (1)	
						Stage I	Stage II
3.2.3.	operation principle of catalytic activity (oxidising, three-way, heated, SCR, other.);	X	X	X	X		X
3.2.4.	precious metal load (identical or higher);	X	X	X	X		X
3.2.5.	precious metal ratio (+/– 15 %);	X	X	X	X		X
3.2.6.	substrate (structure and material);	X	X	X	X		X
3.2.7.	cell density;	X	X	X	X		X
3.2.8.	type of casing for the catalytic converter(s);	X	X	X	X		X
3.3.	propulsion exhaust (not) equipped with particulate filter (PF);	X	X	X	X		X
3.3.1.	PF types;	X	X	X	X		X
3.3.2.	number and elements of PF;	X	X	X	X		X
3.3.3.	size of PF (volume of filter element +/– 10 %);	X	X	X	X		X
3.3.4.	operation principle of PF (partial/wall-flow/other);	X	X	X	X		X
3.3.5.	active surface of PF;	X	X	X	X		X
3.4.	propulsion (not) equipped with periodically regenerating system;	X	X	X	X		X
3.4.1.	periodically regenerating system type;	X	X	X	X		X
3.4.2.	operation principle of periodically regenerating system;	X	X	X	X		X
3.5.	propulsion (not) equipped with selective catalytic converter reduction (SCR) system;	X	X	X	X		X
3.5.1.	SCR system type;	X	X	X	X		X
3.5.2.	operation principle of periodically regenerating system;	X	X	X	X		X
3.6.	propulsion (not) equipped with lean NO_x trap/absorber;	X	X	X	X		X
3.6.1.	lean NO_x trap/absorber type;	X	X	X	X		X
3.6.2.	operation principle of lean NO_x trap/absorber;	X	X	X	X		X

#	Classification criteria description	Test type I	Test type II	Test type V	Test type VII	Test type VIII (1)	
						Stage I	Stage II
3.7.	propulsion (not) equipped with a cold-start device or starting aid device(s);	X	X	X	X		X
3.7.1.	cold-start or starting aid device type;	X	X	X	X		X
3.7.2.	operation principle of cold start or starting aid device(s);	X	X	X	X	X	X
3.7.3.	Activation time of cold-start or starting aid device(s) and/or duty cycle (only limited time activated after cold start/continuous operation);	X	X	X	X	X	X
3.8.	propulsion (not) equipped with O_2 sensor for fuel control;	X	X	X	X	X	X
3.8.1.	O_2 sensor types;	X	X	X	X	X	X
3.8.2.	operation principle of O_2 sensor (binary/wide range/other);	X	X	X	X	X	X
3.8.3.	O_2 sensor interaction with closed-loop fuelling system (stoichiometry/lean or rich operation);	X	X	X	X	X	X
3.9.	propulsion (not) equipped with exhaust gas recirculation (EGR) system;	X	X	X	X		X
3.9.1.	EGR system types;	X	X	X	X		X
3.9.2.	operation principle of EGR system (internal/external);	X	X	X	X		X
3.9.3.	maximum EGR rate (+/– 5 %);	X	X	X	X		X

Explanatory notes:
(1) The same family criteria also apply to functional on-board diagnostics set out in Annex XII of Regulation (EU) No 44/2014.
(2) maximum 30 % acceptable for test type VIII
(3) Only for vehicles equipped with storage for gaseous fuel'

(b) in point 3.2., the heading of Table 11-2 is replaced by the following:

'Table 11-2

Classification criteria propulsion family with regard to test types III and IV'.

COMMISSION IMPLEMENTING REGULATION (EU) 2016/1825

of 6 September 2016

amending Implementing Regulation (EU) No 901/2014 with regard to the administrative requirements for the approval and market surveillance of two- or three-wheel vehicles and quadricycles

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EU) No 168/2013 of the European Parliament and of the Council of 15 January 2013 on the approval and market surveillance of two- or three-wheel vehicles and quadricycles ([1]), and in particular Articles 27(4), 29(4), 30(2) and (3), 32(1), 38(2), 39(3), 40(4) and Article 72 thereof,

Whereas:

(1) To allow the type-approval of fuel tanks as a separate technical unit, a specific information document containing the related information should be inserted as a new Appendix to Annex I to Commission Implementing Regulation (EU) No 901/2014 ([2]).

(2) In order to reduce the administrative burden on manufacturers, in particular with regard to vehicles of categories L6e and L7e, additional system type-approvals should be allowed.

(3) To ensure that in the case of vehicles equipped with Continuous Variable Transmission all relevant information is provided, the table specifying information on gear ratios to be entered into the information document should be amended.

(4) In order to establish a clear link between the two configurations of vehicles capable of converting their performance level from subcategory (L3e/L4e)-A2 to (L3e/L4e)-A3 and vice versa, and to facilitate vehicle owners' access to that information, an entry for the EU type-approval number of the original configuration should be added to the template set out in Appendix 24 to Annex I to Implementing Regulation (EU) No 901/2014 and to the template for the certificate of conformity set out in Annex IV to that Implementing Regulation.

(5) To provide further information in the case of new technologies and new concepts, additional entries should be inserted in the templates for type-approval certificates for systems, components or separate technical units.

(6) For the purposes of clarity and consistency some explanatory notes should be amended or deleted.

(7) Implementing Regulation (EU) No 901/2014 should therefore be amended accordingly.

(8) In order to allow additional time for manufacturers and national authorities to achieve a timely application of the amendments provided for in this Regulation, this Regulation should enter into force as a matter of urgency, especially taking into account that Regulation (EU) No 168/2013 became applicable on 1 January 2016 and that related administrative requirements will become compulsory with regard to all new vehicles registered or placed on the market as from 1 January 2018.

(9) The applicability of the amendments to the templates for the certificates of conformity should be deferred until 1 September 2017 in order to provide manufacturers and national authorities with additional lead-time for the adaptation of their administrative arrangements for the registration of vehicles, and in particular their information technology systems, to those amendments.

(10) The measures provided for in this Regulation are in accordance with the opinion of the committee referred to in Article 73(1) of Regulation (EU) No 168/2013,

([1]) OJ L 60, 2.3.2013, p. 52.

([2]) Commission Implementing Regulation (EU) No 901/2014 of 18 July 2014 implementing Regulation (EU) No 168/2013 of the European Parliament and of the Council with regard to the administrative requirements for the approval and market surveillance of two- or three-wheel vehicles and quadricycles (OJ L 249, 22.8.2014, p. 1).

HAS ADOPTED THIS REGULATION:

Article 1

Annexes I and IV to VIII to Implementing Regulation (EU) No 901/2014 are amended in accordance with the Annex to this Regulation.

Article 2

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

Point 2 of the Annex shall apply from 1 September 2017.

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

Done at Brussels, 6 September 2016.

For the Commission

The President

Jean-Claude JUNCKER

ANNEX

Implementing Regulation (EU) No 901/2014 is amended as follows:

(1) Annex I is amended as follows:

(a) in the list of Appendices, each of the following rows is inserted following their numerical order:

‘5a	Model information document relating to EU type-approval of a type of (or a type of a vehicle with regard to) a maximum torque and a maximum net power of a propulsion unit system	
8a	Model information document relating to EU type-approval of a type of (or a type of a vehicle with regard to) an installation of audible warning devices system	
9a	Model information document relating to EU type-approval of a type of (or a type of a vehicle with regard to) an installation of glazing, windscreen wipers and defrosting and demisting devices system	
9b	Model information document relating to EU type-approval of a type of (or a type of a vehicle with regard to) an identification of controls, tell-tales and indicators system	
11a	Model information document relating to EU type-approval of a type of (or a type of a vehicle with regard to) a safety belt anchorages system	
11b	Model information document relating to EU type-approval of a type of (or a type of a vehicle with regard to) a steer-ability, cornering properties and turn ability system	
13a	Model information document relating to EU type-approval of a type of (or a type of a vehicle with regard to) a vehicle occupant protection, including interior fittings, head restraint and vehicle doors system	
20a	Model information document relating to EU type-approval of a fuel tank as a STU’	

(b) in Part B, in point 2.2., in Table 1, in LIST I, the following row is inserted following its numerical order:

‘5a	System: maximum torque and a maximum net power of a propulsion unit	X Appendix 2’	

(c) in Part B, in point 2.2., in Table 1, in LIST II, each of the following rows is inserted following their numerical order:

‘8a	System: installation of audible warning devices	II	
9a	System: installation of glazing, windscreen wipers and defrosting and demisting devices	VII	
9b	System: identification of controls, tell-tales and indicators	VIII	
11a	System: safety belt anchorages	XII	
11b	System: steer-ability, cornering properties and turn ability	XIV	
13a	System: vehicle occupant protection, including interior fittings, head restraint and vehicle doors	XVII’	

(d) in Part B, in point 2.2., in Table 1, in LIST III, each of the following rows is inserted following their numerical order:

'20a	STU: fuel tank	IX'	

(e) in Part B, in point 2.8., the table relating to information document data entries is amended as follows:

(i) the following information document data entry 3.3.3.4. is inserted:

'3.3.3.4.	L1e — L7e	15/30[4] minutes power[27]: ..... kW'

(ii) the information document data entry 3.5.4. is replaced by the following:

'3.5.4. *Gear ratios*

L1e — L7e **Overview gear ratios**

Gear[24]	Internal transmission ratios (ratios of engine to transmission output shaft revolutions)	Final drive ratio(s) (ratio of transmission output shaft to driven wheel revolutions)	Total gear ratios	Ratio (engine speed/vehicle speed) for manual transmission only
1 2 3 …				
Reverse'				

(iii) the information document data entry 4.0.1. is replaced by the following:

'4.0.1.	L1e — L7e	Environmental step: Euro ..... (3/4/5) [4]'

(iv) the following information document data entries 4.0.2. to 4.0.5. are inserted:

'4.0.2.	L1e — L7e	Fuel consumption (provide details for each reference fuel tested) ..... l/kg[4]/100 km
4.0.3.	L1e — L7e	CO_2 emissions[25]: ..... g/km
4.0.4.	L1e — L7e	Energy consumption[25]: ..... Wh/km
4.0.5.	L1e — L7e	Electric range[25]: ..... km'

(f) Appendix 3 is amended as follows:

(i) the information document data entry 4.0.1. is replaced by the following:

'4.0.1.	L1e — L7e	Environmental step: Euro ..... (3/4/5) [4]'

(ii) the following information document data entries 4.0.2. to 4.0.5. are inserted:

'4.0.2.	L1e — L7e	Fuel consumption (provide details for each reference fuel tested) ..... l/kg[4]/100 km

4.0.3.	L1e — L7e	CO_2 emissions[25]: ..... g/km
4.0.4.	L1e — L7e	Energy consumption[25]: ..... Wh/km
4.0.5.	L1e — L7e	Electric range[25]: ..... km'

(g) Appendix 4 is amended as follows:

(i) the information document data entries 4.0.2., 4.0.2.1. and 4.0.2.2. are deleted;

(ii) the following information document data entries 4.0.6. and 4.0.6.1. are inserted:

'4.0.6.	*Sound level*	
4.0.6.1.	L3e	Limit value for L_{urban}[16]: ..... dB(A)';

(h) the following Appendix 5a is inserted:

'Appendix 5a

Model information document relating to EU type-approval of a type of (or a type of a vehicle with regard to) a maximum torque and a maximum net power of a propulsion unit system

Item No.	(Sub) categories	Detailed information
B.		**General information concerning systems, components or separate technical units**
0.7.	L1e — L7e	**Make(s) (trade name(s) of manufacturer):** .....
0.8.	L1e — L7e	**Type:** .....
0.8.1.	L1e — L7e	Commercial name(s) (if available): .....
0.8.2.	L1e — L7e	Type-approval number(s) (if available): .....
0.8.3.	L1e — L7e	Type-approval(s) issued on (date, if available): .....
0.9.		**Company name and address of manufacturer:** .....
0.9.1.	L1e — L7e	Name(s) and address(es) of assembly plants: .....
0.9.2.	L1e — L7e	Name and address of manufacturer's authorised representative, if any: .....
0.10.		**Vehicle(s) for which the separate technical unit is intended for[21]:**
0.10.1.	L1e — L7e	Type[17]: .....
0.10.2.	L1e — L7e	Variant[17]: .....
0.10.3.	L1e — L7e	Version[17]: .....
0.10.4.	L1e — L7e	Commercial name(s) (if available): .....
0.10.5.	L1e — L7e	Category, subcategory and sub-subcategory of vehicle[2]: .....

Item No.	(Sub) categories	Detailed information
C.		**General information concerning vehicle, systems, components or separate technical units**
0.12.		**Conformity of production**
0.12.1.	L1e — L7e	Description of overall quality-assurance management systems.
1.		GENERAL CONSTRUCTION CHARACTERISTICS
1.8.		**Propulsion unit performance**
1.8.1.	L3e, L4e, L5e, L7e-A, L7e-B2	Declared maximum vehicle speed: ..... km/h
1.8.2.	L1e, L2e, L6e, L7e-B1, L7e-C	Maximum design vehicle speed(22): ..... km/h and gear in which it is reached: .....
1.8.3.	L1e — L7e	Maximum net power combustion engine: ..... kW at ..... min^{-1} at A/F ratio: .....
1.8.4.	L1e — L7e	Maximum net torque combustion engine: .....Nm at ..... min^{-1} at A/F ratio: .....
1.8.5.	L1e — L7e	Maximum continuous-rated power electric motor (15/30(4) minutes power(27)): ..... kW at ..... min^{-1}
1.8.6.	L1e — L7e	Maximum continuous-rated torque electric motor: ..... Nm at ..... min^{-1}
1.8.7.	L1e — L7e	Maximum continuous total power for propulsion(s): ..... kW at ..... min^{-1} at A/F ratio: .....
1.8.8.	L1e — L7e	Maximum continuous total torque for propulsion(s): ..... Nm at ..... min^{-1} at A/F ratio: .....
1.8.9.	L1e — L7e	Maximum peak power for propulsion(s): ..... kW at ..... min^{-1} at A/F ratio: .....
3.		GENERAL POWERTRAIN CHARACTERISTICS
3.2.		**Combustion engine**
3.2.1.		*Specific engine information*
3.2.1.1.	L1e — L7e	Number of combustion engines: .....
3.2.1.2.	L1e — L7e	Working principle: internal combustion engine (ICE)/positive ignition/compression ignition/external combustion engine (ECE)/turbine/compressed air(4): .....
3.2.1.3.	L1e — L7e	Cycle: four-stroke/two-stroke/rotary/other(4):
3.2.1.4.	L1e — L7e	Cylinders
3.2.1.4.1.	L1e — L7e	Number: .....
3.2.1.4.2.	L1e — L7e	Arrangement(26): .....

Item No.	(Sub) categories	Detailed information
3.2.1.4.3.	L1e — L7e	Bore[12]: ..... mm
3.2.1.4.4.	L1e — L7e	Stroke[12]: ..... mm
3.2.1.4.5.	L1e — L7e	Number and configuration of stators in the case of rotary-piston engine: .....
3.2.1.4.6.	L1e — L7e	Volume of combustion chambers in the case of rotary-piston engine: ..... cm^3
3.2.1.4.7.	L1e — L7e	Firing order: .....
3.2.1.5.	L1e — L7e	Engine capacity[6]: ..... cm^3
3.2.1.6.	L1e — L7e	Volumetric compression ratio[7]: .....
3.3.		**Pure electric and hybrid electric propulsion and control**
3.3.3.4.	L1e — L7e	15/30[4] minutes power[27]: ..... kW'

(i) Appendix 6 is amended as follows:

(i) the information document data entry 4.0.1. is replaced by the following:

'4.0.1.	L1e — L7e	Environmental step: Euro ..... (3/4/5) [4]'

(ii) the following information document data entries 4.0.2. to 4.0.5. are inserted:

'4.0.2.	L1e — L7e	Fuel consumption (provide details for each reference fuel tested) ..... l/kg[4]/100 km
4.0.3.	L1e — L7e	CO_2 emissions[25]: .....g/km
4.0.4.	L1e — L7e	Energy consumption[25]: ..... Wh/km
4.0.5.	L1e — L7e	Electric range[25]: .....km'

(j) Appendix 7 is amended as follows:

(i) the information document data entries 4.0.1. and 4.0.2. are replaced by the following:

'4.0.1.	L1e — L7e	Environmental step: Euro ..... (3/4/5) [4]
4.0.2.	L1e — L7e	Fuel consumption (provide details for each reference fuel tested) ..... l/kg[4]/100 km'

(ii) the information document data entries 4.0.2.1. and 4.0.2.2. are deleted;

(iii) the following information document data entries 4.0.3. to 4.0.6.1. are inserted:

'4.0.3.	L1e — L7e	CO_2 emissions[25]: .....g/km
4.0.4.	L1e — L7e	Energy consumption[25]: ..... Wh/km
4.0.5.	L1e — L7e	Electric range[25]: .....km
4.0.6.		*Sound level*
4.0.6.1.	L3e	Limit value for L_{urban}[16]: ..... dB(A)'

(k) Appendix 8 is amended as follows:

(i) the information document data entries 4.0.1. and 4.0.2. are replaced by the following:

'4.0.1.	L1e — L7e	Environmental step: Euro ..... (3/4/5) [4]
4.0.2.	L1e — L7e	Fuel consumption (provide details for each reference fuel tested) ..... l/kg[4]/100 km'

(ii) the information document data entries 4.0.2.1. and 4.0.2.2. are deleted;

(iii) the following information document data entries 4.0.3. to 4.0.6.1. are inserted:

'4.0.3.	L1e — L7e	CO_2 emissions[25]: .....g/km
4.0.4.	L1e — L7e	Energy consumption[25]: ..... Wh/km
4.0.5.	L1e — L7e	Electric range[25]: .....km
4.0.6.		*Sound level*
4.0.6.1.	L3e	Limit value for L_{urban}[16]: ..... dB(A)';

(l) the following Appendix 8a is inserted:

'Appendix 8a

Model information document relating to EU type-approval of a type of (or a type of a vehicle with regard to) an installation of audible warning devices system

Item No.	(Sub) categories	Detailed information
B.		**General information concerning systems, components or separate technical units**
0.7.	L1e — L7e	**Make(s) (trade name(s) of manufacturer):** .....
0.8.	L1e — L7e	**Type:** .....
0.8.1.	L1e — L7e	Commercial name(s) (if available): .....
0.8.2.	L1e — L7e	Type-approval number(s) (if available): .....
0.8.3.	L1e — L7e	Type-approval(s) issued on (date, if available): .....

Item No.	(Sub) categories	Detailed information
0.9.		**Company name and address of manufacturer:** .....
0.9.1.	L1e — L7e	Name(s) and address(es) of assembly plants: .....
0.9.2.	L1e — L7e	Name and address of manufacturer's authorised representative, if any: .....
0.10.		**Vehicle(s) for which the separate technical unit is intended for[21]:**
0.10.1.	L1e — L7e	Type[17]: .....
0.10.2.	L1e — L7e	Variant[17]: .....
0.10.3.	L1e — L7e	Version[17]: .....
0.10.4.	L1e — L7e	Commercial name(s) (if available): .....
0.10.5.	L1e — L7e	Category, subcategory and sub-subcategory of vehicle[2]: .....
C.		**General information concerning vehicle, systems, components or separate technical units**
0.12.		**Conformity of production**
0.12.1.	L1e — L7e	Description of overall quality-assurance management systems.
6.		**INFORMATION ON FUNCTIONAL SAFETY**
6.1.		**Audible warning devices**
6.1.1.	L1e — L7e	Summary description of device(s) used and their purpose: .....
6.1.2.	L1e — L7e	Drawing(s) showing the location of the audible warning device(s) in relation to the structure of the vehicle: .....
6.1.3.	L1e — L7e	Details of the method of attachment, including the part of the vehicle structure to which the audible warning device(s) is (are) attached: .....
6.1.4.	L1e — L7e	Electrical/pneumatic circuit diagram: .....
6.1.4.1.	L1e — L7e	Voltage: AC/DC[4]
6.1.4.2.	L1e — L7e	Rated voltage or pressure: .....
6.1.5.	L1e — L7e	Drawing of the mounting device: .....';

(m) the following Appendix 9a is inserted:

'Appendix 9a

Model information document relating to EU type-approval of a type of (or a type of a vehicle with regard to) an installation of glazing, windscreen wipers and defrosting and demisting devices system

Item No.	(Sub) categories	Detailed information
B.		**General information concerning systems, components or separate technical units**
0.7.	L1e — L7e	**Make(s) (trade name(s) of manufacturer):** .....
0.8.	L1e — L7e	**Type:** .....
0.8.1.	L1e — L7e	Commercial name(s) (if available): .....
0.8.2.	L1e — L7e	Type-approval number(s) (if available): .....
0.8.3.	L1e — L7e	Type-approval(s) issued on (date, if available): .....
0.9.		**Company name and address of manufacturer:** .....
0.9.1.	L1e — L7e	Name(s) and address(es) of assembly plants: .....
0.9.2.	L1e — L7e	Name and address of manufacturer's authorised representative, if any: .....
0.10.		**Vehicle(s) for which the separate technical unit is intended for[21]:**
0.10.1.	L1e — L7e	Type[17]: .....
0.10.2.	L1e — L7e	Variant[17]: .....
0.10.3.	L1e — L7e	Version[17]: .....
0.10.4.	L1e — L7e	Commercial name(s) (if available): .....
0.10.5.	L1e — L7e	Category, subcategory and sub-subcategory of vehicle[2]: .....
C.		**General information concerning vehicle, systems, components or separate technical units**
0.12.		**Conformity of production**
0.12.1.	L1e — L7e	Description of overall quality-assurance management systems.
1.		**GENERAL CONSTRUCTION CHARACTERISTICS**
1.7.	L4e, L5e-B, L6e-B, L7e-A2, L7e-B2, L7e-C	Hand of drive: left/right/centre[4]: .....
1.7.1.	L1e — L7e	Vehicle is equipped to be driven in right/left-hand traffic and in countries that use metric/metric and imperial units[4]: .....

Item No.	(Sub) categories	Detailed information
3.		**GENERAL POWERTRAIN CHARACTERISTICS**
3.1		**Manufacturer of the propulsion unit**
3.1.1.		*Combustion engine*
3.1.1.1.	L1e — L7e	Manufacturer: .....
3.1.1.2.	L1e — L7e	Engine code (as marked on the engine or other means of identification): .....
3.1.2.		*Electric motor*
3.1.2.1.	L1e — L7e	Manufacturer: .....
3.1.2.2.	L1e — L7e	Electric motor code (as marked on the engine or other means of identification): .....
3.1.3.		*Hybrid application*
3.1.3.1.	L1e — L7e	Manufacturer: .....
3.1.3.2.	L1e — L7e	Application code (as marked on the engine or other means of identification): .....
3.2.		**Combustion engine**
3.2.1.		*Specific engine information*
3.2.1.2.	L1e — L7e	Working principle: internal combustion engine (ICE)/positive ignition/compression ignition/external combustion engine (ECE)/turbine/compressed air[4]: .....
3.2.1.3.	L1e — L7e	Cycle: four-stroke/two-stroke/rotary/other[4]: .....
3.2.1.4.	L1e — L7e	Cylinders
3.2.1.4.1.	L1e — L7e	Number: .....
3.2.1.4.2.	L1e — L7e	Arrangement[26]: .....
3.2.1.5.	L1e — L7e	Engine capacity[6]: ..... cm^3
3.2.1.9.	L1e — L7e	Normal warm engine idling speed: ..... min^{-1}
3.2.3.		*Fuel*
3.2.3.1.	L1e — L7e	Fuel type: [9]
3.2.3.2.	L1e — L7e	Vehicle fuel configuration: mono-fuel/bi- fuel/flex fuel[4]

Item No.	(Sub) categories	Detailed information
3.2.10.		*Powertrain cooling system and control*
3.2.10.2.	L1e — L7e	Cooling system: liquid: yes/no[4]
3.2.10.2.2.	L1e — L7e	Nominal setting of the engine temperature control mechanism: .....
3.2.10.2.3.	L1e — L7e	Nature of liquid: .....
3.2.10.2.4.	L1e — L7e	Circulating pump(s): yes/no[4]
3.2.10.2.4.1.	L1e — L7e	Characteristics: .....
3.2.10.2.5.	L1e — L7e	Drive ratio(s): .....
3.2.10.2.6.	L1e — L7e	Description of the fan and its drive mechanism: .....
3.2.10.3.	L1e — L7e	Air cooling: yes/no[4]
3.2.10.3.3.	L1e — L7e)	Fan: yes/no[4]
3.2.10.3.3.1.	L1e — L7e	Characteristics: .....
3.2.13.		*Other electrical systems and control than those intended for the electrical propulsion*
3.2.13.1.	L1e — L7e	Rated voltage: ..... V, positive/negative ground[4]
3.2.13.2.	L1e — L7e	Generator: yes/no[4]:
3.2.13.2.1.	L1e — L7e	Nominal output: ..... VA
3.3.		**Pure electric and hybrid electric propulsion and control**
3.3.3.		*Electric propulsion motor*
3.3.3.2.	L1e — L7e	Type (winding, excitation): .....
3.3.3.3.	L1e — L7e	Operating voltage: V
3.3.4.		*Propulsion batteries*
3.3.4.1.	L1e — L7e	Primary propulsion battery
3.3.4.1.1.	L1e — L7e	Number of cells: .....
3.3.4.1.2.	L1e — L7e	Mass: ..... kg
3.3.4.1.3.	L1e — L7e	Capacity: ..... Ah (Amp-hours) / V
3.3.4.1.5.	L1e — L7e	Position in the vehicle: .....
3.3.4.2.	L1e — L7e	Secondary propulsion battery
3.3.4.2.1.	L1e — L7e	Number of cells: .....

Item No.	(Sub) categories	Detailed information
3.3.4.2.2.	L1e — L7e	Mass: ..... kg
3.3.4.2.3.	L1e — L7e	Capacity: ..... Ah (Amp-hours) / V
3.3.4.2.5.	L1e — L7e	Position in the vehicle: .....
3.3.5.		*Hybrid electric vehicle*
3.3.5.1.	L1e — L7e	Engine or motor combination (number of electric motor(s) and/or combustion engine(s)/other)[4]: .....
3.3.5.2.	L1e — L7e	Category of hybrid electric vehicle: off-vehicle charging/not off-vehicle charging:
3.3.5.3.	L1e — L7e	Operating mode switch: with/without[4]
3.3.5.4.	L1e — L7e	Selectable modes: yes/no[4]
3.3.5.5.	L1e — L7e	Pure fuel consuming: yes/no[4]
3.3.5.6.	L1e — L7e	Vehicle propelled with fuel cell: yes/no[4]
3.3.5.7.	L1e — L7e	Hybrid operation modes: yes/no[4] (if yes, short description): .....
3.3.6.		*Energy storage device*
3.3.6.1.	L1e — L7e	Description: (battery, capacitor, flywheel/generator)[4]
3.3.6.2.	L1e — L7e	Identification number: .....
* 3.3.6.3.	L1e — L7e	Kind of electrochemical couple: .....
3.3.6.4.	L1e — L7e	Energy (for battery: voltage and capacity Ah in 2h, for capacitor: J, …, for flywheel/generator: J,…,): .....
3.3.6.5.	L1e — L7e	Charger: on-board/external/without[4]
3.4.		**Other engines, electric motors or combinations (specific information concerning the parts of these motors)**
3.4.1.		*Cooling system (temperatures permitted by the manufacturer)*
3.4.1.1.	L1e — L7e	Liquid cooling: .....
3.4.1.1.1.	L1e — L7e	Maximum temperature at outlet: ..... K
3.4.1.2.	L1e — L7e	Air cooling: .....
3.4.1.2.1.	L1e — L7e	Reference point: .....
3.4.1.2.2.	L1e — L7e	Maximum temperature at reference point: ..... K

Item No.	(Sub) categories	Detailed information
6.		**INFORMATION ON FUNCTIONAL SAFETY**
6.5.		**Glazing, windscreen wipers and washers, and defrosting and demisting systems**
6.5.1.		*Windscreen*
6.5.1.1.	L2e, L5e, L6e, L7e	Materials used: .....
6.5.1.2.	L2e, L5e, L6e, L7e	Method of mounting: .....
6.5.1.3.	L2e, L5e, L6e, L7e	Angle of inclination: .....
6.5.1.4.	L2e, L5e, L6e, L7e	Windscreen accessories and the position in which they are fitted, together with a brief description of any electrical/electronic components: .....
6.5.1.5.	L2e, L5e, L6e, L7e	Drawing of the windscreen with dimensions: .....
6.5.2.		*Other windows*
6.5.2.1.	L2e, L5e, L6e, L7e	Materials used: .....
6.5.2.2	L2e, L5e, L6e, L7e	A brief description of the electrical/electronic components (if any) of the window lifting mechanism: .....
6.5.3.		*Opening roof glazing*
6.5.3.1.	L2e, L5e, L6e, L7e	Materials used: .....
6.5.4.		*Other glass panes*
6.5.4.1.	L2e, L5e, L6e, L7e	Materials used: .....
6.6.		**Windscreen wiper(s)**
6.6.1.	L2e, L5e, L6e, L7e	Detailed technical description (including photographs or drawings): .....
6.7.		**Windscreen washer**
6.7.1.	L2e, L5e, L6e, L7e	Detailed technical description (including photographs or drawings): .....
6.7.2.	L2e, L5e, L6e, L7e	Capacity of the reservoir: l
6.8.		**Defrosting and demisting**
6.8.1.	L2e, L5e, L6e, L7e	Detailed technical description (including photographs or drawings): .....
6.16.		**Seating positions (saddles and seats)**
6.16.1.	L1e — L7e	Number of seating positions: .....
6.16.1.1.	L2e, L5e, L6e, L7e	Location and arrangement[8]: .....

Item No.	(Sub) categories	Detailed information
6.16.4.	L2e, L4e, L5e-B, L6e-B, L7e	Coordinates or drawing of the R-point(s) of all seating positions: .....
6.16.4.1.	L2e, L4e, L5e-B, L6e-B, L7e	Driver's seat: .....
6.16.5.	L1e — L7e	Design torso angle: .....
6.16.5.1.	L1e — L7e	Driver's seat: .....
6.20.		**Vehicle occupant protection, including interior fittings and vehicle doors**
6.20.1.		*Bodywork*
6.20.1.1.	L2e, L5e-B, L6e-B, L7e	Materials used and methods of construction: .....
6.20.2.		*Occupant doors, latches and hinges*
6.20.2.1.	L2e, L5e, L6e, L7e	Number of doors, and its configuration, dimensions and maximum angle of opening[5]: .....
6.20.3.		*Interior protection for occupants)*
6.20.3.1.	L2e, L5e, L6e, L7e	Photographs, drawings and/or an exploded view of the interior fittings, showing the parts in the passenger compartment and the materials used (with the exception of interior rear view mirrors, arrangement of controls, seats and the rear part of seats), roof and opening roof, backrest: .....';

(n) the following Appendix 9b is inserted:

'Appendix 9b

Model information document relating to EU type-approval of a type of (or a type of a vehicle with regard to) an identification of controls, te ll-tales and indicators system

Item No.	(Sub) categories	Detailed information
B.		**General information concerning systems, components or separate technical units**
0.7.	L1e — L7e	**Make(s) (trade name(s) of manufacturer):** .....
0.8.	L1e — L7e	**Type:** .....
0.8.1.	L1e — L7e	Commercial name(s) (if available): .....

Item No.	(Sub) categories	Detailed information
0.8.2.	L1e — L7e	Type-approval number(s) (if available): .....
0.8.3.	L1e — L7e	Type-approval(s) issued on (date, if available): .....
0.9.		**Company name and address of manufacturer:** .....
0.9.1.	L1e — L7e	Name(s) and address(es) of assembly plants: .....
0.9.2.	L1e — L7e	Name and address of manufacturer's authorised representative, if any: .....
0.10.		**Vehicle(s) for which the separate technical unit is intended for[21]:**
0.10.1.	L1e — L7e	Type[17]: .....
0.10.2.	L1e — L7e	Variant[17]: .....
0.10.3.	L1e — L7e	Version[17]: .....
0.10.4.	L1e — L7e	Commercial name(s) (if available): .....
0.10.5.	L1e — L7e	Category, subcategory and sub-subcategory of vehicle[2]: .....
C.		**General information concerning vehicle, systems, components or separate technical units**
0.12.		**Conformity of production**
0.12.1.	L1e — L7e	Description of overall quality-assurance management systems.
1.		**GENERAL CONSTRUCTION CHARACTERISTICS**
1.7.	L4e, L5e-B, L6e-B, L7e-A2, L7e-B2, L7e-C	Hand of drive: left/right/centre[4]: .....
6.9.		**Driver-operated controls including identification of controls, tell-tales and indicators**
6.9.1.	L1e — L7e	Arrangement and identification of controls, tell-tales and indicators: .....
6.9.2.	L1e — L7e	Photographs and/or drawings of the arrangement of symbols and controls, tell-tales and indicators: .....
6.9.3.	L1e — L7e	Controls, tell-tales and indicators for which, when fitted, identification is mandatory, including the identification symbols to be used for that purpose:

Item No.	(Sub) categories	Detailed information
6.9.4.	L1e — L7e	Summary table: the vehicle is equipped with the following driver-operated controls, including indicators and tell-tales[4]

Controls, tell-tales and indicators for which, when fitted, identification is mandatory, and symbols to be used for that purpose

Symbol No	Device	Control / indicator available (+)	Identified by symbol (+)	Where (++)	Tell-tale available (+)	Identified by symbol (+)	Where (++)
1	Master light						
2	Dipped-beam head lamps						
3	Main-beam head lamps						
4	Position (side) lamps						
5	Front fog lamps						
6	Rear fog lamp						
7	Headlamp levelling device						
8	Parking lamps						
9	Direction indicators						
10	Hazard warning						
11	Windscreen wiper						
12	Windscreen washer						
13	Windscreen wiper and washer						
14	Headlamp cleaning device						
15	Windscreen demisting and defrosting						
16	Rear window demisting and defrosting						
17	Ventilating fan						
18	Diesel pre-heat						
19	Choke						
20	Brake failure						
21	Fuel level						
22	Battery charging condition						
23	Engine coolant temperature						
24	Malfunction indicator light (MI)						

(+) x = yes
- = no or not separately available
o = optional.

(++) d = directly on control, indicator or tell-tale
c = in close vicinity.

Item No.	(Sub) categories	Detailed information
6.9.5.	L1e — L7e	**Controls, tell-tales and indicators for which, when fitted, identification is optional, and symbols which shall be used if they are to be identified**

Symbol No	Device	Control / indicator available (*)	Identified by symbol (*)	Where (**)	Tell-tale available (*)	Identified by symbol (*)	Where (**)
1	Parking brake						
2	Rear window wiper						
3	Rear window washer						
4	Rear window wiper and washer						
5	Intermittent windscreen wiper						
6	Audible warning device (horn)						
7	Front hood (bonnet)						
8	Rear hood (boot)						
9	Seat belt						
10	Engine oil pressure						
11	Unleaded petrol						
12	…						
13	…						

(*) x = yes
- = no or not separately available
o = optional.
(**) d = directly on control, indicator or tell-tale
c = in close vicinity.';

(o) the following Appendix 11a is inserted:

'Appendix 11a

Model information document relating to EU type-approval of a type of (or a type of a vehicle with regard to) a safety belt anchorages system

Item No.	(Sub) categories	Detailed information
B.		**General information concerning systems, components or separate technical units**
0.7.	L1e — L7e	**Make(s) (trade name(s) of manufacturer):** .....
0.8.	L1e — L7e	**Type:** .....
0.8.1.	L1e — L7e	Commercial name(s) (if available): .....
0.8.2.	L1e — L7e	Type-approval number(s) (if available): .....
0.8.3.	L1e — L7e	Type-approval(s) issued on (date, if available): .....

Item No.	(Sub) categories	Detailed information
0.9.		**Company name and address of manufacturer:** .....
0.9.1.	L1e — L7e	Name(s) and address(es) of assembly plants: .....
0.9.2.	L1e — L7e	Name and address of manufacturer's authorised representative, if any: .....
0.10.		**Vehicle(s) for which the separate technical unit is intended for[21]:**
0.10.1.	L1e — L7e	Type[17]: .....
0.10.2.	L1e — L7e	Variant[17]: .....
0.10.3.	L1e — L7e	Version[17]: .....
0.10.4.	L1e — L7e	Commercial name(s) (if available): .....
0.10.5.	L1e — L7e	Category, subcategory and sub-subcategory of vehicle[2]: .....
C.		**General information concerning vehicle, systems, components or separate technical units**
0.12.		**Conformity of production**
0.12.1.	L1e — L7e	Description of overall quality-assurance management systems.
1.		**GENERAL CONSTRUCTION CHARACTERISTICS**
1.4.	L1e — L7e	Chassis (if any) (overall drawing): .....
1.5.	L2e, L5e-B, L6e-B, L7e-A2, L7e-B2, L7e-C	Material used for the bodywork: .....
1.7.	L4e, L5e-B, L6e-B, L7e-A2, L7e-B2, L7e-C	Hand of drive: left/right/centre[4]: .....
6.		**INFORMATION ON FUNCTIONAL SAFETY**
6.14.		**Safety belts and/or other restraints**
6.14.1.	L2e, L4e, L5e-B, L6e-B, L7e	Number and position of safety belts and restraint systems and seats on which they can be used, please fill out table below: (L = left side, R = right side, C = centre)
		Safety belt configuration and associated information

		Complete EU type-approval mark	Variant, if applicable	Belt adjustment device for height (indicate yes/no/optional)
First row of seats	L			
	C			
	R			
Second row of seats	L			
	C			
	R			

L = left, C = centre, R = right

Item No.	(Sub) categories	Detailed information
6.14.2.	L2e, L4e, L5e-B, L6e-B, L7e	Description of a specific type of belt, with one anchorage attached to the seat back-rest or incorporating an energy-dissipation device: .....
6.14.3.	L2e, L4e, L5e-B, L6e-B, L7e	Number and location of the anchorages: .....
6.14.4.	L2e, L4e, L5e-B, L6e-B, L7e	Brief description of electrical/electronic components: .....
6.15.		**Safety belt anchorages**
6.15.1.	L2e, L4e, L5e-B, L6e-B, L7e	Photographs and/or drawings of the bodywork showing the true, effective location and dimensions of the anchorages, together with an indication of the R-point: .....
6.15.2.	L2e, L4e, L5e-B, L6e-B, L7e	Drawings of the anchorages and the parts of the vehicle structure to which they are attached (together with a statement on the nature of the materials used): .....
6.15.3.	L2e, L4e, L5e-B, L6e-B, L7e	Designation of the types of belts(14) authorised for attachment to the anchorages on the vehicle: .....
		Safety-belt anchorage configuration and associated information

					Anchorage location	
					Vehicle structure	Seat structure
First row of seats						
Right-hand seat	{	Lower anchorages Upper anchorages	{	outboard inboard		
Centre seat	{	Lower anchorages Upper anchorages	{	right left		
Left-hand seat	{	Lower anchorages Upper anchorages	{	outboard inboard		
Second row of seats						
Right-hand seat	{	Lower anchorages Upper anchorages	{	outboard inboard		
Centre seat	{	Lower anchorages Upper anchorages	{	right left		
Left-hand seat	{	Lower anchorages Upper anchorages	{	outboard inboard		

6.15.4.	L2e, L4e, L5e-B, L6e-B, L7e	Type-approval mark for each position: .....
6.15.5.	L2e, L4e, L5e-B, L6e-B, L7e	Special devices (example: seat-height adjustment, preloading device, etc.): .....

Item No.	(Sub) categories	Detailed information
6.15.6.	L2e, L4e, L5e-B, L6e-B, L7e	Photographs and/or drawings of the bodywork showing the true, effective location and dimensions of the anchorages, together with an indication of the R-point: .....
6.15.7.	L2e, L4e, L5e-B, L6e-B, L7e	Observation: .....';

(p) the following Appendix 11b is inserted:

'Appendix 11b

Model information document relating to EU type-approval of a type of (or a type of a vehicle with regard to) a steer-ability, cornering properties and turn ability system

Item No.	(Sub) categories	Detailed information
B.		**General information concerning systems, components or separate technical units**
0.7.	L1e — L7e	**Make(s) (trade name(s) of manufacturer):** .....
0.8.	L1e — L7e	**Type:** .....
0.8.1.	L1e — L7e	Commercial name(s) (if available): .....
0.8.2.	L1e — L7e	Type-approval number(s) (if available): .....
0.8.3.	L1e — L7e	Type-approval(s) issued on (date, if available): .....
0.9.		**Company name and address of manufacturer:** .....
0.9.1.	L1e — L7e	Name(s) and address(es) of assembly plants: .....
0.9.2.	L1e — L7e	Name and address of manufacturer's authorised representative, if any: .....
0.10.		**Vehicle(s) for which the separate technical unit is intended for[21]:**
0.10.1.	L1e — L7e	Type[17]: .....
0.10.2.	L1e — L7e	Variant[17]: .....
0.10.3.	L1e — L7e	Version[17]: .....
0.10.4.	L1e — L7e	Commercial name(s) (if available): .....
0.10.5.	L1e — L7e	Category, subcategory and sub-subcategory of vehicle[2]: .....
C.		**General information concerning vehicle, systems, components or separate technical units**
0.12.		**Conformity of production**
0.12.1.	L1e — L7e	Description of overall quality-assurance management systems.

Item No.	(Sub) categories	Detailed information
1.		**GENERAL CONSTRUCTION CHARACTERISTICS**
1.1.	L1e — L7e	Photographs and/or drawings of a representative vehicle: .....
1.3.	L1e — L7e	Number of axles and wheels: .....
1.3.1.	L1e — L7e	Axles with twinned wheels[23]: .....
1.3.2.	L1e — L7e	Powered axles[23]: .....
1.7.	L4e, L5e-B, L6e-B, L7e-A2, L7e-B2, L7e-C	Hand of drive: left/right/centre[4]: .....
1.8.		**Propulsion unit performance**
1.8.1.	L3e, L4e, L5e, L7e-A, L7e-B2	Declared maximum vehicle speed: ..... km/h
1.8.2.	L1e, L2e, L6e, L7e-B1, L7e-C	Maximum design vehicle speed[22]: ..... km/h and gear in which it is reached: .....
2.		**MASSES AND DIMENSIONS** (in kg and mm.) refer to drawings where applicable
2.1		**Range of vehicle mass (overall)**
2.1.3.	L1e — L7e	Technically permissible maximum laden mass: ..... kg
2.1.3.1.	L1e — L7e	Technically permissible maximum mass on front axle: ..... kg
2.1.3.2.	L1e — L7e	Technically permissible maximum mass on rear axle: ..... kg
2.1.3.3.	L4e	Technically permissible maximum mass on sidecar axle: ..... kg
2.2.		**Range of vehicle dimensions (overall)**
2.2.1.	L1e — L7e	Length: ..... mm
2.2.2.	L1e — L7e	Width: ..... mm
2.2.3.	L1e — L7e	Height: ..... mm
2.2.4.	L1e — L7e	Wheelbase: ..... mm
2.2.4.1.	L4e	Wheelbase sidecar[28]: ..... mm
2.2.5.		Track width
2.2.5.1.	L1e — L7e if equipped with twinned wheels L2e, L4e, L5e, L6e, L7e	Track width front: ..... mm.
2.2.5.2.	L1e — L7e if equipped with twinned wheels	Track width rear: ..... mm.

Item No.	(Sub) categories	Detailed information
2.2.5.3.	L2e, L4e, L5e, L6e, L7e	Track width sidecar: ..... mm.
2.2.6.	L7e-B	Front overhang: ..... mm.
2.2.7.	L7e-B	Rear overhang: ..... mm.
3.		**GENERAL POWERTRAIN CHARACTERISTICS**
3.5.		**Drive-train and control**[13]
3.5.1.	L1e — L7e	Brief description and schematic drawing of the vehicle drive-train and its control system (gear shift control, clutch control or any other element of drive-train): .....
3.6.		**Safe-cornering device**
3.6.1.	L1e — L7e equipped with twinned wheels, L2e, L5e, L6e, L7e	Safe-cornering device (Annex VIII to Regulation (EU) No 168/2013: yes/no[4]; differential/other[4]
3.6.2.	L1e — L7e equipped with twinned wheels, L2e, L5e, L6e, L7e	Differential lock: yes/no/optional[4]
3.6.3.	L1e — L7e	Brief description and schematic drawing of the safe-cornering device, the differential lock and their control systems: .....
3.7.		**Suspension and control**
3.7.1.	L1e — L7e	Brief description and schematic drawing of suspension and its control system: .....
6.		**INFORMATION ON FUNCTIONAL SAFETY**
6.17.		**Steer-ability, cornering properties and turn-ability**
6.17.1.	L1e — L7e	Schematic diagram of steered axle(s) showing steering geometry: .....
6.17.2.		*Transmission and control of steering*
6.17.2.1.	L1e — L7e	Configuration of steering transmission (specify for front and rear): ...
6.17.2.2.	L1e — L7e	Linkage to wheels (including other than mechanical means; specify for front and rear): .....
6.17.2.2.1.	L1e — L7e	A brief description of the electrical/electronic components: .....
6.17.2.3.	L1e — L7e	Diagram of the steering transmission: .....
6.17.2.4.	L2e, L5e, L6e, L7e	Schematic diagram(s) of the steering control(s): .....
6.17.2.5.	L2e, L5e, L6e, L7e	Range and method of adjustment of the steering control(s): .....
6.17.2.6.	L2e, L5e, L6e, L7e	Method of assistance: .....

Item No.	(Sub) categories	Detailed information
6.17.3.		*Maximum steering angle of the wheels*
6.17.3.1.	L1e — L7e	To the right: ..... degrees; number of turns of the steering wheel (or equivalent data): .....
6.17.3.2.	L1e — L7e	To the left: ..... degrees; number of turns of the steering wheel (or equivalent data): .....
6.18.		**Tyres/wheels combination**
6.18.1.		*Tyres:*
6.18.1.1.		Size designation
6.18.1.1.1.	L1e — L7e	Axle 1: .....
6.18.1.1.2.	L1e — L7e	Axle 2: .....
6.18.1.1.3.	L4e	Sidecar wheel: .....
6.18.1.4.	L1e — L7e	Tyre pressure(s) as recommended by the vehicle manufacturer: ..... kPa';

(q) the following Appendix 13a is inserted:

'Appendix 13a

Model information document relating to EU type-approval of a type of (or a type of a vehicle with regard to) a vehicle occupant protection, including interior fittings, head restraint and vehicle doors system

Item No.	(Sub) categories	Detailed information
B.		**General information concerning systems, components or separate technical units**
0.7.	L1e — L7e	**Make(s) (trade name(s) of manufacturer):** .....
0.8.	L1e — L7e	**Type:** .....
0.8.1.	L1e — L7e	Commercial name(s) (if available): .....
0.8.2.	L1e — L7e	Type-approval number(s) (if available): .....
0.8.3.	L1e — L7e	Type-approval(s) issued on (date, if available): .....
0.9.		**Company name and address of manufacturer:** .....
0.9.1.	L1e — L7e	Name(s) and address(es) of assembly plants: .....
0.9.2.	L1e — L7e	Name and address of manufacturer's authorised representative, if any: .....

Item No.	(Sub) categories	Detailed information
0.10.		**Vehicle(s) for which the separate technical unit is intended for[21]:**
0.10.1.	L1e — L7e	Type[17]: .....
0.10.2.	L1e — L7e	Variant[17]: .....
0.10.3.	L1e — L7e	Version[17]: .....
0.10.4.	L1e — L7e	Commercial name(s) (if available): .....
0.10.5.	L1e — L7e	Category, subcategory and sub-subcategory of vehicle[2]: .....
C.		**General information concerning vehicle, systems, components or separate technical units**
0.12.		**Conformity of production**
0.12.1.	L1e — L7e	Description of overall quality-assurance management systems.
1.		**GENERAL CONSTRUCTION CHARACTERISTICS**
1.7.	L4e, L5e-B, L6e-B, L7e-A2, L7e-B2, L7e-C	Hand of drive: left/right/centre[4]: .....
6.		**INFORMATION ON FUNCTIONAL SAFETY**
6.16.		**Seating positions (saddles and seats)**
6.16.1.	L1e — L7e	Number of seating positions: .....
6.16.1.1.	L2e, L5e, L6e, L7e	Location and arrangement[8]: .....
6.16.2.	L1e — L7e	Seating position configuration: seat/saddle[4]
6.16.3.	L1e — L7e	Description and drawings of:
6.16.3.1.	L1e — L7e	The seats and their anchorages: .....
6.16.3.2.	L1e — L7e	The adjustment system: .....
6.16.3.3.	L1e — L7e	The displacement and locking systems: .....
6.16.3.4.	L1e — L7e	The seat-belt anchorages incorporated in the seat structure: .....
6.16.3.5.	L1e — L7e	The parts of the vehicle used as anchorages: .....
6.16.4.	L2e, L4e, L5e-B, L6e-B, L7e	Coordinates or drawing of the R-point(s) of all seating positions: .....
6.16.4.1.	L2e, L4e, L5e-B, L6e-B, L7e	Driver's seat: .....
6.16.4.2.	L2e, L4e, L5e-B, L6e-B, L7e	All other seating positions: .....

Item No.	(Sub) categories	Detailed information
6.16.5.	L1e — L7e	Design torso angle: .....
6.16.5.1.	L1e — L7e	Driver's seat: .....
6.16.5.2.	L1e — L7e	All other seating positions: .....
6.20.		**Vehicle occupant protection, including interior fittings and vehicle doors**
6.20.1.		*Bodywork*
6.20.1.1.	L2e, L5e-B, L6e-B, L7e	Materials used and methods of construction:
6.20.2.		*Occupant doors, latches and hinges*
6.20.2.1.	L2e, L5e, L6e, L7e	Number of doors, and its configuration, dimensions and maximum angle of opening[5]: .....
6.20.2.2.	L2e, L5e, L6e, L7e	Drawing of latches and hinges and of their position in the doors: ....
6.20.2.3.	L2e, L5e, L6e, L7e	Technical description of latches and hinges: .....
6.20.2.4.	L2e, L5e, L6e, L7e	Details, including dimensions, of entrances, steps and necessary handles where applicable: .....
6.20.3.		*Interior protection for occupants)*
6.20.3.1.	L2e, L5e, L6e, L7e	Photographs, drawings and/or an exploded view of the interior fittings, showing the parts in the passenger compartment and the materials used (with the exception of interior rear view mirrors, arrangement of controls, seats and the rear part of seats), roof and opening roof, backrest: .....
6.20.4.		*Head restraints*
6.20.4.1.	L2e, L5e, L6e, L7e	Head restraints: integrated/detachable/separate[4]
6.20.4.2.	L2e, L5e, L6e, L7e	Detailed description of the head restraint, specifying in particular the nature of the padding material or materials and, where applicable, the position and specifications of the braces and anchorage pieces for the type of seat for which approval is sought: .....
6.20.4.3.	L2e, L5e, L6e, L7e	In the case of a 'separate' head restraint
6.20.4.3.1.	L2e, L5e, L6e, L7e	Detailed description of the structural zone to which the head restraint is intended to be fixed: .....
6.20.4.3.2.	L2e, L5e, L6e, L7e	Scale drawings of the significant parts of the structure and the head restraint: .....';

(r) the following Appendix 20a is inserted:

'Appendix 20a

Model information document relating to EU type-approval of a fuel tank as a STU

Item No.	(Sub) categories	Detailed information
B.		**General information concerning systems, components or separate technical units**
0.7.	L1e — L7e	**Make(s) (trade name(s) of manufacturer):** .....
0.8.	L1e — L7e	**Type:** .....
0.8.1.	L1e — L7e	Commercial name(s) (if available): .....
0.8.2.	L1e — L7e	Type-approval number(s) (if available): .....
0.8.3.	L1e — L7e	Type-approval(s) issued on (date, if available): .....
0.9.		**Company name and address of manufacturer:** .....
0.9.1.	L1e — L7e	Name(s) and address(es) of assembly plants: .....
0.9.2.	L1e — L7e	Name and address of manufacturer's authorised representative, if any: .....
0.10.		**Vehicle(s) for which the separate technical unit is intended for[21]:**
0.10.1.	L1e — L7e	Type[17]: .....
0.10.2.	L1e — L7e	Variant[17]: .....
0.10.3.	L1e — L7e	Version[17]: .....
0.10.4.	L1e — L7e	Commercial name(s) (if available): .....
0.10.5.	L1e — L7e	Category, subcategory and sub-subcategory of vehicle[2]: .....
C.		**General information concerning vehicle, systems, components or separate technical units**
0.12.		**Conformity of production**
0.12.1.	L1e — L7e	Description of overall quality-assurance management systems.
4.		**GENERAL INFORMATION ON ENVIRONMENTAL AND PROPULSION PERFORMANCE**
4.3.		**Evaporative emission control system**
4.3.7.	L1e — L7e	Schematic drawing of the fuel tank, indicating capacity and material:

Item No.	(Sub) categories	Detailed information
7.		**INFORMATION ON VEHICLE CONSTRUCTION**
7.5.		**Fuel storage**
7.5.1.1.		Fuel tank
7.5.1.1.1.	L1e — L7e	Maximum capacity: .....
7.5.1.1.2.	L1e — L7e	Materials used: .....
7.5.1.1.3.	L1e — L7e	Fuel tank inlet: restricted orifice/label[4] .....
7.5.1.3.	L1e — L7e	Drawing and technical description of the tank with connections and lines of the breathing and venting system, locks, valves, fastening devices: .....
7.5.2.		*Compressed natural gas (CNG) container*
7.5.2.1.	L1e — L7e	Applicable information document set out in UNECE regulation No 110 (*) as prescribed for vehicle category M1 shall supplement this information document with regards to the CNG container and related equipment.
7.5.3.	L1e — L7e	*Liquefied petroleum gas (LPG)container(s)*
7.5.3.1.	L1e — L7e	Applicable information document set out in UNECE regulation No 67 (**) as prescribed for vehicle category M1 shall supplement this information document with regards to the LPG container and related equipment.

(*) OJ L 120, 7.5.2011, p. 1.
(**) OJ L 72, 14.3.2008, p. 1.'

(s) Appendix 24 is replaced by the following:

'Appendix 24

Manufacturer's declaration for vehicles capable of converting their performance level from subcategory (L3e/L4e)-A2 to (L3e/L4e)-A3 and vice versa

Manufacturer's declaration of conversion of (L3e/L4e)-A2 to (L3e/L4e)-A3 motorcycle characteristics and vice-versa

A duly-completed version of this statement shall be included in the information folder.

The undersigned: [.....(full name and position)]

0.4. Company name and address of manufacturer: .....

0.4.2. Name and address of the manufacturer's representative (if any)[0]: .....

Declares that

The (L3e/L4e)-A2 or (L3e/L4e)-A3[1] motorcycle:

0.2. Type[4]: .....

0.2.1. Variant(s)[4]: .....

0.2.2. Version(s)[4]: .....

0.2.3 Commercial name(s) (if available): .....

0.3. Category, subcategory and sub-subcategory of vehicle[5]: .....

1. Type-approval number (if available): .....

1.1. Type-approval issued on (date, if available): .....

3.2.2.1. PCUs/ECUs[1] software identification number(s): ..... and calibration verification number(s): .....

is technically suitable to be retrofitted to the (L3e/L4e)-A2 or (L3e/L4e)-A3[1] vehicle identified below:

0.2. Type[4]: .....

0.2.1. Variant(s)[4]: .....

0.2.2. Version(s)[4]: .....

0.2.3 Commercial name(s) (if available): .....

0.3. Category, subcategory and sub-subcategory of vehicle[5]: .....

1. Type-approval number (if available): .....

1.1. Type-approval issued on (date, if available): .....

3.2.2.1. PCUs/ECUs[1] software identification number(s): ..... and calibration verification number(s): .....

With the following technical characteristics:

General construction characteristics[3]

1.8. Maximum design vehicle speed: ..... km/h

1.9. Maximum net power: .....kW (at ..... min^{-1})[1]

1.10. Ratio maximum net power/mass of the vehicle in running order: ..... kW/kg

Environmental performance[3]

4.0.6. Sound level measured according to[2]: .....

4.0.6.1. Stationary: ..... dB(A) at engine speed: ..... min^{-1}

4.0.6.2. Drive-by: ..... dB(A)

4.0.6.3. Limit value for L_{urban}[0][7]: ..... dB(A)

3.2.15. Exhaust emissions measured according to[2]: .....

3.2.15.1. Type I test: tailpipe emissions after cold start, including the deterioration factor:

CO: ..... mg/km

THC: ..... mg/km

NMHC[0]: ..... mg/km

NOx: ..... mg/km

THC+NOx(0): ..... mg/km

PM(0): ..... mg/km

8.7.3.2. Type II test: tailpipe emissions at (increased) idle and free acceleration:

HC: ..... ppm at normal idling speed and: ..... ppm at high idle speed

CO: ..... % vol. at normal idling speed and: ..... % vol. at high idle speed

8.7.3.2.1. Smoke corrected absorption coefficient: ..... m^{-1}

Energy efficiency measured according to(2)(3):

4.0.2. Fuel consumption(0)(6): ..... l or kg/100 km

4.0.3. CO_2 emissions(0)(6): ..... g/km

4.0.4. Energy consumption(0)(6): ..... Wh/km

4.0.5. Electric range(0): ..... km

by modifying the following components, parts, software, etc.: .....

.....

Place: … Date: …

Signature: … Name and position in the company: …

Explanatory notes relating to Appendix 24

(Footnotes and explanations not to be stated on the Manufacturer's declaration)

(0) Suppress the entry if not applicable.

(1) Delete where not applicable (no deletion required when more than one entry is applicable).

(2) Number of the Commission Delegated Regulation and latest amending Commission Delegated Regulation applicable to the type-approval. In the case of a Commission Delegated Regulation with two or more implementation stages; indicate also the implementation stage and/or code. Alternatively indicate the number of the applicable UNECE Regulation.

(3) Round the units of measure to the nearest whole number for dB(A), Wh/ km, mg/ km, g/km, ppm and km; to the nearest tenth for kW, l/ 100 km, kg/ 100 km, m^3/ 100 km and for % vol; and to the nearest hundredth for kW/ kg and for m^{-1}.

(4) Indicate the alphanumeric code Type-Variant-Version or 'TVV' allocated to each type, variant and version as set out in point 2.3 of Part B of Annex I.

(5) Classified according to Article 4 of and Annex I to Regulation (EU) No 168/2013, the coding shall be indicated, e.g. 'L3e-A2' for a medium-performance motorcycle.

(6) For externally chargeable hybrid electric vehicles, the "weighted, combined" values for CO_2, fuel consumption and electric energy consumption shall be indicated.

(7) Only applicable for vehicle category L3e.'

(t) the explanatory notes relating to Annex I are amended as follows:

(i) explanatory note (16) is replaced by the following:

'(16) Rounded to the nearest whole number for dB(A).';

(ii) explanatory note (24) is replaced by the following:

'(24) For vehicles equipped with CVT indicate the following: 1 "gear ratio at maximum design vehicle speed"; 2 "gear ratio at maximum peak power"; 3 "gear ration at maximum peak torque". The gear ratios shall include the gear ratio of the primary transmission ratio (if applicable) and be supplemented with an acceptable tolerance band to the satisfaction of the approval authority. For wheel hub engines without gear drive, indicate "n/a" or "1".'.

(2) Annex IV is amended as follows:

(a) Appendix 1 is amended as follows:

(i) in MODEL A — Section 1, the words 'conforms in all respects to the type described in EU type-approval (… *type-approval number including extension number*) issued on (..... *date of issue*) and' are replaced by the words 'conforms in all respects to the type described in EU type-approval (… *type-approval number including extension number*) (CV*… *type-approval number including extension number*)(3i) issued on (..... *date of issue*) (CV* ..... *date of issue*)(3i) and';

(ii) in MODEL B — Section 1, the words 'conforms in all respects to the type described in EU type-approval (… *type-approval number including extension number*) issued on (..... *date of issue*) and' are replaced by the words 'conforms in all respects to the type described in EU type-approval (… *type-approval number including extension number*) (CV*… *type-approval number including extension number*)(3i) issued on (..... *date of issue*) (CV* ..... *date of issue*)(3i) and';

(iii) in MODEL C — Section 1, the words 'conforms in all respects to the type described in EU type-approval (… *type-approval number including extension number*) issued on (..... *date of issue*) and' are replaced by the words 'conforms in all respects to the type described in EU type-approval (… *type-approval number including extension number*) (CV*… *type-approval number including extension number*)(3i) issued on (..... *date of issue*) (CV* ..... *date of issue*)(3i) and';

(iv) in Section 2, the heading 'Section 2' is replaced by the following:

'SECTION 2(O)*';*

(v) in Section 2, entry 4.0.1. is replaced by the following:

'4.0.1.	Environmental step: Euro ..... (3/4/5) (1)'

(vi) in Section 2, entries 4.0.2., 4.0.2.1. and 4.0.2.2. are deleted;

(vii) in Section 2, the following entries 4.0.6. to 4.0.6.3. are inserted after entry 4.0.1.:

'4.0.6.	Sound level measured according to(m):
4.0.6.1.	Stationary: ..... dB(A) (CV*: ..... dB(A))(3i) at engine speed: ..... min^{-1} (CV*:..... min^{-1})(3i)
4.0.6.2.	Drive-by: ..... dB(A) (CV*: ..... dB(A))(3i)
4.0.6.3.	Limit value for L_{urban}(3r): ..... dB(A) (CV*: ..... dB(A))(3i)';

(viii) in Section 2, entry 3.2.15.1. is replaced by the following:

'3.2.15.1.	Type I test: tailpipe emissions after cold start, including the deterioration factor, if applicable:		
	CO:	mg/km	(CV*:… mg/km)(3i)
	THC:	mg/km	(CV*:… mg/km)(3i)
	NMHC:	mg/km (3)	(CV*:… mg/km)(3i)
	NOx:	mg/km	(CV*:… mg/km)(3i)
	THC+NOx:	mg/km(3)	(CV*:… mg/km)(3i)
	PM:	mg/km(3)	(CV*:… mg/km)(3i)'

(ix) in Section 2, the heading 'Energy efficiency', including all its entries, is replaced by the following:

'Energy efficiency(m)(o):

4.0.2.	Fuel consumption(3)(q):	l or kg/100 km	(CV*:… l or kg/100 km)(3)(q)(3i)
4.0.3.	CO_2 emissions(3)(q)(n):	g/km	(CV*:… g/km)(3)(q)(3i)
4.0.4.	Energy consumption(3)(q):	Wh/km	(CV*:… Wh/km)(3)(q)(3i)
4.0.5.	Electric range(3):	km	(CV*:… km)(3)(3i)'

(b) Appendix 2 is amended as follows:

(i) entry 0.3. is replaced by the following:

'0.3.	Category, subcategory and sub-subcategory of vehicle(6)(u):…'

(ii) the heading 'Energy efficiency', including all its entries, is replaced by the following:

'Energy efficiency:

4.0.2.	Fuel consumption(3)(q):	l or kg/100 km	(CV*:… l or kg/100 km)(3)(q)(3i)
4.0.3.	CO_2 emissions(3)(q)(n):	g/km	(CV*:… g/km)(3)(q)(3i)
4.0.4.	Energy consumption(3)(q):	Wh/km	(CV*:… Wh/km)(3)(q)(3i)
4.0.5.	Electric range(3):	km	(CV*:… km)(3)(3i)'

(c) the explanatory notes relating to Annex IV are amended as follows:

(i) explanatory note (9) is replaced by the following:

'(9) Indicate the following value according to the category of the vehicle:

— for (sub) categories: L1e, L2e, L6e, L7e-B1, L7e-C: the measured maximum speed of the vehicle;

— for (sub) categories L3e, L4e, L5e, L7e-A and L7e-B2: the maximum design vehicle speed.

— for cycles designed to pedal (L1e): suppress this entry of the certificate of conformity';

(ii) explanatory note (n) is deleted;

(iii) explanatory note (o) is replaced by the following:

'(o) Round the values to the nearest whole number for dB(A), Wh/ km, mg/ km, g/km, ppm, mm, kg, km and km/ h; to the nearest tenth for kW, l/ 100 km, kg/ 100 km, m^3/ 100 km and for % vol; and to the nearest hundredth for kW/ kg and for m^{-1}.';

(iv) explanatory note (p) is deleted;

(v) the second explanatory note (s) below explanatory note (t) is deleted;

(vi) the following explanatory note (u) is inserted:

'(u) The information contained in this entry shall be stated in entry No 04. "Vehicle category" of the certificates of conformity issued in accordance with the template set out in Annex IV to Directive 2002/24/EC.';

(vii) the following explanatory note (3r) is inserted:

'(3r) Only applicable for vehicle category L3e'.

(3) Annex V is amended as follows:

(a) point 3.1.6. is replaced by the following:

'3.1.6. The existence of measures taken by the manufacturer to ensure the traceability of the vehicle referred to in point 3.1.5. needs not be checked at the time of the type-approval.';

(b) point 3.2.8. is replaced by the following:

'3.2.8. The vehicle identification number shall, if possible, be presented on a single line. When the VIN is marked on two lines, the beginning and the end of the VIN shall be limited by one symbol at the choice of the manufacturer which should neither be a Roman capital letter nor an Arabic numeral.'

(c) in Appendix 1, point 5 is replaced by the following:

'5. Example for a L3e-A3 motorcycle with additional information for the converted vehicle (CV), a L3e-A2 motorcycle, outside the clearly marked rectangle. In this case for the purpose of a temporary and reversible manufacturer's authorised modification to the first registered L3e-A3 motorcycle in order to register it nationally after its conversion as a reduced-power L3e-A2 configuration (e.g. for vehicle operators with A2 driving licence):

MOTORUDOLPH
L3e-A3
e4*168/2013*2691
JRM00DBP008002211
84 dB(A) — 4 250 min^{-1}
max 352 kg
L3e-A2
e4*168/2013*2692
83 dB(A) — 3 750 min^{-1}
35 kW'.

(4) Annex VI is amended as follows:

(a) in Appendix 1, in Section III, entry 2.1. is replaced by the following:

'2.1.	The approval is granted in accordance with Article 40 of Regulation (EU) No 168/2013 and the validity of the approval is thus limited to dd/mm/yyyy[6].'

(b) Appendix 2 is amended as follows:

(i) in Section III, entry 4.1. is replaced by the following:

'4.1.	The approval is granted in accordance with Article 40 of Regulation (EU) No 168/2013 and the validity of the approval is thus limited to dd/mm/yyyy[6].'

(ii) in Section III, the first indent under 'NB:' is replaced by the following:

'— If this model is used for type-approval of a vehicle as an exemption for new technology or new concept, pursuant to Article 40 of Regulation (EU) No 168/2013, the heading of the certificate shall read 'EU WHOLE-VEHICLE PROVISIONAL TYPE-APPROVAL CERTIFICATE VALID ONLY ON THE TERRITORY OF …[5]'. The provisional type-approval certificate shall also specify the restrictions that have been imposed as to its validity and the waivers which have been applied in accordance with Article 30(4) of Regulation (EU) No 168/2013.'

(iii) the explanatory notes related to Appendix 2 are replaced by the following:

'Explanatory notes relating to Appendix 2

(Footnotes and explanations not to be stated on the type-approval certificate)

(1) Delete where not applicable.

(2) Indicate the alphanumeric code Type-Variant-Version or 'TVV' allocated to each type, variant and version as set out in point 2.3 of Part B of Annex I.

(3) Classified according to Article 4 of and Annex I to Regulation (EU) No 168/2013, the coding shall be indicated, e.g. 'L3e-A1E' for a low-performance Enduro motor-cycle.

(4) See section 2.

(5) Indicate the Member State.

(6) Applicable only for type-approval of a vehicle as an exemption for new technology or new concept, pursuant to Article 40 of Regulation (EU) No 168/2013.

(7) Applicable only for vehicle type-approval for a national small series, pursuant to Article 42 of Regulation (EU) No 168/2013.

(8) Indicate only the latest amendment in case of an amendment of one or more Articles of Regulation (EU) 168/2013, according to the amendment applied for the EU type-approval.';

(c) in Appendix 4, in Section II, the following entries 4a. and 4a.1. are inserted before entry 5.:

'4a.	The approval is granted/extended/refused/withdrawn[1]
4a.1.	The approval is granted in accordance with Article 40 of Regulation (EU) No 168/2013 and its validity is thus limited to dd/mm/yyyy[5].'

(d) Section II of Appendix 5 is amended as follows:

(i) the following entries 4a. and 4a.1. are inserted before entry 5.:

'4a.	The approval is granted/extended/refused/withdrawn[1]
4a.1.	The approval is granted in accordance with Article 40 of Regulation (EU) No 168/2013 and its validity is thus limited to dd/mm/yyyy[5].'

(ii) entry 5. is replaced by the following:

'5.	Restrictions of validity[1][5]: ....'

(iii) entry 6. is replaced by the following:

'6.	Waivers applied[1][5]: ....'

(5) Annex VII is amended as follows:

(a) in point 4., table 1 is deleted;

(b) point 5. is replaced by the following:

'5. Codification for the numbering system of EU type-approval certificates of systems, components and separate technical units

Table 1

Codification for the numbering system of EU type-approval certificates of systems, components and separate technical units

LIST I — Environmental and propulsion unit performance requirements		
System or component/separate technical unit (STU)	Commission Delegated Regulation (EU) No	alphanumerical character
System: engine emissions (Euro 4 stage)	134/2014	A1
System: engine emissions (Euro 5 stage)	134/2014	A2
System: crankcase (point 1.3.1. and 1.3.2.) and evaporative emissions (point 1.4.1. to 1.4.3 of Annex IV to Regulation (EU) 168/2013)	134/2014	B1
System: crankcase (point 1.3.1. and 1.3.2.) and evaporative emissions (point 1.4.4. to 1.4.6 of Annex IV to Regulation (EU) 168/2013)	134/2014	B2
System: crankcase (point 1.3.1. and 1.3.2.) and evaporative emissions (point 1.4.7. to 1.4.8 of Annex IV to Regulation (EU) 168/2013)	134/2014	B3
System: environmental on-board diagnostic (OBD Stage I: point 1.8.1. to 1.8.2 of Annex IV to Regulation (EU) 168/2013)	134/2014	C1

LIST I — Environmental and propulsion unit performance requirements		
System or component/separate technical unit (STU)	Commission Delegated Regulation (EU) No	alphanumerical character
System: environmental on-board diagnostic (OBD Stage II: point 1.8.3. of Annex IV to Regulation (EU) 168/2013)	134/2014	C2
System: sound level	134/2014	D
System: propulsion unit performance	134/2014	E
System: maximum torque and a maximum net power of a propulsion unit	134/2014	E1
STU: pollution-control device	134/2014	F
STU: noise-abatement device	134/2014	G
STU: exhaust device (pollution-control device and noise-abatement device)	134/2014	H

LIST II — Vehicle functional safety requirements		
System or component/separate technical unit (STU)	Commission Delegated Regulation (EU) No	alphanumerical character
System: braking	3/2014	J
System: installation of lighting and light-signalling devices	3/2014	K
System: roll-over protective structure (ROPS)	3/2014	L
System: installation of tyres	3/2014	M
System: installation of audible warning devices	3/2014	AA
System: installation of glazing, windscreen wipers and de-frosting and demisting devices	3/2014	AB
System: identification of controls, tell-tales and indicators	3/2014	AC
System: safety belt anchorages	3/2014	AD
System: steer-ability, cornering properties and turn ability	3/2014	AE
System: vehicle occupant protection, including interior fittings, head restraint and vehicle doors	3/2014	AF
Component/STU: audible warning device	3/2014	N

LIST II — Vehicle functional safety requirements		
System or component/separate technical unit (STU)	Commission Delegated Regulation (EU) No	alphanumerical character
Component/STU: non-glazing front windscreen	3/2014	O
Component/STU: windscreen washer device	3/2014	P
Component/STU: rearward visibility device	3/2014	Q
Component/STU: safety belts	3/2014	R
Component/STU: seating position (saddle/seat)	3/2014	S

LIST III — Vehicle construction and general type-approval requirements		
System or component/separate technical unit (STU)	Commission Delegated Regulation (EU) No	alphanumerical character
System: functional on-board diagnostics (OBD Stage I: point 1.8.1. to 1.8.2 of Annex IV to Regulation (EU) 168/2013)	44/2014	T1
System: functional on-board diagnostics (OBD Stage II: point 1.8.3. of Annex IV to Regulation (EU) 168/2013)	44/2014	T2
STU: trailer coupling device	44/2014	U
STU: devices to prevent unauthorised use	44/2014	V
STU: passenger handholds	44/2014	W
STU: footrests	44/2014	X
STU: side-car	44/2014	Y
STU: fuel tank	44/2014	Z’

(6) Annex VIII is amended as follows:

(a) item 2.2.1.3.3. is replaced by the following:

‘2.2.1.3.3. Type II test results[3]:

Table 5-2

Test type II results

Test	HC (ppm)	CO (% vol.)	Lambda	Engine speed (min-)	Engine oil temperature (K)	Measured & corrected value of absorption coefficient (m^{-1})
PI: Low idle test						—
PI: High idle test						—
CI — Free acceleration test / Smoke opacity test results	—	—	—	—	—	’

(b) items 2.2.1.8.6. and 2.2.1.8.7. are replaced by the following:

'2.2.1.8.6. CO_2 emissions and fuel consumption[3]

Table 5-8

Test Type VII result table for propulsions equipped with a combustion engine only or equipped with not-externally-chargeable (NOVC) hybrid electric propulsion

Test Type VII Test Results (TR_{TTVII})	Test No	CO_2 (g/km)	Fuel consumption (l/100km) or (kg/100 km)
$TR_{TTI\ Measured\ x}$ (i) (ii)	1		
	2		
	3		
$TR_{TTI\ Measured\ Mean}$ (i) (ii)			
K_i (i) (iii) (v) (no unit)			
TR_{TTVIIx} (i) (iv) = $K_i \cdot TR_{TTI\ Measured\ x\ Mean}$			
CO_2 and Fuel consumption as declared by the manufacturer	—		

(i) Where applicable.
(ii) Round to 2 decimal places.
(iii) Round to 4 decimal places.
(iv) Round to 0 decimal places
(v) Set K_i = 1 in case:
(a) the vehicle is **not** equipped with a periodically regenerating emission abatement system or;
(b) the vehicle is **not** a hybrid electric vehicle.

2.2.1.8.7. CO_2 emissions/fuel consumption (manufacturer's declared values)[3]

Electric energy consumption and electric range[3]:

Table 5-9

Test Type VII result table for pure electric propulsion or not-externally-chargeable (NOVC) propulsions equipped with an electric motor for propulsion

	Measured electric energy consumption (Wh/km)	Declared electric energy consumption (Wh/km)	Measured electric range (km)	Declared electric range (km)
Pure electric powertrain				
NOVC hybrid electric powertrain				;

(c) in point 2.2.1.10.9., Table 5-13 is replaced by the following:

'Table 5-13

Test result requirements regarding sound level

Sound emission level	Euro 4		Euro 5
Sound level limits	Annex VI(D) to Regulation (EU) No 168/2013	Equivalent UNECE sound level limits to Annex VI(D) to Regulation (EU) No 168/2013	Annex VI(D) to Regulation (EU) No 168/2013
Test requirements	Annex VIII to Regulation (EU) No 168/2013	UNECE Regulations referred to in Annex VI(D) to Regulation (EU) No 168/2013	UNECE Regulations referred to in Annex VI(D) to Regulation (EU) No 168/2013

Administrative requirements for vehicle subcategories regarding sound level:

Vehicle (sub)categories		
L1e, L6e-A	Annex I to UNECE Regulation No 63	UNECE Regulation No 63
L3e	Annex I to UNECE Regulation No 41	UNECE Regulation No 41
L2e, L4e, L5e, L6e-B, L7e	Annex I to UNECE Regulation No 9	UNECE Regulation No 9
Replacement exhaust noise-abatement devices all categories	Annex I to UNECE Regulation No 92	UNECE Regulation No 92'

(d) in point 2.2.1.10.11., Table 5-14 is replaced by the following:

'Table 5-14

Sound level test results Euro 4 or Euro 5

Vehicle category	Propulsion class	Euro 4 sound level limit SL_{EU4} (dB(A)) / Euro 4 test results $TR_{TTIXEU4}$ (dB(A))& (% of SL_{EU4})	Euro 4 sound test procedure	Euro 5 sound level limit SL_{EU5} (dB(A)) / Euro 5 test results $TR_{TTIXEU5}$ (dB(A)) & (% of SL_{EU5})	Euro 5 sound test procedure
L1e-A	PI / CI / Hybrid	SL_{EU4}:63	Commission Delegated Regulation (EU) No 134/2014 Annex VIII / UNECE Regulation No 63	SL_{EU5}:	UNECE Regulation No 63
		$TR_{TTIXEU4}$:		$TR_{TTIXEU5}$:	
L1e-B	PI / CI / Hybrid $v_{max} \leq 25$ km/h	SL_{EU4}:66		SL_{EU5}:	
		$TR_{TTIXEU4}$:		$TR_{TTIXEU5}$:	
	PI / CI / Hybrid $v_{max} \leq 45$ km/h	SL_{EU4}:71		SL_{EU5}:	
		$TR_{TTIXEU4}$:		$TR_{TTIXEU5}$:	

Vehicle category	Propulsion class	Euro 4 sound level limit SL_{EU4} (dB(A)) / Euro 4 test results $TR_{TTIXEU4}$ (dB(A))& (% of SL_{EU4})	Euro 4 sound test procedure	Euro 5 sound level limit SL_{EU5} (dB(A)) / Euro 5 test results $TR_{TTIXEU5}$ (dB(A)) & (% of SL_{EU5})	Euro 5 sound test procedure
L2e	PI / CI / Hybrid	SL_{EU4}:76	Commission Delegated Regulation (EU) No 134/2014 Annex VIII / UNECE Regulation No 9	SL_{EU5}:	UNECE Regulation No 9
		STR_{EU4}:		STR_{EU5}:	
L3e	PI / CI / Hybrid PMR ≤ 25	SL_{EU4}:73	UNECE Regulation No 41	SL_{EU5}:	UNECE Regulation No 41
		$TR_{TTIXEU4}$:		$TR_{TTIXEU5}$:	
	PI / CI / Hybrid 25 < PMR ≤ 50	SL_{EU4}:74		SL_{EU5}:	
		STR_{EU4}:		STR_{EU5}:	
	PI / CI / Hybrid PMR > 50	SL_{EU4}:77		SL_{EU5}:	
		$TR_{TTIXEU4}$:		$TR_{TTIXEU5}$:	
L4e	PI / CI / Hybrid	SL_{EU4}:80	Commission Delegated Regulation (EU) No 134/2014 Annex VIII / UNECE Regulation No 9	SL_{EU5}:	UNECE Regulation No 9
		$TR_{TTIXEU4}$		$TR_{TTIXEU5}$:	
L5e-A	PI / CI / Hybrid	SL_{EU4}:80	Commission Delegated Regulation (EU) No 134/2014 Annex VIII / UNECE Regulation No 9	SL_{EU5}:	UNECE Regulation No 9
		STR_{EU4}:		STR_{EU5}:	
L5e-B	PI / CI / Hybrid	SL_{EU4}:80		SL_{EU5}:	
		STR_{EU4}:		STR_{EU5}:	
L6e-A	PI / CI / Hybrid	SL_{EU4}:80	Commission Delegated Regulation (EU) No 134/2014 Annex VIII / UNECE Regulation No 63	SL_{EU5}:	UNECE Regulation No 63
		$TR_{TTIXEU4}$:		$TR_{TTIXEU5}$:	

Vehicle category	Propulsion class	Euro 4 sound level limit SL_{EU4} (dB(A)) / Euro 4 test results $TR_{TTIXEU4}$ (dB(A))& (% of SL_{EU4})	Euro 4 sound test procedure	Euro 5 sound level limit SL_{EU5} (dB(A)) / Euro 5 test results $TR_{TTIXEU5}$ (dB(A)) & (% of SL_{EU5})	Euro 5 sound test procedure
L6e-B	PI / CI / Hybrid	SL_{EU4}:80	Commission Delegated Regulation (EU) No 134/2014 Annex VIII / UNECE Regulation No 9	SL_{EU5}:	UNECE Regulation No 9'
		$TR_{TTIXEU4}$:		$TR_{TTIXEU5}$:	
L7e-A	PI / CI / Hybrid	SL_{EU4}:80		SL_{EU5}:	
		$TR_{TTIXEU4}$:		$TR_{TTIXEU5}$:	
L7e-B	PI / CI / Hybrid	SL_{EU4}:80		SL_{EU5}:	
		$TR_{TTIXEU4}$:		$TR_{TTIXEU5}$:	
L7e-C	PI / CI / Hybrid	SL_{EU4}:80		SL_{EU5}:	
		$TR_{TTIXEU4}$		$TR_{TTIXEU5}$:	

(e) items 2.2.1.10.12.and 2.2.1.10.13. are replaced by the following:

'2.2.1.10.12.	Stationary sound level: ..... dB(A) at engine speed: ..... min^{-1}
2.2.1.10.13.	Replacement noise-abatement device(s) make(s) and type(s) [3]: ..... ';

(f) the following item 2.2.1.10.14. is inserted:

'2.2.1.10.14.	Location of the type-approval number (add drawings, photographs) [3]: .....'.

COMMISSION IMPLEMENTING REGULATION (EU) 2016/1826

of 14 October 2016

concerning the non-approval of the active substance tricyclazole, in accordance with Regulation (EC) No 1107/2009 of the European Parliament and of the Council concerning the placing of plant protection products on the market

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EC) No 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC ([1]), and in particular Article 13(2) thereof,

Whereas:

(1) In accordance with Article 7(1) of Regulation (EC) No 1107/2009, on 21 December 2012, Italy received an application from Dow AgroSciences for the approval of the active substance tricyclazole.

(2) In accordance with Article 9(3) of that Regulation, the rapporteur Member State notified the applicant, the other Member States, the Commission and the European Food Safety Authority (hereinafter 'the Authority') of the admissibility of the application on 4 February 2013.

(3) For that active substance, the effects on human and animal health and the environment have been assessed, in accordance with the provisions of Article 11(2) and (3) of that Regulation, for the use proposed by the applicant. The rapporteur Member State submitted a draft assessment report to the Commission and the Authority on 7 January 2014.

(4) The Authority complied with Article 12(1) of Regulation (EC) No 1107/2009. In accordance with Article 12(3) of that Regulation, it requested that the applicant supply additional information to the Member States, the Commission and the Authority. The assessment of the additional information by the rapporteur Member State was submitted to the Authority in the format of an updated draft assessment report.

(5) The draft assessment report was reviewed by the Member States and the Authority. The Authority presented to the Commission its conclusion on the risk assessment of the active substance tricyclazole ([2]) on 18 February 2015. The Authority concluded that the assessment of the genotoxic and carcinogenic potential of the substance was inconclusive and therefore reference values (ADI, ARfD and AOEL) for use in human health risk assessments could not be established. Consequently, the risk assessments for operators, workers, bystanders, residents and consumers could not be conducted. It further concluded that the test material used in the toxicity studies was not representative of the proposed technical specification for the active substance and associated impurities. In addition, certain areas of the assessment could not be finalised, including the potential of tricyclazole to act as an endocrine disruptor and the potential for groundwater contamination by metabolites whose toxicological relevance is unknown.

(6) The Commission invited the applicant to submit its comments on the conclusion of the Authority and, in accordance with Article 13(1) of Regulation (EC) No 1107/2009, on the draft review report. The applicant submitted its comments, which have been carefully examined.

(7) However, despite the arguments put forward by the applicant, the concerns referred to in recital 5 could not be eliminated.

([1]) OJ L 309, 24.11.2009, p. 1.
([2]) *EFSA Journal* 2015;13(2):4032 Available online: www.efsa.europa.eu/efsajournal

(8) Consequently, it has not been demonstrated that it may be expected that, with respect to one or more representative uses of at least one plant protection product containing tricyclazole, the approval criteria provided for in Article 4 of Regulation (EC) No 1107/2009 are satisfied. The active substance tricyclazole should therefore not be approved pursuant to Article 13(2) of Regulation (EC) No 1107/2009.

(9) This Regulation does not prejudice the submission of a further application for tricyclazole pursuant to Article 7 of Regulation (EC) No 1107/2009.

(10) The Standing Committee on Plants, Animals, Food and Feed has not delivered an opinion within the time-limit laid down by its Chairman. An implementing act was deemed to be necessary and the chair submitted the draft implementing act to the appeal committee for further deliberation. The appeal committee did not deliver an opinion,

HAS ADOPTED THIS REGULATION:

Article 1

Non-approval of active substance

The active substance tricyclazole is not approved.

Article 2

Entry into force

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

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

Done at Brussels, 14 October 2016.

For the Commission
The President
Jean-Claude JUNCKER

COMMISSION IMPLEMENTING REGULATION (EU) 2016/1827

of 14 October 2016

amending for the 255th time Council Regulation (EC) No 881/2002 imposing certain specific restrictive measures directed against certain persons and entities associated with the ISIL (Da'esh) and Al-Qaida organisations

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Council Regulation (EC) No 881/2002 of 27 May 2002 imposing certain specific restrictive measures directed against certain persons and entities associated with the ISIL (Da'esh) and Al-Qaida organisations [1], and in particular Article 7(1)(a) and Article 7a(5) thereof,

Whereas:

(1) Annex I to Regulation (EC) No 881/2002 lists the persons, groups and entities covered by the freezing of funds and economic resources under that Regulation.

(2) On 11 October 2016, the Sanctions Committee of the United Nations Security Council (UNSC) decided to remove one natural person and to amend one entry from its list of persons, groups and entities to whom the freezing of funds and economic resources should apply. Annex I to Regulation (EC) No 881/2002 should therefore be updated accordingly,

HAS ADOPTED THIS REGULATION:

Article 1

Annex I to Regulation (EC) No 881/2002 is amended in accordance with the Annex to this Regulation.

Article 2

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

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

Done at Brussels, 14 October 2016.

For the Commission,
On behalf of the President,
Acting Head of the Service for Foreign Policy Instruments

[1] OJ L 139 29.5.2002, p. 9.

ANNEX

Annex I to Regulation (EC) No 881/2002 is amended as follows:

(1) the following entry under the heading 'Natural persons' is deleted:

'Nasir 'Abd-Al-Karim 'Abdullah Al-Wahishi (alias (a) Nasir al-Wahishi, (b) Abu Basir Nasir al-Wahishi, (c) Naser Abdel Karim al-Wahishi, (d) Nasir Abd al-Karim al-Wuhayshi, (e) Abu Basir Nasir Al-Wuhayshi, (f) Nasser Abdul- karim Abdullah al-Wouhichi, (g) Abu Baseer al-Wehaishi, (h) Abu Basir Nasser al-Wuhishi, (i) Abdul Kareem Abdullah Al-Woohaishi, (j) Nasser Abdelkarim Saleh Al Wahichi, (k) Abu Basir, (l) Abu Bashir). Date of birth: (a) 1.10.1976, (b) 8.10.1396 (Hijri Calendar). Place of birth: Yemen. Nationality: Yemeni. Passport No: 40483 (Yemeni passport number issued on 5.1.1997). Other information: Reportedly deceased in Yemen in Jun. 2015. Date of designation referred to in Article 7d(2)(i): 19.1.2010.';

(2) the following entry under the heading 'Natural persons' is amended as follows:

'Yazid Sufaat (*alias* (a) Joe, (b) Abu Zufar). Address: Taman Bukit Ampang, Selangor, Malaysia. Date of birth: 20.1.1964. Place of birth: Johor, Malaysia. Nationality: Malaysian. Passport No: A 10472263. National identification No: 640120-01-5529. Date of designation referred to in Article 2a (4) (b): 9.9.2003.' is replaced by the following:

'Yazid Sufaat (*alias* (a) Joe, (b) Abu Zufar). Address: (a) Taman Bukit Ampang, Selangor, Malaysia (prevoius address) (b) Malaysia (in prison since 2013). Date of birth: 20.1.1964. Place of birth: Johor, Malaysia. Nationality: Malaysian. Passport No: A 10472263. National identification No: 640120-01-5529. Date of designation referred to in Article 7d(2)(i): 9.9.2003.'

COMMISSION IMPLEMENTING REGULATION (EU) 2016/1828

of 14 October 2016

establishing the standard import values for determining the entry price of certain fruit and vegetables

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EU) No 1308/2013 of the European Parliament and of the Council of 17 December 2013 establishing a common organisation of the markets in agricultural products and repealing Council Regulations (EEC) No 922/72, (EEC) No 234/79, (EC) No 1037/2001 and (EC) No 1234/2007 ([1]),

Having regard to Commission Implementing Regulation (EU) No 543/2011 of 7 June 2011 laying down detailed rules for the application of Council Regulation (EC) No 1234/2007 in respect of the fruit and vegetables and processed fruit and vegetables sectors ([2]), and in particular Article 136(1) thereof,

Whereas:

(1) Implementing Regulation (EU) No 543/2011 lays down, pursuant to the outcome of the Uruguay Round multilateral trade negotiations, the criteria whereby the Commission fixes the standard values for imports from third countries, in respect of the products and periods stipulated in Annex XVI, Part A thereto.

(2) The standard import value is calculated each working day, in accordance with Article 136(1) of Implementing Regulation (EU) No 543/2011, taking into account variable daily data. Therefore this Regulation should enter into force on the day of its publication in the *Official Journal of the European Union*,

HAS ADOPTED THIS REGULATION:

Article 1

The standard import values referred to in Article 136 of Implementing Regulation (EU) No 543/2011 are fixed in the Annex to this Regulation.

Article 2

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

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

Done at Brussels, 14 October 2016.

For the Commission,
On behalf of the President,
Jerzy PLEWA
Director-General for Agriculture and Rural Development

([1]) OJ L 347, 20.12.2013, p. 671.
([2]) OJ L 157, 15.6.2011, p. 1.

ANNEX

Standard import values for determining the entry price of certain fruit and vegetables

(EUR/100 kg)

CN code	Third country code (1)	Standard import value
0702 00 00	MA	124,5
	ZZ	124,5
0707 00 05	TR	145,2
	ZZ	145,2
0709 93 10	TR	138,5
	ZZ	138,5
0805 50 10	AR	92,2
	CL	85,2
	TR	90,3
	UY	31,0
	ZA	94,7
	ZZ	78,7
0806 10 10	BR	285,5
	EG	169,2
	TR	144,7
	ZZ	199,8
0808 10 80	AR	191,8
	AU	196,9
	BR	124,9
	CL	154,5
	NZ	145,5
	ZA	112,2
	ZZ	154,3
0808 30 90	CN	59,0
	TR	134,9
	ZZ	97,0

(1) Nomenclature of countries laid down by Commission Regulation (EU) No 1106/2012 of 27 November 2012 implementing Regulation (EC) No 471/2009 of the European Parliament and of the Council on Community statistics relating to external trade with non-member countries, as regards the update of the nomenclature of countries and territories (OJ L 328, 28.11.2012, p. 7). Code 'ZZ' stands for 'of other origin'.

CORRIGENDA

Corrigendum to Commission Regulation (EU) 2016/919 of 27 May 2016 on the technical specification for interoperability relating to the 'control-command and signalling' subsystems of the rail system in the European Union

(Official Journal of the European Union L 158 of 15 June 2016)

On page 37, in the Annex, in point 6.1.1.2(4):

for: '(4) specific cases described in point 7.2.9.',

read: '(4) specific cases described in point 7.6.'.

ISSN 1977-0677 (electronic edition)
ISSN 1725-2555 (paper edition)

Publications Office of the European Union
2985 Luxembourg
LUXEMBOURG

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