

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 (Text with EEA relevance)

**Changes to legislation:** There are currently no known outstanding effects for the Regulation (EU) No 168/2013 of the European Parliament and of the Council. (See end of Document for details)

## ANNEX I

## VEHICLE CLASSIFICATION

| Category       | Category name                   | Common classification criteria   |
|----------------|---------------------------------|--|
| L1e-L7e        | All L-category vehicles         | <p>(1) length <math>\leq</math> 4 000 mm or <math>\leq</math> 3 000 mm for a L6e-B vehicle or <math>\leq</math> 3 700 mm for a L7e-C vehicle, and</p> <p>(2) width <math>\leq</math> 2 000 mm, or <math>\leq</math> 1 000 mm for a L1e vehicle, or <math>\leq</math> 1 500 mm for a L6e-B or a L7e-C vehicle and</p> <p>(3) height <math>\leq</math> 2 500 mm and</p>  |
| Category       | Category name                   | Common classification criteria   |
| L1e            | Light two-wheel powered vehicle | <p>(4) two wheels and powered by a propulsion as listed under Article 4(3) and</p> <p>(5) engine capacity <math>\leq</math> 50 cm<sup>3</sup> if a PI internal combustion engine forms part of the vehicle's propulsion configuration and</p> <p>(6) maximum design vehicle speed <math>\leq</math> 45 km/h and</p> <p>(7) maximum continuous rated or net power <sup>(1)</sup> <math>\leq</math> 4 000 W and</p> <p>(8) maximum technically permissible mass declared by the manufacturer and</p> |
| Sub-categories | Subcategory name                | Supplemental sub-classification criteria   |

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|                 |                      |   |
|-----------------|----------------------|---|
| L1e-A           | Powered cycle        | <p>(9) cycles designed to pedal equipped with an auxiliary propulsion with the primary aim to aid pedalling and</p> <p>(10) output of auxiliary propulsion is cut off at a vehicle speed <math>\leq</math> 25 km/h and</p> <p>(11) maximum continuous rated or net power <sup>(1)</sup> <math>\leq</math> 1 000 W and</p> <p>(12) a powered three- or four-wheel cycle complying with supplemental specific sub-classification criteria (9) to (11) is classified as being technically equivalent to a two-wheel L1e-A vehicle.</p> |
| L1e-B           | Two-wheel moped      | <p>(9) any other vehicle of the L1e category that cannot be classified according to the criteria (9) to (12) of a L1e-A vehicle.</p>  |
| <b>Category</b> | <b>Category name</b> | <b>Common classification criteria</b>   |
| L2e             | Three-wheel moped    | <p>(4) three wheels and powered by a propulsion as listed under Article 4(3) and</p> <p>(5) engine capacity <math>\leq</math> 50 cm<sup>3</sup> if a PI internal combustion engine or engine capacity <math>\leq</math> 500 cm<sup>3</sup> if a CI combustion engine forms part of the vehicle's propulsion configuration and</p>   |

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|                       |   |   |
|-----------------------|---|---|
|                       |   | <p>(6) maximum design vehicle speed <math>\leq 45</math> km/h and</p> <p>(7) maximum continuous rated or net power <sup>(1)</sup> <math>\leq 4</math> 000 W and</p> <p>(8) mass in running order <math>\leq 270</math> kg and</p> <p>(9) equipped with a maximum of two seating positions, including the seating position for the driver and</p>  |
| <b>Sub-categories</b> | <b>Subcategory name</b>                   | <b>Supplemental sub-classification criteria</b>   |
| L2e-P                 | Three-wheel moped for passenger transport | (10) L2e vehicle other than those complying with the specific classification criteria for a L2e-U vehicle.  |
| L2e-U                 | Three-wheel moped for utility purposes    | <p>(10) exclusively designed for the carriage of goods with an open or enclosed, virtually even and horizontal loading bed that meets the following criteria:</p> <p>(a) <span style="float: right;">length<sub>loading bed</sub> ×</span></p> <p>(b) or an equivalent loading bed area as defined above in order to install machines and/or equipment and</p> <p>(c) designed with a loading</p> |

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|                    |                            | (d) bed area which is clearly separated by a rigid partition from the area reserved for the vehicle occupants and the loading bed area shall be able to carry a minimum volume represented by a 600 mm cube.                              |
|--------------------|----------------------------|---|
| Category           | Category name              | Common classification criteria  |
| L3e <sup>(2)</sup> | Two-wheel motorcycle       | <p>(4) two wheels and powered by propulsion as listed under Article 4(3) and</p> <p>(5) maximum technically permissible mass declared by the manufacturer and</p> <p>(6) two-wheel vehicle that cannot be classified as category L1e.</p> |
| Sub-categories     | Subcategory name           | Supplemental sub-classification criteria  |
| L3e-A1             | Low-performance motorcycle | <p>(7) engine capacity <math>\leq</math> 125 cm<sup>3</sup> and</p> <p>(8) maximum continuous rated or net power <sup>(1)</sup> <math>\leq</math> 11 kW and</p>   |

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|                            |                               |  |
|----------------------------|-------------------------------|--|
|                            |                               | (9) power <sup>(1)</sup> /weight ratio $\leq 0,1$ kW/kg.   |
| L3e-A2                     | Medium-performance motorcycle | (7) maximum continuous rated or net power <sup>(1)</sup> $\leq 35$ kW and<br>(8) power <sup>(1)</sup> /weight ratio $\leq 0,2$ kW/kg and<br>(9) not derived from a vehicle equipped with an engine of more than double its power <sup>(1)</sup> and<br>(10) L3e vehicle that cannot be classified under supplemental sub-classification criteria (7), (8) and (9) of a L3e-A1 vehicle. |
| L3e-A3                     | High-performance motorcycle   | (7) any other L3e vehicle that cannot be classified according to the classification criteria of a L3e-A1 or L3e-A2 vehicle.  |
| <b>Sub-sub-categories</b>  | <b>Sub-Subcategory name</b>   | <b>Sub-Sub-classification criteria in addition to the sub-classification criteria of L3e-A1, L3e-A2 or L3e-A3 vehicles</b>   |
| L3e-AxE<br>(x = 1, 2 or 3) | Enduro motorcycles            | (a) seat height $\geq 900$ mm and<br>(b) ground clearance $\geq 310$ mm and<br>(c) overall gear ratio in highest gear (primary gear ratio $\times$ secondary gear ratio in the highest speed $\times$ final drive ratio) $\geq 6,0$ and<br>(d) mass in running order plus the mass of the propulsion battery in case of electric or hybrid   |

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|                            |                                    |  |
|----------------------------|------------------------------------|--|
|                            |                                    | (e) electric propulsion $\leq 140$ kg and no seating position for a passenger.   |
| L3e-AxT<br>(x = 1, 2 or 3) | Trial motorcycles                  | (a) seat height $\leq 700$ mm and<br>(b) ground clearance $\geq 280$ mm and<br>(c) fuel tank capacity $\leq 4$ litres and<br>(d) overall gear ratio in highest gear (primary gear ratio $\times$ secondary gear ratio in the highest speed $\times$ final drive ratio) $\geq 7,5$ and<br>(e) mass in running order $\leq 100$ kg and<br>(f) no seating position for a passenger.   |
| <b>Category</b>            | <b>Category name</b>               | <b>Common classification criteria</b>  |
| L4e                        | Two-wheel motorcycle with side-car | (4) base powered vehicle complying with the classification and subclassification criteria for a L3e vehicle and<br>(5) base powered vehicle equipped with one side-car and<br>(6) with a maximum of four seating positions including the driver on the motorcycle with side car and<br>(7) a maximum of two seating positions for passengers in the side car and<br>(8) maximum technically permissible mass declared by the manufacturer. |

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| <b>Category</b>       | <b>Category name</b>    | <b>Common classification criteria</b>   |
|-----------------------|-------------------------|---|
| L5e                   | Powered tricycle        | <p>(4) three wheels and powered by a propulsion as listed under Article 4(3) and</p> <p>(5) mass in running order <math>\leq 1\ 000</math> kg and</p> <p>(6) three-wheel vehicle that cannot be classified as a L2e vehicle and</p>   |
| <b>Sub-categories</b> | <b>Subcategory name</b> | <b>Supplemental sub-classification criteria</b>   |
| L5e-A                 | Tricycle                | <p>(7) L5e vehicle other than those complying with the specific classification criteria for a L5e-B vehicle and</p> <p>(8) with a maximum of five seating positions, including the seating position of the driver.</p>  |
| L5e-B                 | Commercial tricycle     | <p>(7) designed as a utility vehicle and characterised by an enclosed driving and passenger compartment accessible by maximum three sides and</p> <p>(8) equipped with a maximum of two seating positions, including the seating position for the driver and</p> <p>(9) exclusively designed for the carriage of goods with an open or enclosed, virtually even and horizontal loading bed that</p> |



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|                 |                      |  |
|-----------------|----------------------|--|
|                 |                      | <p>meets the following criteria:</p> <p>(a)</p> <p>(b) or an equivalent loading bed area as defined above designed to install machines and/or equipment and</p> <p>(c) designed with a loading bed area which is clearly separated by a rigid partition from the area reserved for the vehicle occupants and</p> <p>(d) the loading bed area shall be able to carry a minimum volume represented by a 600 mm cube.</p> |
| <b>Category</b> | <b>Category name</b> | <b>Common classification criteria</b>  |
| L6e             | Light quadricycle    | (4) four wheels and powered by a propulsion as listed under Article 4(3) and   |

length<sub>loading bed</sub> ×

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|                           |   |   |
|---------------------------|---|---|
|                           |   | (5) maximum design vehicle speed $\leq 45$ km/h and<br>(6) the mass in running order $\leq 425$ kg and<br>(7) engine capacity $\leq 50$ cm <sup>3</sup> if a PI engine or engine capacity $\leq 500$ cm <sup>3</sup> if a CI engine forms part of the vehicle's propulsion configuration and<br>(8) equipped with a maximum of two seating positions, including the seating position for the driver and |
| <b>Sub-categories</b>     | <b>Subcategory name</b>                     | <b>Supplemental sub-classification criteria</b>   |
| L6e-A                     | Light on-road quad                          | (9) L6e vehicle not complying with the specific classification criteria for a L6e-B vehicle and<br>(10) maximum continuous rated or net power <sup>(1)</sup> $\leq 4$ 000 W.  |
| L6e-B                     | Light quadri-mobile                         | (9) enclosed driving and passenger compartment accessible by maximum three sides and<br>(10) maximum continuous rated or net power <sup>(1)</sup> $\leq 6$ 000 W and  |
| <b>Sub-sub-categories</b> | <b>Sub-subcategory name</b>                 | <b>Sub-sub-classification criteria in addition to the sub-classification criteria of a L6e-B vehicle</b>  |
| L6e-BP                    | Light quadri-mobile for passenger transport | (11) L6e-B vehicle mainly designed for passenger transport and  |

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|        |  |   |
|--------|--|---|
|        |  | (12) L6e-B vehicle other than those complying with the specific classification criterion for a L6e-BU vehicle.  |
| L6e-BU | Light quadri-mobile for utility purposes | (11) exclusively designed for the carriage of goods with an open or enclosed, virtually even and horizontal loading bed that meets the following criteria:<br>(a) <span style="float: right;">length<sub>loading bed</sub> ×</span><br>(b) or an equivalent loading bed area as defined above in order to install machines and/or equipment and<br>(c) designed with a loading bed area which is clearly separated by a rigid partition from the area reserved for the vehicle occupants and<br>(d) the loading bed area shall be able to |

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|                           |                              |   |
|---------------------------|------------------------------|---|
|                           |                              | carry a minimum volume represented by a 600 mm cube.  |
| <b>Category</b>           | <b>Category name</b>         | <b>Common classification criteria</b>   |
| L7e                       | Heavy quadricycle            | <p>(4) four wheels and powered by a propulsion as listed under Article 4(3) and</p> <p>(5) mass in running order:</p> <p>(a) <math>\leq 450</math> kg for transport of passengers;</p> <p>(b) <math>\leq 600</math> kg for transport of goods.</p> <p>and</p> <p>(6) L7e vehicle that cannot be classified as a L6e vehicle and</p> |
| <b>Sub-categories</b>     | <b>Subcategory name</b>      | <b>Supplemental sub-classification criteria</b>   |
| L7e-A                     | Heavy on-road quad           | <p>(7) L7e vehicle not complying with the specific classification criteria for a L7e-B or a L7e-C vehicle and</p> <p>(8) vehicle designed for the transport of passengers only and</p> <p>(9) maximum continuous rated or net power <sup>(1)</sup> <math>\leq 15</math> kW and</p>  |
| <b>Sub-Sub categories</b> | <b>Sub-Sub category name</b> | <b>Supplemental sub-classification criteria</b>   |
| L7e-A1                    | A1 heavy on-road quad        | <p>(10) maximum two straddle seating positions, including the seating position for the rider and</p>  |

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|                           |                              |  |
|---------------------------|------------------------------|--|
|                           |                              | (11) handlebar to steer.   |
| L7e-A2                    | A2 heavy on-road quad        | (10) L7e-A vehicle not complying with the specific classification criteria for a L7e-A1 vehicle and<br>(11) maximum two non-straddle seating positions, including the seating position for the driver.   |
| <b>Sub-category</b>       | <b>Subcategory name</b>      | <b>Supplemental sub-classification criteria</b>  |
| L7e-B                     | Heavy all terrain quad       | (7) L7e vehicle not complying with the specific classification criteria for a L7e-C vehicle and<br>(8) ground clearance $\geq 180$ mm and  |
| <b>Sub-Sub categories</b> | <b>Sub-Sub category name</b> | <b>Supplemental sub-classification criteria</b>  |
| L7e-B1                    | All terrain quad             | (9) maximum two straddle seating positions, including the seating position for the rider and<br>(10) equipped with a handlebar to steer and<br>(11) maximum design vehicle speed $\leq 90$ km/h and<br>(12) wheelbase to ground clearance ratio $\leq 6$ . |
| L7e-B2                    | Side-by-side buggy           | (9) L7e-B vehicle other than a L7e-B1 vehicle and<br>(10) maximum three non-straddle seats of which two positioned side-by-side, including the seating position for the driver and<br>(11) maximum continuous rated or                                     |

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|                           |   |   |
|---------------------------|---|---|
|                           |   | (12) net power <sup>(1)</sup> ≤ 15 kW and wheelbase to ground clearance ratio ≤ 8.  |
| <b>Sub-category</b>       | <b>Subcategory name</b>                     | <b>Supplemental sub-classification criteria</b>   |
| L7e-C                     | Heavy quadri-mobile                         | (7) L7e vehicle not complying with the specific classification criteria for a L7e-B vehicle and<br>(8) maximum continuous rated or net power <sup>(1)</sup> ≤ 15 kW and<br>(9) maximum design vehicle speed ≤ 90 km/h and<br>(10) enclosed driving and passenger compartment accessible via maximum three sides and |
| <b>Sub-sub-categories</b> | <b>Sub-subcategory name</b>                 | <b>Sub-sub-classification criteria in addition to the sub-classification criteria of a L7e-C vehicle</b>  |
| L7e-CP                    | Heavy quadri-mobile for passenger transport | (11) L7e-C vehicle not complying with the specific classification criteria for a L7e-CU vehicle and<br>(12) maximum four non-straddle seats, including the seating position for the driver.   |
| L7e-CU                    | Heavy quadri-mobile for utility purposes    | (11) exclusively designed for the carriage of goods with an open or enclosed, virtually even and horizontal loading bed that meets the following criteria:<br>(a)   |

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length<sub>loading bed</sub> ×

(b) or  
an  
equivalent  
loading  
bed area  
as defined  
above  
designed  
to install  
machines  
and/or  
equipment  
and

(c) designed  
with a  
loading  
bed area  
which is  
clearly  
separated  
by a rigid  
partition  
from  
the area  
reserved  
for the  
vehicle  
occupants  
and

(d) the  
loading  
bed area  
shall be  
able to  
carry a  
minimum  
volume  
represented  
by a 600  
mm cube  
and

(12) maximum two  
non-straddle seats,  
including the  
seating position for  
the driver.

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NB: refer to the end of Annex VIII for an overview of the notes to the Annexes.

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ANNEX II

EXHAUSTIVE LIST OF REQUIREMENTS FOR THE PURPOSES OF EU VEHICLE TYPE-APPROVAL <sup>(3)</sup>

| No  | Articles | Subject   | Regulatory act reference | Vehicle Categories |       |     |     |     |       |       |       |       |       |       |
|---|----------|---|--------------------------|--------------------|-------|-----|-----|-----|-------|-------|-------|-------|-------|-------|
|   |          |   |                          | L1e-A              | L1e-B | L2e | L3e | L4e | L5e-A | L5e-B | L6e-A | L6e-B | L7e-A | L7e-B |
| A ENVIRONMENTAL AND PROPULSION PERFORMANCE REQUIREMENTS |          |   |                          |                    |       |     |     |     |       |       |       |       |       |       |
| 1   | 23 & 24  | environmental test procedures related to exhaust emissions, evaporative emissions, greenhouse gas emissions, fuel consumption and reference fuels | X                        | X                  | X     | X   | X   | X   | X     | X     | X     | X     | X     | X     |
| 2   |          | maximum design vehicle speed, maximum torque, maximum continuous total engine power of propulsion   | X                        | X                  | X     | X   | X   | X   | X     | X     | X     | X     | X     | X     |
| 3   |          | test procedures related to sound  | X                        | X                  | X     | X   | X   | X   | X     | X     | X     | X     | X     | X     |
| No  | Articles | Subject   | Regulatory act reference | Vehicle Categories |       |     |     |     |       |       |       |       |       |       |





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|    |   |   |   |    |   |   |   |    |    |    |    |    |   |   |    |
|----|---|---|---|----|---|---|---|----|----|----|----|----|---|---|----|
|    | controls, tell-tales and indicators   |   |   |    |   |   |   |    |    |    |    |    |   |   |    |
| 8  | installation of lighting and light signalling devices, including automatic switching-on of lighting | X | X | X  | X | X | X | X  | X  | X  | X  | X  | X | X | X  |
| 9  | rearward visibility   |   | X | X  | X | X | X | X  | X  | X  | X  | X  | X | X | X  |
| 10 | rollover protective structure (ROPS)  |   |   |    |   |   |   |    |    |    |    |    |   | X |    |
| 11 | safety belt anchorages and safety belts   |   |   | IF |   |   |   | X  | IF | IF | IF | X  |   | X | X  |
| 12 | seating position (saddles and seats)  | X | X | X  | X | X | X | X  | X  | X  | X  | X  | X | X | X  |
| 13 | steerability, cornering properties and turnability  | X | X | X  | X | X | X | X  | X  | X  | X  | X  | X | X | X  |
| 14 | installation of tyres   | X | X | X  | X | X | X | X  | X  | X  | X  | X  | X | X | X  |
| 15 | vehicle maximum speed   |   |   | IF |   |   |   | IF | IF | IF | IF | IF | X | X | IF |



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|  |    |                                       |    |    |    |    |    |    |    |                    |                    |    |    |    |    |    |
|--|----|---------------------------------------|----|----|----|----|----|----|----|--------------------|--------------------|----|----|----|----|----|
| 3  | 33 | conformity of production requirements | X  | X  | X  | X  | X  | X  | X  | X                  | X                  | X  | X  | X  | X  | X  |
| 4  | 18 | coupling devices and attachments      | IF | IF | IF | IF | IF | IF | IF | IF                 | IF                 | IF | IF | IF | IF | IF |
| 5  | 18 | devices to prevent unauthorised use   | X  | X  | X  | X  | X  | X  | X  | X                  | X                  | X  | X  | X  | X  | X  |
| 6  | 18 | electromagnetic compatibility (EMC)   | X  | X  | X  | X  | X  | X  | X  | X                  | X                  | X  | X  | X  | X  | X  |
| 7  | 18 | external projections                  | X  | X  | X  | X  | X  | X  | X  | X                  | X                  | X  | X  | X  | X  | X  |
| 8  | 18 | fuel storage                          | IF | IF | IF | IF | IF | IF | IF | IF                 | IF                 | IF | IF | IF | IF | IF |
| 9  | 18 | load platforms                        |    |    | IF |    |    | X  |    | IF                 |                    |    | IF | IF | IF |    |
| 10   | 18 | masses and dimensions                 | X  | X  | X  | X  | X  | X  | X  | X                  | X                  | X  | X  | X  | X  | X  |
| 11   | 21 | on-board diagnostics                  |    |    |    | X  | X  | X  | X  | [ <sup>F1</sup> X] | [ <sup>F1</sup> X] | X  | X  | X  | X  | X  |
| 12   | 18 | passenger handholds and footrests     |    | X  | IF | IF | IF | IF | IF | X                  |                    | IF | IF | IF | IF |    |
| 13   | 18 | registration plate space              | X  | X  | X  | X  | X  | X  | X  | X                  | X                  | X  | X  | X  | X  | X  |
| 14   | 18 | repair and maintenance information    | X  | X  | X  | X  | X  | X  | X  | X                  | X                  | X  | X  | X  | X  | X  |
| 15   | 18 | stands                                | X  | X  |    | X  |    |    |    |                    |                    |    |    |    |    |    |
| <b>C2 REQUIREMENTS OF TECHNICAL SERVICES</b> |    |                                       |    |    |    |    |    |    |    |                    |                    |    |    |    |    |    |
| 16   | 65 | performance standards and assessment  |    |    |    |    |    |    |    |                    |                    |    |    |    |    |    |

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of  
 technical  
 services

**Editorial Information**

**X1** Substituted by [Corrigendum 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 \(Official Journal of the European Union L 60 of 2 March 2013\)](#).

**Textual Amendments**

**F1** Deleted by [Regulation \(EU\) 2019/129 of the European Parliament and of the Council of 16 January 2019 amending Regulation \(EU\) No 168/2013 as regards the application of the Euro 5 step to the type-approval of two- or three-wheel vehicles and quadricycles](#).

NB: refer to the end of Annex VIII for an overview of the notes to the Annexes.

ANNEX III

LIMITS FOR SMALL SERIES

| Vehicle (Sub-)category | Vehicle (Sub-)category name        | Small series(units for each type made available on the market, registered and entered into service per year) |
|------------------------|------------------------------------|--|
| L1e-A                  | Powered cycle                      | 50   |
| L1e-B                  | Two-wheel moped                    |  |
| L2e                    | Three-wheel moped                  |  |
| L3e                    | Two-wheel motorcycle               | 75   |
| L4e                    | Two-wheel motorcycle with side-car | 150  |
| L5e-A                  | Tricycle                           | 75   |
| L5e-B                  | Commercial tricycle                | 150  |
| L6e-A                  | Light on-road quad                 | 30   |
| L6e-B                  | Light quadri-mobile                | 150  |
| L7e-A                  | Heavy on-road quad                 | 30   |
| L7e-B                  | Heavy all terrain quad             | 50   |
| L7e-C                  | Heavy quadri-mobile                | 150  |

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## ANNEX IV

TIMETABLE FOR THE APPLICATION OF THIS  
REGULATION IN RESPECT OF TYPE-APPROVAL

| Point    | Description  | (Sub-)category         | New types of vehicles obligatory | Existing types of vehicles obligatory | Last date of registration of compliant vehicles |
|----------|--|------------------------|----------------------------------|---------------------------------------|---|
| 1.       | Application of delegated act on environmental and propulsion performance requirements, items as listed in Annex II (A) |                        |                                  |                                       |   |
| 1.1.     | Test type I, tailpipe emission test after cold start   | —                      | —                                | —                                     | —   |
| 1.1.1.   | Test cycle   | —                      | —                                | —                                     | —   |
| 1.1.1.1. | Test type I, ECE R 47 test cycle   | L1e, L2e, L6e          | 1.1.2017                         | 1.1.2018                              | 31.12.2020                                      |
| 1.1.1.2. | Test type I, ECE R 40 (with extra urban driving cycle if applicable)   | L5e-B, L7e-B, L7e-C    | 1.1.2016                         | 1.1.2017                              | 31.12.2020                                      |
| 1.1.1.3. | Test type I, WMTC, stage 2   | L3e, L4e, L5e-A, L7e-A | 1.1.2016                         | 1.1.2017                              | 31.12.2020                                      |
| 1.1.1.4. | Test type I, revised WMTC based test cycle   | L1e-L7e                | 1.1.2020                         | 1.1.2021                              |   |
| 1.1.2.   | Test type I, tailpipe emission limits  |                        | —                                | —                                     | —   |

**Changes to legislation:** There are currently no known outstanding effects for the Regulation (EU) No 168/2013 of the European Parliament and of the Council. (See end of Document for details)

|          |  |                       |  |  |   |
|----------|--|-----------------------|--|--|---|
| 1.1.2.1. | Euro 4:<br>Annex VI A1   | L1e, L2e, L6e         | 1.1.2017   | 1.1.2018   | 31.12.2020;<br>for L2e-U<br>and L6e-B:<br>31.12.2024    |
| 1.1.2.2. | Euro 4:<br>Annex VI A1   | L3e, L4e,<br>L5e, L7e | 1.1.2016   | 1.1.2017   | 31.12.2020;<br>for L3e-AxE<br>and L3e-AxT<br>31.12.2024 |
| 1.1.2.3. | Euro 5:<br>Annex VI A2   | L1e-L7e               | 1.1.2020;<br>for L2e-U,<br>L3e-AxE,<br>L3e-AxT<br>and L6e-B:<br>1.1.2024 | 1.1.2021;<br>for L2e-U,<br>L3e-AxE,<br>L3e-AxT<br>and L6e-B:<br>1.1.2025 | ]   |
| 1.2.     | Test type II,<br>emissions test<br>at (increased)<br>idle/free<br>acceleration |                       |  |  |   |
| 1.2.1.   | Test type II,<br>emissions test<br>at (increased)<br>idle/free<br>acceleration | L1e, L2e, L6e         | 1.1.2017   | 1.1.2018   |   |
| 1.2.2.   | Test type II,<br>emissions test<br>at (increased)<br>idle/free<br>acceleration | L3e, L4e,<br>L5e, L7e | 1.1.2016   | 1.1.2017   |   |
| 1.3.     | Test type<br>III, zero<br>crankcase gas<br>emissions                           |                       |  |  |   |
| 1.3.1.   | Test type<br>III, zero<br>crankcase gas<br>emissions                           | L1e, L2e, L6e         | 1.1.2017   | 1.1.2018   |   |
| 1.3.2.   | Test type<br>III, zero<br>crankcase gas<br>emissions                           | L3e, L4e,<br>L5e, L7e | 1.1.2016   | 1.1.2017   |   |
| 1.4.     | Test type IV,<br>evaporative<br>emissions                                      |                       | —  | —  | —   |
| 1.4.1.   | Fuel tank<br>permeability<br>test  | L1e, L2e, L6e         | 1.1.2017   | 1.1.2017   |   |

**Changes to legislation:** There are currently no known outstanding effects for the Regulation (EU) No 168/2013 of the European Parliament and of the Council. (See end of Document for details)

|        |   |   |          |          |            |
|--------|---|---|----------|----------|------------|
| 1.4.2. | Fuel tank permeability test   | L3e, L4e, L5e, L7e                            | 1.1.2016 | 1.1.2016 |            |
| 1.4.3. | SHED test procedure   | L3e, L4e, L5e-A, L7e-A                        | 1.1.2016 | 1.1.2017 |            |
| 1.4.4. | SHED test procedure   | L6e-A   | 1.1.2017 | 1.1.2018 |            |
| 1.4.5. | SHED test limits, Annex VI (C1)   | L3e, L4e, L5e-A, L7e-A                        | 1.1.2016 | 1.1.2017 | 31.12.2020 |
| 1.4.6. | SHED test limits, Annex VI (C1)   | L6e-A   | 1.1.2017 | 1.1.2018 | 31.12.2020 |
| 1.4.7. | SHED test or fuel permeation test, pending study results referred to in Article 23(4) and (5) | L1e-A, L1e-B, L2e, L5e-B, L6e-B, L7e-B, L7e-C | 1.1.2020 | 1.1.2021 |            |
| 1.4.8. | SHED test limits, Annex VI (C2), pending study results referred to in Article 23(4) and (5)   | L1e-L7e                                       | 1.1.2020 | 1.1.2021 |            |
| 1.5.   | Test type V, durability testing <sup>(3)</sup>  |   |          |          |            |
| 1.5.1. | Euro 4 durability mileage, Annexes VII (A) and (B)  | L1e, L2e, L6e                                 | 1.1.2017 | 1.1.2018 | 31.12.2020 |
| 1.5.2. | Euro 4 durability mileage, Annexes VII (A) and (B)  | L3e, L4e, L5e, L7e                            | 1.1.2016 | 1.1.2017 | 31.12.2020 |
| 1.5.3. | Euro 5, durability mileage,   | L1e-L7e                                       | 1.1.2020 | 1.1.2021 |            |



**Changes to legislation:** There are currently no known outstanding effects for the Regulation (EU) No 168/2013 of the European Parliament and of the Council. (See end of Document for details)

|                        | Annexes VII (A) and (B)   |                        |          |          |            |
|------------------------|---|------------------------|----------|----------|------------|
| 1.6.                   | A test type VI has not been attributed  | —                      | —        | —        | —          |
| 1.7.                   | Test type VII, greenhouse gas emissions/ fuel or energy consumption determination and reporting |                        |          | —        |            |
| 1.7.1.                 | Test type VII, greenhouse gas emissions/ fuel or energy consumption determination and reporting | L1e, L2e, L6e          | 1.1.2017 | 1.1.2018 |            |
| 1.7.2.                 | Test type VII, greenhouse gas emissions/ fuel or energy consumption determination and reporting | L3e, L4e, L5e, L7e     | 1.1.2016 | 1.1.2017 |            |
| 1.8.                   | Test type VIII, OBD environmental test  |                        | —        | —        |            |
| [ <sup>F2</sup> 1.8.1. | OBD stage I functional requirements   | L3e, L4e, L5e-A, L7e-A | 1.1.2016 | 1.1.2017 | 31.12.2020 |
|                        | OBD stage I environmental test procedure (test type VIII)                                       |                        |          |          |            |
|                        | OBD stage I environmental test thresholds, Annex VI (B1)  |                        |          |          |            |

**Changes to legislation:** There are currently no known outstanding effects for the Regulation (EU) No 168/2013 of the European Parliament and of the Council. (See end of Document for details)

|                        |  |   |          |          |            |
|------------------------|--|---|----------|----------|------------|
| 1.8.2.                 | OBD stage I functional requirements including any operating mode which significantly reduces engine torque | L3e, L4e, L5e, L7e                                  | 1.1.2020 | 1.1.2021 | 31.12.2024 |
|                        | OBD stage I environmental test procedure (test type VIII)  |   |          |          |            |
|                        | OBD stage I environmental test thresholds, Annex VI (B1)   |   |          |          |            |
| 1.8.3.                 | OBD stage I functional requirements including any operating mode which significantly reduces engine torque | L3e, L4e, L5e, L7e                                  | 1.1.2024 | 1.1.2025 |            |
|                        | OBD stage I environmental test procedure (test type VIII)  |   |          |          |            |
|                        | OBD stage I environmental test thresholds, Annex VI (B2)]  |   |          |          |            |
| [ <sup>F3</sup> 1.8.4. | OBD stage II functional requirements with the exception of catalyst monitoring                             | L3e (except L3e-AxE and L3e-AxT), L4e, L5e-A, L7e-A | 1.1.2020 | 1.1.2021 | 31.12.2024 |
|                        | OBD stage II environmental   |   |          |          |            |

**Changes to legislation:** There are currently no known outstanding effects for the Regulation (EU) No 168/2013 of the European Parliament and of the Council. (See end of Document for details)

|                        |   |   |          |          |   |
|------------------------|---|---|----------|----------|---|
|                        | test procedures (test type VIII)  |   |          |          |   |
|                        | OBD stage II environmental test thresholds, Annex VI (B1)   |   |          |          |   |
| 1.8.5.                 | OBD stage II functional requirements, OBD stage II environmental test procedures (test type VIII), OBD stage II environmental test thresholds, Annex VI (B2)] | L3e (except L3e-AxE and L3e-AxT), L4e, L5e-A, L7e-A | 1.1.2024 | 1.1.2025 |   |
| 1.9.                   | Test type IX, sound level <sup>(3)</sup>  |   |          |          |   |
| [ <sup>F2</sup> 1.9.1. | Sound level test procedure and limit values Annex VI (D)  | L1e, L2e, L6e                                       | 1.1.2017 | 1.1.2018 |   |
| 1.9.2.                 | Sound level test procedure and limit values <sup>(3)</sup> , Annex VI (D)   | L3e, L4e, L5e, L7e                                  | 1.1.2016 | 1.1.2017 | ] |
| 1.9.3.                 | UNECE regulations Nos 9, 41, 63, 92 and limits of Annex VI (D)  | L1e-L7e   |          |          |   |
| [ <sup>F2</sup> 1.9.4. | UNECE regulations Nos 9, 41, 63, 92 and   | L1e-L7e   |          |          | ] |

**Changes to legislation:** There are currently no known outstanding effects for the Regulation (EU) No 168/2013 of the European Parliament and of the Council. (See end of Document for details)

|         |  |                    |          |          |  |
|---------|--|--------------------|----------|----------|--|
|         | associated new limit values proposed by the Commission   |                    |          |          |  |
| 1.10.   | Propulsion performance tests and requirements regarding maximum design vehicle speed, maximum torque, maximum continuous rated or net power and maximum peak power |                    |          |          |  |
| 1.10.1. | Propulsion performance tests and requirements  | L1e, L2e, L6e      | 1.1.2017 | 1.1.2018 |  |
| 1.10.2. | Propulsion performance tests and requirements  | L3e, L4e, L5e, L7e | 1.1.2016 | 1.1.2017 |  |
| 2.      | Application of delegated act on vehicle functional safety requirements, items as listed in Annex II (B) <sup>(3)</sup>   |                    |          |          |  |
| 2.1.    | Application of delegated act on vehicle functional safety requirements, items as listed in Annex II (B) <sup>(3)</sup>   | L1e, L2e, L6e      | 1.1.2017 | 1.1.2018 |  |

**Changes to legislation:** There are currently no known outstanding effects for the Regulation (EU) No 168/2013 of the European Parliament and of the Council. (See end of Document for details)

|        |   |                    |          |          |   |
|--------|---|--------------------|----------|----------|---|
| 2.2.   | Application of delegated act on vehicle functional safety requirements, items as listed in Annex II (B) <sup>(3)</sup>              | L3e, L4e, L5e, L7e | 1.1.2016 | 1.1.2017 |   |
| 2.3.   | Annex VIII, enhanced safety features <sup>(3)</sup>   |                    | —        | —        |   |
| 2.3.1. | Automatic switching-on of lighting  | L1e-L7e            | 1.1.2016 | 1.1.2016 |   |
| 2.3.2. | Safe cornering device (differential or equivalent)  | L1e-L7e            | 1.1.2016 | 1.1.2017 |   |
| 2.3.3. | Advanced Brake Systems, obligatory fitting  | L3e                | 1.1.2016 | 1.1.2017 | — |
| 3.     | Application of delegated act on vehicle construction requirements, items as listed in [ <sup>X1</sup> Annex II (C1)] <sup>(3)</sup> |                    |          |          |   |
| 3.1.   | Application of delegated act on vehicle construction requirements, items as listed in [ <sup>X1</sup> Annex II (C1)] <sup>(3)</sup> | L1e, L2e, L6e      | 1.1.2017 | 1.1.2018 |   |
| 3.2.   | Application of delegated act on vehicle construction requirements, items as listed  | L3e, L4e, L5e, L7e | 1.1.2016 | 1.1.2017 |   |

**Changes to legislation:** There are currently no known outstanding effects for the Regulation (EU) No 168/2013 of the European Parliament and of the Council. (See end of Document for details)

|      |  |                    |          |          |  |
|------|--|--------------------|----------|----------|--|
|      | in [ <sup>X1</sup> Annex II (C1) <sup>(3)</sup> ]              |                    |          |          |  |
| 4.   | Application of implementing act on administrative requirements |                    |          |          |  |
| 4.1. | Application of implementing act on administrative requirements | L1e, L2e, L6e      | 1.1.2017 | 1.1.2018 |  |
| 4.2. | Application of implementing act on administrative requirements | L3e, L4e, L5e, L7e | 1.1.2016 | 1.1.2017 |  |

#### Textual Amendments

- F2** Substituted by Regulation (EU) 2019/129 of the European Parliament and of the Council of 16 January 2019 amending Regulation (EU) No 168/2013 as regards the application of the Euro 5 step to the type-approval of two- or three-wheel vehicles and quadricycles.
- F3** Inserted by Regulation (EU) 2019/129 of the European Parliament and of the Council of 16 January 2019 amending Regulation (EU) No 168/2013 as regards the application of the Euro 5 step to the type-approval of two- or three-wheel vehicles and quadricycles.

NB: refer to the end of Annex VIII for an overview of the notes to the annexes.

## ANNEX V

[<sup>F4</sup>(A)][<sup>X1</sup>Environmental performance test procedures and requirements]

L-category vehicles may be type-approved only if they comply with the following [<sup>X1</sup>environmental performance requirements]:

| Test type | Description                         | Requirements: limit values | Subclassification criteria in addition to Article 2 and Annex I | Requirements: test procedures    |
|-----------|-------------------------------------|----------------------------|---|----------------------------------|
| I         | Tailpipe emissions after cold start | Annex VI (A)               | Point 4.3 of Annex II to Commission                             | Annex II to Commission Delegated |

**Changes to legislation:** There are currently no known outstanding effects for the Regulation (EU) No 168/2013 of the European Parliament and of the Council. (See end of Document for details)

|     |  |  | Delegated Regulation (EU) No 134/2014   | Regulation (EU) No 134/2014                                   |
|-----|--|--|---|---|
| II  | — PI or Hybrid (5) equipped with PI: emissions at idling and increased idling speed<br>— CI or Hybrid with CI engine: free acceleration test | Directive 2009/40/EC (6)   | Point 4.3 of Annex II to Commission Delegated Regulation (EU) No 134/2014                       | Annex III to Commission Delegated Regulation (EU) No 134/2014 |
| III | Emissions of crankcase gases   | Zero emission, closed crankcase. Crankcase emissions shall not be discharged directly into the ambient atmosphere from any vehicle throughout its useful life. | Point 3.2 of Annex XI to Commission Delegated Regulation (EU) No 134/2014                       | Annex IV to Commission Delegated Regulation (EU) No 134/2014  |
| IV  | Evaporative emissions  | Annex VI (C)   | Point 3.2 of Annex XI to Commission Delegated Regulation (EU) No 134/2014                       | Annex V to Commission Delegated Regulation (EU) No 134/2014   |
| V   | Durability of pollution control devices  | Annexes VI and VII   | SRC-LeCV: point 2 of Appendix 1 to Annex VI to Commission Delegated Regulation (EU) No 134/2014 | Annex VI to Commission Delegated Regulation (EU) No 134/2014  |

**Changes to legislation:** There are currently no known outstanding effects for the Regulation (EU) No 168/2013 of the European Parliament and of the Council. (See end of Document for details)

|      |   |   |   |  |
|------|---|---|---|--|
|      |   |   | USA EPA AMA: point 2.1 of Appendix 2 to Annex VI to Commission Delegated Regulation (EU) No 134/2014  |  |
| VI   | A test-type VI has not been attributed  | Not applicable  | Not applicable  | Not applicable   |
| VII  | CO <sub>2</sub> emissions, fuel and/or electric energy consumption and electric range | Measurement and reporting, no limit value for type- approval purposes | Point 4.3 of Annex II to Commission Delegated Regulation (EU) No 134/2014   | Annex VII to Commission Delegated Regulation (EU) No 134/2014  |
| VIII | OBD environmental tests   | Annex VI (B)  | Point 4.3 of Annex II to Commission Delegated Regulation (EU) No 134/2014   | Annex VIII to Commission Delegated Regulation (EU) No 134/2014 |
| IX   | Sound level   | Annex VI (D)  | When UNECE regulations Nos 9, 41, 63 or 92 replace the EU proprietary requirements set out in the delegated act on environmental and propulsion performance requirements, the (sub-) classification criteria laid down in those UNECE regulations (Annex 6) shall be selected with reference to test type IX sound level tests. | Annex IX to Commission Delegated Regulation (EU) No 134/2014.] |

(B) Application of environmental performance test requirements for approval and extensions



**Changes to legislation:** There are currently no known outstanding effects for the Regulation (EU) No 168/2013 of the European Parliament and of the Council. (See end of Document for details)

|   | Vehicle with PI engines including hybrids |     |                |                |                      |                   |                   |                   |                           | Vehicles with CI engines including hybrids | Pure electric vehicle | Hydrogen fuel cell vehicle         |                             |
|---|---|-----|----------------|----------------|----------------------|-------------------|-------------------|-------------------|---------------------------|--|-----------------------|------------------------------------|-----------------------------|
|   | [ <sup>X1</sup> Mono-fuel]                |     |                |                | Bi-fuel              |                   |                   | Flex-fuel         |                           | Flex-fuel                                  | Mono-fuel             | propelled with compressed air (CA) |                             |
|   | [ <sup>X1</sup> Petrol (E5)]              | LPG | NG/ Biomethane | H <sub>2</sub> | Petrol (E5)          | Petrol (E5)       | Petrol (E5)       | Petrol (E5)       | NG/ Biomethane (E85)      | Diesel (B5)                                | Diesel (B5)           |                                    |                             |
|   |   |     |                | LPG            | NG/ Biomethane (E85) | H <sub>2</sub>    | Ethanol           | H <sub>2</sub>    | NG                        | Biodiesel                                  |                       |                                    |                             |
| <b>Type I test (19)</b>                                       | Yes                                       | Yes | Yes            | Yes            | Yes (both fuels)     | Yes (both fuels)  | Yes (both fuels)  | Yes (both fuels)  | Yes (both fuels)          | Yes (B5 only)                              | Yes                   | No                                 | No                          |
| <b>[<sup>F2</sup>Type I test (19) mass (Euro 5 only)]</b>     | Yes                                       | No  | No             | No             | Yes (petrol only)    | Yes (petrol only) | Yes (petrol only) | Yes (petrol only) | No                        | Yes (B5 only)                              | Yes                   | No/ Yes for CA                     | No                          |
| <b>Type II test (19), including smoke opacity for CI only</b> | Yes                                       | Yes | Yes            | Yes            | Yes (both fuels)     | Yes (both fuels)  | Yes (petrol only) | Yes (both fuels)  | Yes (NG/ biomethane only) | Yes (B5 only)                              | Yes                   | No                                 | No                          |
| <b>Type III test (19)</b>                                     | Yes                                       | Yes | Yes            | Yes            | Yes                  | Yes               | Yes               | Yes               | Yes                       | Yes  | Yes                   | No                                 | No                          |
| <b>Type IV test (19)</b>                                      | Yes                                       | No  | No             | No             | Yes (petrol only)    | Yes (petrol only) | Yes (petrol only) | Yes (petrol only) | No                        | No   | No                    | No                                 | No                          |
| <b>Type V test (19)</b>                                       | Yes                                       | Yes | Yes            | Yes            | Yes (petrol only)    | Yes (petrol only) | Yes (petrol only) | Yes (petrol only) | Yes (NG/ biomethane only) | Yes (B5 only)                              | Yes                   | No                                 | No                          |
| <b>Type VII test (19)</b>                                     | Yes                                       | Yes | Yes            | Yes            | Yes (both fuels)     | Yes (both fuels)  | Yes (both fuels)  | Yes (both fuels)  | Yes (both fuels)          | Yes (both fuels)                           | Yes                   | Yes (only energy consumption)      | Yes (only fuel consumption) |

**Changes to legislation:** There are currently no known outstanding effects for the Regulation (EU) No 168/2013 of the European Parliament and of the Council. (See end of Document for details)

|                                       |     |     |     |     |                   |                   |                   |                   |                          |          |     |   |                                      |
|---------------------------------------|-----|-----|-----|-----|-------------------|-------------------|-------------------|-------------------|--------------------------|----------|-----|---|--------------------------------------|
| <b>Type VIII test</b> <sup>(19)</sup> | Yes | Yes | Yes | Yes | Yes (petrol only) | Yes (petrol only) | Yes (petrol only) | Yes (petrol only) | Yes (NG/biomethane only) | Yes (B5) | Yes | No                                      | No                                   |
| <b>Type IX test</b> <sup>(19)</sup>   | Yes | Yes | Yes | Yes | Yes               | Yes               | Yes               | Yes               | Yes                      | Yes      | Yes | [ <sup>x1</sup> No<br>Yes<br>for<br>CA] | [ <sup>20</sup> No <sup>(20)</sup> ] |

NB: refer to the end of Annex VIII for an overview of the notes to the annexes.

## ANNEX VI

Pollutant emission limit values, OBD thresholds and sound-level limit values for type-approval and conformity of production

(A) Tailpipe emission limits after cold start

(A1)

EURO 4

| Vehicle category                            | Vehicle category name | Propulsion class  | Euro level | Mass of carbon monoxide (CO) | Mass of total hydrocarbons (THC) | Mass of oxides of nitrogen (NO <sub>x</sub> ) | Mass of particulate matter (PM) | Test cycle    |
|---|-----------------------|---|------------|------------------------------|----------------------------------|---|---------------------------------|---------------|
|   |                       |   |            | L <sub>1</sub><br>(mg/km)    | L <sub>2</sub><br>(mg/km)        | L <sub>3</sub><br>(mg/km)                     | L <sub>4</sub><br>(mg/km)       |               |
| L1e-A                                       | Powered cycle         | PI/CI/Hybrid  | Euro 4     | 560                          | 100                              | 70  |                                 | ECE R47       |
| L1e-B                                       | Two-wheel moped       | PI/CI/Hybrid  | Euro 4     | 1 000                        | 630                              | 170   | —                               | ECE R47       |
| L2e   | Three-wheel moped     | PI/CI/Hybrid  | Euro 4     | 1 900                        | 730                              | 170   | —                               | ECE R47       |
| L3e<br>L4e <sup>(7)</sup><br>L5e-A<br>L7e-A | —                     | PI/CI/Hybrid, motorcycles with > 30 km/h and without side-car | Euro 4     | 1 140                        | 380                              | 70  | —                               | WMTC, stage 2 |
|   | —                     | PI/CI/Hybrid, cycle   | Euro 4     | 1 140                        | 170                              | 90  | —                               | WMTC, stage 2 |

**Changes to legislation:** There are currently no known outstanding effects for the Regulation (EU) No 168/2013 of the European Parliament and of the Council. (See end of Document for details)

|                |  | Head-on-road quad |        |       |     |     |                   |               |
|----------------|--|-------------------|--------|-------|-----|-----|-------------------|---------------|
|                |  | CI/CI Hybrid      | Euro 4 | 1 000 | 100 | 300 | 80 <sup>(8)</sup> | WMTC, stage 2 |
| L5e-B          | Commercial tricycle                          | PI/PI Hybrid      | Euro 4 | 2 000 | 550 | 250 | —                 | ECE R40       |
|                |  | CI/CI Hybrid      | Euro 4 | 1 000 | 100 | 550 | 80 <sup>(8)</sup> | ECE R40       |
| L6e-A<br>L6e-B | Light on-road quad<br>Light quadrimobile     | PI/PI Hybrid      | Euro 4 | 1 900 | 730 | 170 |                   | ECE R47       |
|                |  | CI/CI Hybrid      | Euro 4 | 1 000 | 100 | 550 | 80 <sup>(8)</sup> | ECE R47       |
| L7e-B<br>L7e-C | Heavy all terrain quad<br>Heavy quadrimobile | PI/PI Hybrid      | Euro 4 | 2 000 | 550 | 250 | —                 | ECE R40       |
|                |  | CI/CI Hybrid      | Euro 4 | 1 000 | 100 | 550 | 80 <sup>(8)</sup> | ECE R40       |

(A2)

EURO 5

| Vehicle category | Vehicle category name         | Propulsion class | Euro Level <sup>(4)</sup> | Mass of carbon monoxide (CO)           | Mass of total carbon (HC)               | Mass of Non-hydrocarbons (THC)          | Mass of oxides of nitrogen (NOx)       | Mass of particulate matter (PM)        | Test cycle                   |
|------------------|-------------------------------|------------------|---------------------------|--|---|---|--|--|------------------------------|
|                  |                               |                  |                           | <b>L<sub>1</sub></b><br><b>(mg/km)</b> | <b>L<sub>2A</sub></b><br><b>(mg/km)</b> | <b>L<sub>2B</sub></b><br><b>(mg/km)</b> | <b>L<sub>3</sub></b><br><b>(mg/km)</b> | <b>L<sub>4</sub></b><br><b>(mg/km)</b> |                              |
| L1e-A            | Powered cycle                 | PI/CI/ Hybrid    | Euro 5                    | 500                                    | 100                                     | 68                                      | 60                                     | 4,5 <sup>(9)</sup>                     | Revised WMTC <sup>(10)</sup> |
| L1e-B-<br>L7e    | All other L-category vehicles | PI/ PI Hybrid    | Euro 5                    | 1 000                                  | 100                                     | 68                                      | 60                                     | 4,5 <sup>(9)</sup>                     | Revised WMTC                 |
|                  |                               | CI/CI Hybrid     |                           | 500                                    | 100                                     | 68                                      | 90                                     | 4,5                                    | Revised WMTC                 |

(B) On-board diagnostics emission thresholds

**Changes to legislation:** There are currently no known outstanding effects for the Regulation (EU) No 168/2013 of the European Parliament and of the Council. (See end of Document for details)

(B1)

## EURO 4, OBD STAGE I

| Vehicle category   | Vehicle category name | Propulsion class   | Euro level | Mass of carbon monoxide (CO) | Mass of total hydrocarbons (THC) | Mass of oxides of nitrogen (NO <sub>x</sub> ) | Test cycle       |
|--|-----------------------|--|------------|------------------------------|----------------------------------|---|------------------|
|  |                       |  |            | OT <sub>1</sub><br>(mg/km)   | OT <sub>2</sub><br>(mg/km)       | OT <sub>3</sub><br>(mg/km)                    |                  |
| [ <sup>F1</sup> ]  |                       |  |            |                              |                                  |   |                  |
| L3e ( <sup>5</sup> )<br>L4e ( <sup>7</sup> )<br>L5e-A<br>L7e-A | —                     | PI/PI<br>Hybrid<br>motorcycle<br>with<br>30 km/h<br>and<br>PI/PI<br>without<br>side<br>car<br>Y <sub>max</sub> ≥<br>130 km/h<br>Tricycle | Euro 4     | 2 170                        | 1 400                            | 350   | WMTC,<br>stage 2 |
|  | —                     | CI/CI<br>Hybrid<br>on<br>road<br>quad  |            | 2 170                        | 630                              | 450   | WMTC,<br>stage 2 |
|  | —                     | CI/CI<br>Hybrid<br>on<br>road<br>quad  |            | 2 170                        | 630                              | 900   | WMTC,<br>stage 2 |

(B2)

EURO 5, OBD STAGE I AND OBD STAGE II (<sup>4</sup>)

| Vehicle category                             | Vehicle category name  | Propulsion class | Euro level | Mass of carbon monoxide (CO) | Mass of Non-hydrocarbons (NMHC) | Mass of oxides of nitrogen (NO <sub>x</sub> ) | Mass of particulate matter (PM) | Test cycle      |
|--|--|------------------|------------|------------------------------|---------------------------------|---|---------------------------------|-----------------|
|  |  |                  |            | OT <sub>1</sub><br>(mg/km)   | OT <sub>2</sub><br>(mg/km)      | OT <sub>3</sub><br>(mg/km)                    | OT <sub>4</sub><br>(mg/km)      |                 |
| [ <sup>F2</sup> L3e,<br>L4e,<br>L5e,<br>L7e] | [ <sup>F2</sup> All L<br>category<br>vehicles<br>except<br>category<br>L1e,<br>L2e and<br>L6e] | PI/PI<br>Hybrid  | Euro 5     | 1 900                        | 250                             | 300   | 50                              | Revised<br>WMTC |
|  |  | CI/CI<br>Hybrid  | Euro 5     | 1 900                        | 320                             | 540   | 50                              | Revised<br>WMTC |

(C) Evaporative emission limits

**Changes to legislation:** There are currently no known outstanding effects for the Regulation (EU) No 168/2013 of the European Parliament and of the Council. (See end of Document for details)

## (C1)

## EURO 4

| Vehicle category          | Vehicle category name  | Propulsion class   | Euro level | Mass of total hydrocarbons (THC)(mg/test) | Test cycle |
|---------------------------|--|--------------------|------------|---|------------|
| L3e<br>L4e <sup>(7)</sup> | Two-wheel motorcycle <sup>(13)</sup> with and without side-car | PI <sup>(11)</sup> | Euro 4     | 2 000                                     | SHED       |
| L5e-A                     | Tricycle   | PI <sup>(11)</sup> | Euro 4     |   |            |
| L6e-A                     | Light on-road quad   | PI <sup>(11)</sup> | Euro 4     |   |            |
| L7e-A                     | Heavy on-road quad   | PI <sup>(11)</sup> | Euro 4     |   |            |

## (C2)

## EURO 5

| Vehicle Class <sup>(12)</sup> | Vehicle category name                          | Propulsion Class   | Euro level | Permeation test(mg/m <sup>2</sup> /day) |             | Mass of total hydrocarbons (THC) in SHED test(mg/test) |
|-------------------------------|--|--------------------|------------|---|-------------|--|
|                               |  |                    |            | Fuel tank                               | Fuel tubing | Vehicle  |
| L1e-A                         | Powered cycle                                  | PI <sup>(11)</sup> | Euro 5     | 1 500                                   | 15 000      | 1 500  |
| L1e-B                         | Two-wheel moped                                |                    | Euro 5     | 1 500                                   | 15 000      | 1 500  |
| L2e                           | Three-wheel moped                              |                    | Euro 5     | 1 500                                   | 15 000      | 1 500  |
| L3e<br>L4e <sup>(7)</sup>     | Two-wheel motorcycle with and without side-car |                    | Euro 5     |   |             | 1 500  |
| L5e-A                         | Tricycle                                       |                    | Euro 5     |   |             | 1 500  |

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|        |                     |        |       |        |       |
|--------|---------------------|--------|-------|--------|-------|
| L5e-B  | Commercial tricycle | Euro 5 | 1 500 | 15 000 | 1 500 |
| L6e-A  | Light on-road quad  | Euro 5 |       |        | 1 500 |
| L6e-B  | Light quadrimobile  | Euro 5 | 1 500 | 15 000 | 1 500 |
| L7e-A  | Heavy on-road quad  | Euro 5 |       |        | 1 500 |
| L7e-.B | All terrain quad    | Euro 5 | 1 500 | 15 000 | 1 500 |
| L7e-C  | Heavy quadrimobile  | Euro 5 | 1 500 | 15 000 | 1 500 |

(D) Sound-level limits — Euro 4 and Euro 5

| Vehicle category | Vehicle category name  | Euro 4 sound level <sup>(14)</sup> (dB(A)) | Euro 4 test procedure <sup>(16)</sup> | Euro 5 sound level <sup>(15)</sup> (dB(A)) | Euro 5 test procedure  |
|------------------|--|--|---------------------------------------|--|------------------------|
| L1e-A            | Powered cycle  | [ <sup>x1</sup> 63]                        | Delegated act/UNECE regulation No 63  |  | UNECE regulation No 63 |
| L1e-B            | Two-wheel moped $v_{\max} \leq 25$ km/h  | 66   |                                       |  |                        |
|                  | Two-wheel moped $v_{\max} \leq 45$ km/h  | 71   |                                       |  |                        |
| L2e              | Three-wheel moped  | 76   | Delegated act/UNECE regulation No 9   |  | UNECE regulation No 9  |
| L3e              | Two-wheel motorcycle<br>Engine capacity $\leq 80$ cm <sup>3</sup>                            | 75   | Delegated act/UNECE regulation No 41  |  | UNECE regulation No 41 |
|                  | Two-wheel motorcycle<br>$80$ cm <sup>3</sup> <<br>Engine capacity $\leq 175$ cm <sup>3</sup> | 77   |                                       |  |                        |

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|       |   |    |  |  |
|-------|---|----|--|--|
|       | Two-wheel motorcycle<br>Engine capacity > 175 cm <sup>3</sup> | 80 |  |  |
| L4e   | Two-wheel motorcycle with side-car                            | 80 | [ <sup>X2</sup> Delegated act/UNECE regulation No 9] | [ <sup>X2</sup> UNECE regulation No 9] |
| L5e-A | Tricycle  | 80 | Delegated act/UNECE regulation No 9                  | UNECE regulation No 9                  |
| L5e-B | Commercial tricycle   | 80 |  |  |
| L6e-A | Light on-road quad  | 80 | Delegated act/[ <sup>X1</sup> UNECE regulation No 9] | [ <sup>X1</sup> UNECE regulation No 9] |
| L6e-B | Light quadrimobile  | 80 | Delegated act/UNECE regulation No 9                  | UNECE regulation No 9                  |
| L7e-A | Heavy on-road quad  | 80 |  |  |
| L7e-B | Heavy all terrain quad  | 80 |  |  |
| L7e-C | Heavy quadrimobile  | 80 |  |  |

#### Editorial Information

**X2** Inserted by [Corrigendum 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 \(Official Journal of the European Union L 60 of 2 March 2013\)](#).

NB: refer to the end of Annex VIII for an overview of the notes to the annexes.

## ANNEX VII

### Durability of pollution control devices

(A) Durability mileage of L-category vehicles

| Vehicle category | Vehicle category name | Euro 4 durability mileage (km) and Euro 5 durability mileage <sup>(4)</sup> (km) |
|------------------|-----------------------|--|
| L1e-A            | — Powered cycle       | 5 500  |

**Changes to legislation:** There are currently no known outstanding effects for the Regulation (EU) No 168/2013 of the European Parliament and of the Council. (See end of Document for details)

|                         |                               |   |        |
|-------------------------|-------------------------------|---|--------|
| L3e-AxT (x = 1, 2 or 3) | —                             | Two-wheel Trial motorcycle                      | 11 000 |
| L1e-B                   | —                             | Two-wheel moped                                 |        |
| L2e                     | —                             | Three-wheel moped                               |        |
| L3e-AxE (x = 1, 2 or 3) | —                             | Two-wheel Enduro motorcycle                     |        |
| L6e-A                   | —                             | Light on-road quad                              |        |
| L7e-B                   | —                             | Heavy all terrain quad                          |        |
| L3e                     | —                             | Two-wheel motorcycle, with and without side-car | 20 000 |
| L4e <sup>(7)</sup>      | (v <sub>max</sub> < 130 km/h) |   |        |
| L5e                     | —                             | Tricycle  |        |
| L6e-B                   | —                             | Light quadri-mobile                             |        |
| L7e-C                   | —                             | Heavy quadri-mobile                             |        |
| L3e                     |                               | Two-wheel motorcycle, with and without side-car |        |
| L4e <sup>(7)</sup>      | (v <sub>max</sub> ≥ 130 km/h) |   |        |
| L7e-A                   |                               | Heavy on-road quad                              |        |

## (B) Deterioration Factors (DF)

| Vehicle category name | Euro 4DF (-) | DF (-) |     |                 |     | Euro 5DF <sup>(4)</sup> (-) |     |                    |      |     |                 |     |                                   |
|-----------------------|--------------|--------|-----|-----------------|-----|-----------------------------|-----|--------------------|------|-----|-----------------|-----|-----------------------------------|
|                       |              | CO     | HC  | NO <sub>x</sub> | PM  | CO                          | THC |                    | NMHC |     | NO <sub>x</sub> |     | PM <sup>(17)</sup> <sup>(4)</sup> |
|                       |              |        |     |                 |     |                             | PI  | CI <sup>(18)</sup> | PI   | CI  | PI              | CI  | CI                                |
| L1e-L7e               | All          | 1,3    | 1,2 | 1,2             | 1,1 | 1,3                         | 1,3 | 1,1                | 1,3  | 1,1 | 1,3             | 1,1 | 1,0                               |

NB: refer to the end of Annex VIII for an overview of the notes to the annexes.



**Changes to legislation:** There are currently no known outstanding effects for the Regulation (EU) No 168/2013 of the European Parliament and of the Council. (See end of Document for details)

## ANNEX VIII

[<sup>X1</sup>ENHANCED FUNCTIONAL SAFETY REQUIREMENTS<sup>(21)</sup>]

| Topic   | Requirements   |
|---|--|
| Mandatory fitting of advanced brake systems                                       | <p>(a) new motorcycles<sup>(22)</sup> of the L3e-A1 subcategory which are made available on the market, registered and entering into service are to be equipped with either an anti-lock or a combined brake system or both types of advanced brake systems, at the choice of the vehicle manufacturer;</p> <p>(b) new motorcycles of subcategories L3e-A2 and L3e-A3 which are made available on the market, registered and entering into service to be equipped with an anti-lock brake system.</p> <p>Exemption:<br/>L3e-AxE (x = 1, 2 or 3, two-wheel Enduro motorcycles) and L3e-AxT (x = 1, 2 or 3, two-wheel Trial motorcycles) are exempted from the obligatory fitting of advanced brake systems.</p> |
| Safe cornering on hard-surfaced roads   | <p>L-category vehicles are to be constructed such that each of the wheels can rotate at different speeds at all times in order to allow safe cornering on hard-surfaced roads. If a vehicle is equipped with a lockable differential, it must be designed to be normally unlocked.</p>   |
| Improvement of vehicle and rider visibility by automatic switching-on of lighting | <p>In order to improve their visibility, L-category vehicles are to be equipped with the following:</p> <p>(a) for L1e vehicles: lighting and light-signalling devices in compliance with UNECE regulation No 74 Rev. 2, which requires the lighting system to be turned on automatically;</p> <p>(b) for L3e vehicles: at the choice of the vehicle manufacturer, either lighting and light-signalling devices in compliance with UNECE regulation No 53 Rev. 2 and its amendments 1 and 2, or dedicated day-time running lights (DRL) complying with UNECE regulation</p>  |

**Changes to legislation:** There are currently no known outstanding effects for the Regulation (EU)

No 168/2013 of the European Parliament and of the Council. (See end of Document for details)

|   |   |
|---|---|
|   | <p>No 87 Rev. 2 and its amendments 1 and 2;</p> <p>(c) for all other subcategories of L-category vehicles: a lighting system automatically turning on or at the choice of the manufacturer, dedicated day-time running lights that automatically switch on<sup>(23)</sup>.</p>  |
| (Annex II (B) 3) Electrical Safety  | Vehicles of category L, with respect to the electric power train when equipped with one or more traction motor(s) operated by electric power and not permanently connected to the grid, as well as their high voltage components and systems which are galvanically connected to the high voltage bus of the electric power train, shall be designed so as to avoid any risk to electrical safety, in using relevant requirements of UNECE regulation No 100 and ISO 13063.   |
| (Annex II (B) 4) Requirements on manufacturer declaration requirements regarding endurance testing of functional safety critical systems, parts and equipment | <p>The vehicle manufacturer shall declare that vehicles produced in conformity with Article 22(2), shall be able to withstand normal use as intended for at least the distance travelled as specified below, within five years after first registration.</p> <p>The distance shall be 1,5 times the distance as specified in Annex VII in direct relation to the vehicle category in question and the emission stage (i.e. Euro level) according to which the vehicle is to be type-approved, however, the required distance shall not exceed 60 000 km for any vehicle category.</p> |
| (Annex II (B) 5) Requirements on front and rear protective structures   | Vehicles of category L, with respect to their front and rear structures, shall be designed to avoid pointed or sharp parts or projections which are directed outwards and which are likely to catch on or significantly increase the severity of injuries or chance of lacerations to vulnerable road users in case of a collision. This is applicable both for front and rear structure of the vehicle.  |
| (Annex II (B) 10) Safety belt anchorages and safety belts   | Mandatory requirements for safety belt anchorages and the installation of safety belts on vehicles of categories L2e, L5e, L6e and L7e fitted with body work.   |
| (Annex II (B) 15) Requirements concerning vehicle occupant protection including interior fittings and vehicle doors   | Vehicles of category L2e, L5e, L6e and L7e which are fitted with bodywork shall be designed to avoid any pointed or sharp parts or projections which are likely to  |

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**Changes to legislation:** There are currently no known outstanding effects for the Regulation (EU) No 168/2013 of the European Parliament and of the Council. (See end of Document for details)

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|   |  |
|---|--|
|   | <p>significantly increase the severity of injuries to the driver and the passengers. Vehicles fitted with doors shall be designed to ensure that these doors are constructed with relevant latches and hinges.</p>   |
| (Annex II (B) 17) Requirements on vehicle structure integrity | <p>The vehicle manufacturer shall declare that in case of a recall due to a serious safety risk, specific analysis of vehicle structures, components and/or parts by means of engineering calculations, virtual testing methods and/or structural testing will be made available immediately to the approval authority and the Commission upon request. Vehicle type-approval shall not be granted if there is reason to doubt that the vehicle manufacturer is able to provide such analysis.</p> |

NB: refer to the end of Annex VIII for an overview of the notes to the annexes.

**Changes to legislation:**

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