

21 November 2019

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## **Agreement**

### **Concerning the Adoption of Harmonized Technical United Nations Regulations for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these United Nations Regulations\***

(Revision 3, including the amendments which entered into force on 14 September 2017)

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#### **Addendum 52 – UN Regulation No. 53**

#### **Revision 4 – Amendment 2**

Supplement 2 to 02 series of amendments – Date of entry into force: 15 October 2019

#### **Installation of lighting and light-signalling devices for L<sub>3</sub> vehicles**

This document is meant purely as documentation tool. The authentic and legal binding text is: ECE/TRANS/WP.29/2019/17 (as amended by document ECE/TRANS/WP.29/1145, paragraph 107, ECE/TRANS/WP.29/2018/86/Rev.1 and ECE/TRANS/WP.29/2018/104/Rev.1).



**UNITED NATIONS**

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\* Former titles of the Agreement:  
Agreement concerning the Adoption of Uniform Conditions of Approval and Reciprocal Recognition of Approval for Motor Vehicle Equipment and Parts, done at Geneva on 20 March 1958 (original version);  
Agreement concerning the Adoption of Uniform Technical Prescriptions for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these Prescriptions, done at Geneva on 5 October 1995 (Revision 2).

## Supplement 2 to the 02 series of amendments to UN Regulation No. 53 (Installation of lighting and light-signalling devices for L3 vehicles)

*Paragraph 2. and its subparagraphs, amend to read:*

### **"2. Definitions**

For the purpose of this Regulation, the definitions given in the latest series of amendments to UN Regulation No. 48 in force at the time of application for type approval shall apply, unless otherwise specified in this Regulation.

- 2.1. "*Vehicle type*" means a category of vehicles which do not differ from each other in such essential respects as:
  - 2.1.1. The dimensions and external shape of the vehicle;
  - 2.1.2. The number and position of the devices;
  - 2.1.3. The following shall likewise not be deemed to be "vehicles of a different type":
    - 2.1.3.1. Vehicles which differ within the meaning of paragraphs 2.1.1. and 2.1.2. above but not in such a way as to entail a change in the kind, number, position and geometric visibility of the lamps prescribed for the vehicle type in question; and
    - 2.1.3.2. Vehicles on which lamps approved under one of the Regulations annexed to the 1958 Agreement, or lamps allowed in the country in which the vehicles are registered, are fitted, or are absent where their fitting is optional;
- 2.2. "*Unladen vehicle*" means a vehicle without a driver, or passenger, and unladen, but with its fuel tank full and its normal complement of tools;
- 2.3. "*Lamp*" means a device designed to illuminate the road or to emit a light signal to other road users. Rear registration plate lamp and retro-reflectors are likewise to be regarded as lamps;
  - 2.3.1. "*Equivalent lamps*" means lamps having the same function and authorised in the country in which the vehicle is registered; such lamps may have different characteristics from those of the lamps with which the vehicle is equipped at the time of approval, on condition that they satisfy the requirements of this Regulation;
  - 2.3.2. "*Independent lamp*" means devices having separate apparent surfaces, separate light sources and separate lamp bodies;
  - 2.3.3. "*Grouped lamps*" means devices having separate apparent surfaces and separate light sources, but a common lamp body;
  - 2.3.4. "*Combined*" means devices having separate apparent surfaces, but a common light source and a common lamp body;
  - 2.3.5. "*Reciprocally incorporated*" means devices having separate light sources or a single light source operating under different conditions (for example, optical, mechanical, electrical differences), totally or partially common apparent surfaces and a common lamp body;
  - 2.3.6. "*Direction indicator lamp*" means the lamp used to indicate to other road-users that the driver intends to change direction to the right or to the left;

A direction indicator lamp or lamps may also be used according to provisions of UN Regulation No. 97.

2.3.7. "*Front position lamp*" means the lamp used to indicate the presence of the vehicle when viewed from the front;

2.3.8. "*Rear position lamp*" means the lamp used to indicate the presence of the vehicle when viewed from the rear;

2.3.9. "*Retro-reflector*" means a device used to indicate the presence of a vehicle by the reflection of light emanating from a light source not connected to the vehicle, the observer being situated near the source;

For the purpose of this Regulation, retro-reflecting number plates are not considered as retro-reflectors;

2.4. "*Light-emitting surface*" of a "lighting device", "light-signalling device" or a retro-reflector means all or part of the exterior surface of the transparent material as declared in the request for approval by the manufacturer of the device on the drawing, see Annex 3;

2.5. "*Illuminating surface*" (see Annex 3);

2.5.1. "*Illuminating surface of a lighting device*" (driving beam (main beam) headlamp, passing beam (dipped beam) headlamp, front fog lamp means the orthogonal projection of the full aperture of the reflector, or in the case of headlamps with an ellipsoidal reflector of the "projection lens", on a transverse plane. If the lighting device has no reflector, the definition of paragraph 2.5.2. below shall be applied. If the light emitting surface of the lamp extends over part only of the full aperture of the reflector, then the projection of that part only is taken into account.

In the case of a passing-beam headlamp, the illuminating surface is limited by the apparent trace of the cut-off on to the lens. If the reflector and lens are adjustable relative to one another, the mean adjustment should be used;

In the case where any combination of a headlamp producing the principal passing-beam and additional lighting units or light sources designed to produce bend lighting are operated together, the individual illuminating surfaces, taken together, constitute the illuminating surface.

2.5.2. "*Illuminating surface of a light-signalling device other than a retro-reflector*" (direction indicator lamp, stop lamp, front position lamp, rear position lamp, hazard warning signal, rear fog lamp means the orthogonal projection of the lamp in a plane perpendicular to its axis of reference and in contact with the exterior light-emitting surface of the lamp, this projection being bounded by the edges of screens situated in this plane, each allowing only 98 per cent of the total luminous intensity of the light to persist in the direction of the axis of reference. To determine the lower, upper and lateral limits of the illuminating surface, only screens with horizontal or vertical edges shall be used;

2.5.3. "*Illuminating surface of a retro-reflector*" (para. 2.3.9. above) means the orthogonal projection of a retro-reflector in a plane perpendicular to its axis of reference and delimited by planes continuous to the outermost parts of the retro-reflector's optical system and parallel to that axis. For the purposes of determining the lower, upper and lateral edges of the device, only horizontal and vertical planes shall be considered;

- 2.6. The "*apparent surface*" for a defined direction of observation means, at the request of the manufacturer or his duly accredited representative, the orthogonal projection of:
- Either the boundary of the illuminating surface projected on the exterior surface of the lens (a-b),
- Or the light-emitting surface (c-d),
- In a plane perpendicular to the direction of observation and tangential to the most exterior point of the lens (see Annex 3 to this Regulation);
- 2.7. "*Centre of reference*" means the intersection of the axis of reference with the exterior light-emitting surface; it is specified by the manufacturer of the lamp;
- 2.8. "*Extreme outer edge*", on either side of the vehicle means the plane parallel to the median longitudinal plane of the vehicle and touching the lateral extremity of the vehicle, disregarding the projection or projections:
- 2.8.1. Of rear-view mirrors,
- 2.8.2. Of direction indicator lamps,
- 2.8.3. Of front and rear position lamps and retro-reflectors;
- 2.9. "*Over-all width*" means the distance between the two vertical planes defined in paragraph 2.8. above;
- 2.10. "*Colour of the light emitted from the device*". The definitions of the colour of the light emitted given in UN Regulation No. 48 and its series of amendments in force at the time of application for type approval shall apply to this Regulation.
- 2.11. "*Gross vehicle mass*" or "maximum mass" means the technically permissible maximum laden mass as declared by the manufacturer.
- 2.12. "*Laden*" means so loaded as to attain the gross vehicle mass as defined in paragraph 2.11. above.
- 2.13. "*Horizontal inclination*" means the angle created between the beam pattern when the motorcycle is set as specified in paragraph 5.4. of this Regulation, and the beam pattern when the motorcycle is banked (see drawing in Annex 6);
- 2.14. "*Horizontal inclination adjustment system (HIAS)*" means a device that adjusts the horizontal inclination of the headlamp towards zero;
- 2.15. "*Bank angle*" means the angle made with the vertical by the vertical longitudinal median plane of the motorcycle, when the motorcycle is rotated about its longitudinal axis (see drawing in Annex 6);
- 2.16. "*HIAS signal*" means any control signal or, any additional control input to the system or, a control output from the system to the motorcycle;
- 2.17. "*HIAS signal generator*" means a device, reproducing one or more of the HIAS signals for system test;
- 2.18. "*HIAS test angle*" means the angle  $\delta$  created by the headlamp cut-off line and HH line (in case of an asymmetrical beam headlamp, the horizontal part of the cut-off shall be used), (see drawing in Annex 6).
- 2.19. "*Bend lighting*" means a lighting function to provide enhanced illumination in bends.

- 2.20. "H plane" means the horizontal plane containing the centre of reference of the lamp.
- 2.21. "Sequential activation" means an electrical connection where the individual light sources of a lamp are wired such that they are activated in a predetermined sequence.
- 2.22. "Emergency stop signal" means a signal to indicate to other road users to the rear of the vehicle that a high retardation"

Insert a new paragraph 2.34., to read:

- "2.34. "Exterior courtesy lamp" means a lamp used to provide supplementary illumination to assist the mounting and dismounting of the vehicle driver and passenger or in loading operations."

Paragraph 3.2.1., amend to read:

- "3.2.1. A description of the vehicle type with regard to the items mentioned in paragraphs 2.1.1. to 2.1.3. above; the vehicle type duly identified shall be specified;"

Paragraphs 3.2.4. and 3.2.5., amend to read:

- "3.2.4. If necessary, in order to verify the conformity to the prescriptions of the present regulation, a layout drawing or drawings of each lamp showing the illuminating surface, as defined in paragraph 2.7.1. above, the light-emitting surface as defined in paragraph 2.4. above, the axis of reference as defined in UN Regulation No. 48 and the centre of reference as defined in UN Regulation No. 48. This information is not necessary in the case of the rear registration plate lamp (as defined in UN Regulation No. 48).
- 3.2.5. The application shall include a statement of the method used for the definition of the apparent surface (paragraph 2.6. above)."

Paragraphs 5.6.2.1., 5.6.2.2. and 5.6.2.3., amend to read:

- "5.6.2.1. Single lamps as defined in paragraph 2.16.1. of UN Regulation No. 48, subparagraph (a), composed of two or more distinct parts, shall be installed in such a way that:
- (a) Either the total area of the projection of the distinct parts on a plane tangent to the exterior surface of the outer lens and perpendicular to the reference axis shall occupy not less than 60 per cent of the smallest quadrilateral circumscribing the said projection; or
  - (b) The minimum distance between the facing edges of two adjacent/tangential distinct parts shall not exceed 75 mm when measured perpendicularly to the reference axis.

These requirements shall not apply to a single retro-reflector.

- 5.6.2.2. Single lamps as defined in paragraph 2.16.1. of UN Regulation No. 48, subparagraph (b) or (c), composed of two lamps marked "D" or two independent retro reflectors, shall be installed in such a way that:
- (a) Either the projection of the apparent surfaces in the direction of the reference axis of the two lamps or retro reflectors occupies not less than 60 per cent of the smallest quadrilateral circumscribing the projections of the said apparent surfaces in the direction of the reference axis; or
  - (b) The minimum distance between the facing edges of the apparent surfaces in the direction of the reference axis of two lamps or two independent retro

reflectors does not exceed 75 mm when measured perpendicularly to the reference axis.

- 5.6.2.3. Single lamps as defined in paragraph 2.16.1. of UN Regulation No. 48, subparagraph (d), shall fulfil the requirements of paragraph 5.6.2.1.

Where two or more lamps and/or two or more separate apparent surfaces are included into the same lamp body and/or have a common outer lens, these shall not be considered as an interdependent lamp system.

However, a lamp in the shape of a band or strip may be part of an interdependent lamp system."

*Paragraph 5.8.1., amend to read:*

- "5.8.1. The photometric characteristics of a direction indicator lamp except for categories 5 and 6 specified in UN Regulation No. 6 or 148, and of a direction indicator lamp specified in UN Regulation No. 50 or 148 may be varied during a flash by sequential activation of light sources as specified in paragraph 5.6. of UN Regulation No. 6 or paragraph 5.6.11. of UN Regulation No. 148 or in paragraph 6.8. of UN Regulation No. 50.

This provision shall not apply when direction indicator lamps of categories 2a and 2b of UN Regulation No. 6 or 148 or category 12 of UN Regulation No. 50 or 148 are operated as emergency stop signal according to paragraph 6.14. of this Regulation."

*Paragraph 5.9., amend to read:*

- "5.9. No red light which could give rise to confusion shall be emitted from a lamp as defined in paragraph 2.5. in a forward direction and no white light which could give rise to confusion, shall be emitted from a lamp as defined in paragraph 2.5. in a rearward direction. No account shall be taken of lighting devices fitted for the interior lighting of the vehicle. In case of doubt, this requirement shall be verified as follows (see drawing in Annex 4)..."

*Paragraph 5.13., amend to read:*

- "5.13. Colours of the lights

...

Emergency stop signal: amber or red

Exterior courtesy lamp: white"

*Paragraph 5.14.4., amend to read:*

- "5.14.4. Stop lamp, S1 category device specified in UN Regulation No. 7 or 148 or stop lamp specified in UN Regulation No. 50 (paragraph 6.4.) or stop lamp for category L vehicles in UN Regulation No 148;"

*Paragraph 5.15.4., amend to read:*

- "5.15.4. Stop lamp, S3 category device specified in UN Regulation No. 7 (paragraph 6.4.) or 148;"

*Insert a new paragraph 5.15.6., to read:*

- "5.15.6. Exterior courtesy lamp (paragraph 6.15.)."

*Paragraph 5.19.2., amend to read:*

- "5.19.2. In the case where the functions referred to in paragraph 5.19. are obtained by an

assembly of two lamps marked "D" (see paragraph 2.16.1. of UN Regulation No. 48), only one of the lamps needs to meet the position, geometric visibility and photometric requirements for those lamps at all fixed positions of the movable components."

*Insert a new paragraph 5.21., to read:*

"5.21. A device type approved according to any preceding series of amendments to UN Regulations Nos. 148 and/or 149 and/or 150 is deemed equivalent to one approved according to the latest series of amendments to the pertinent UN Regulations Nos. 148 and/or 149 and/or 150, when the change indexes (defined in UN Regulation No. 48) related to each individual lamp (function) do not differ. In this case such a device may be fitted on the vehicle to be type approved without any update of the device type approval documents and device markings."

*Paragraph 6.1.1.1., amend to read:*

"6.1.1.1. For motorcycles having a cylinder capacity  $\leq 125 \text{ cm}^3$   
...  
(i) Class A, B, D, CS, DS or ES of UN Regulation No. 149"

*Paragraph 6.1.1.2., amend to read:*

"6.1.1.2. For motorcycles having a cylinder capacity  $> 125 \text{ cm}^3$   
...  
(h) Class A, B, D, DS or ES of UN Regulation No. 149  
..."

*Paragraph 6.2.1.1., amend to read:*

"6.2.1.1. For motorcycles having a cylinder capacity  $\leq 125 \text{ cm}^3$   
...  
(i) Class A, B, D, CS, DS or ES of UN Regulation No. 149"

*Paragraph 6.2.1.2., amend to read:*

"6.2.1.2. For motorcycles having a cylinder capacity  $> 125 \text{ cm}^3$   
One or two of approved type according to:  
(a) Class D or E of UN Regulation No. 113;  
(b) UN Regulation No. 112;  
(c) UN Regulation No. 1;  
(d) UN Regulation No. 8;  
(e) UN Regulation No. 20;  
(f) UN Regulation No. 72;  
(g) UN Regulation No. 98;  
(h) Class A, B, D, DS or ES of UN Regulation No. 149  
Two of approved type according to:  
(i) Class C of UN Regulation No. 113;

(j) Class CS of UN Regulation No. 149"

*Paragraph 6.2.3.1.4.*, amend to read:

"6.2.3.1.4. If installed, additional lighting unit(s) which provide bend lighting, type approved as part of the passing-beam according to UN Regulation No. 113 or 149, shall be installed under the following conditions:

In the case of (a) pair(s) of additional lighting units, they shall be installed so that their reference centre(s) are symmetrical in relation to the median longitudinal plane of the vehicle.

In the case of a single additional lighting unit, its reference centre shall be coincident with the median longitudinal plane of the vehicle."

*Paragraph 6.2.4.*, amend to read:

"6.2.4. Geometric visibility

Defined by angles  $\alpha$  and  $\beta$  as specified in paragraph 2.13. of UN Regulation No. 48:

..."

*Paragraph 6.2.5.7.*, amend to read:

"6.2.5.7. Additional light source(s) or additional lighting unit(s) may be activated only in conjunction with the principal passing-beam or the driving-beam to produce bend lighting. The illumination provided by the bend lighting shall not extend above the horizontal plane that is parallel with the ground and containing the reference axis of the headlamp producing the principal passing-beam for all bank angles as specified by the manufacturer during type approval of the device according to UN Regulation No. 113 or 149."

*Paragraph 6.2.5.8.*, amend to read:

"6.2.5.8. The requirement in paragraph 6.2.5.7. above shall be tested as follows:

The test vehicle shall be set as specified in paragraph 5.4. of this Regulation. Measure the bank angles on both sides of the vehicle under every condition where the bend lighting is activated. The bank angles to measure are the bank angles specified by the manufacturer during type approval of the device according to UN Regulation No. 113 or 149.

The handlebar may be fixed in the straight ahead position so as not to move during the vehicle inclination.

For the test, the bend lighting may be activated by means of a signal generator provided by the manufacturer.

The system is considered to satisfy the requirements of paragraph 6.2.5.7. above, if all measured bank angles on both sides of the vehicle are greater than or equal to the minimum bank angles given in the communication form for the type approval of the device according to UN Regulation No. 113 or 149.

Conformity to paragraph 6.2.5.7. above may be demonstrated by the manufacturer using other means accepted by the Type Approval Authority responsible for type approval."

*Paragraph 6.2.6.*, amend to read:

"6.2.6. Electrical connections



The control for changing over to the passing-beam(s) shall switch off the driving-beam(s) simultaneously. Passing-beam headlamps with a light source approved in accordance with UN Regulation No. 99 shall remain switched on when the driving-beam is illuminated.

- 6.2.6.1. The additional light source(s) or additional lighting unit(s) used to produce bend lighting shall be so connected that it (they) cannot be activated unless the headlamp(s) producing the principal passing-beam or the driving-beam is (are) also activated.

The additional light source(s) or additional lighting unit(s) used to produce bend lighting on each side of the vehicle may only be automatically activated when the bank angle(s) is(are) greater or equal to the minimum bank angle(s) given in the communication form for the type approval of the device according to UN Regulation No. 113 or 149.

However, the additional light source(s) or additional lighting unit(s) shall not be activated when the bank angle is less than three degrees.

The additional light source(s) or additional lighting unit(s) shall be deactivated when the bank angle(s) is (are) less than the minimum bank angle(s) given in the communication form for the type approval of the device according to UN Regulation No. 113 or 149."

*Paragraph 6.3.2., amend to read:*

- "6.3.2. Arrangement

Two front indicators (category 1 as specified in UN Regulation No. 6 or 148 or category 11 specified in UN Regulation No. 50 or 148).

Two rear indicators (category 2 as specified in UN Regulation No. 6 or 148 or category 12 specified in UN Regulation No. 50 or 148)."

*Paragraph 6.3.3.1., amend to read:*

- "6.3.3.1. ...

For rear indicators, the clearance between the inner edges of the two illuminating surfaces shall be at least 180 mm on the condition that the prescriptions of paragraph 2.13. of UN Regulation No. 48 are applied even when the registration plate is mounted;"

*Paragraph 6.3.6., amend to read:*

- "6.3.6. Electrical connections

- 6.3.6.1. The direction indicator lamps shall switch on independently of the other lamps. All direction indicator lamps on one side of a vehicle shall be switched on and off by means of one control.

- 6.3.6.2. The direction indicator lamps may be switched ON to indicate the status of the device for protection of vehicles against unauthorized use.

- 6.3.6.3. The indication described in paragraph 6.3.6.2. shall be produced by the simultaneous operation of the direction indicator lamps and shall be in accordance to the following conditions.

In case of single indication: 3 seconds maximum

In case of continuous indication:

Duration: 5 minutes maximum

Frequency: (2 ± 1) Hz  
On time: Off time ± 10 per cent

This indication shall be allowed only when the device which starts and/or stops the engine (propulsion system) is set in a position which makes it impossible for the engine (propulsion system) to operate."

*Paragraph 6.3.7.* shall be deleted.

*Paragraphs 6.3.8. to 6.3.9.4. (former),* renumber as paragraphs 6.3.7. to 6.3.8.4. respectively.

*Paragraph 6.4.1.,* amend to read:

"6.4.1. Number

One or two approved as a category S1 device according to UN Regulation No. 7 or 148 or stop lamp according to UN Regulation No. 50 or stop lamp for category L vehicles of UN Regulation No. 148.

Optional one approved as a category S3 device according to UN Regulation No. 7 or 148."

*Paragraph 6.4.3.,* amend to read:

"6.4.3. Position

6.4.3.1. For category S1 device specified in UN Regulation No. 7 or UN Regulation No. 148 or stop lamp specified in UN Regulation No. 50 or 148

In height: not less than 250 mm nor more than 1,500 mm above the ground;

In length: at the rear of the vehicle.

6.4.3.2. For the category S3 device specified in UN Regulation No. 7 or 148

In height: The horizontal plane tangential to the lower edge of the apparent surface shall not be less than 850 mm above the ground.

However, the horizontal plane tangential to the lower edge of the apparent surface shall be above the horizontal plane tangential to the upper edge of the apparent surface of the category S1 device specified in UN Regulation No. 7 or 148 or stop lamp specified in UN Regulation No. 50 or stop lamp for category L vehicles of UN Regulation No. 148.

In length: at the rear of the vehicle."

*Paragraph 6.4.4.,* amend to read:

"6.4.4. Geometric visibility

For category S1 device specified in UN Regulation No. 7 or 148 or stop lamp specified in UN Regulation No. 50 or stop lamp for category L vehicles of UN Regulation No. 148

Horizontal angle: 45° to left and to right for a single lamp;

45° outwards and 10° inwards for each pair of lamps;

Vertical angle: 15° above and below the horizontal.

However, where a lamp is mounted below 750 mm (measured according to the provisions of paragraph 5.7.), the downward angle of 15° may be reduced to 5°.

For category S3 device specified in UN Regulation No. 7 or 148

Horizontal angle: 10° to the left and to the right of the longitudinal axis of the vehicle.

Vertical angle: 10° above and 5° below the horizontal."

*Paragraph 6.5.1.*, amend to read:

"6.5.1. Number

One, approved as a category 2 device according to UN Regulation No. 50 or 148. The device may consist of several optical components designed to illuminate the space reserved for the registration plate."

*Paragraph 6.10.4.*, amend to read:

"6.10.4. Geometric visibility

Defined by angles  $\alpha$  and  $\beta$  as specified in paragraph 2.13. of UN Regulation No. 48:

..."

*Paragraph 6.11.4.*, amend to read:

"6.11.4. Geometric visibility

Defined by angles  $\alpha$  and  $\beta$  as specified in paragraph 2.13. of UN Regulation No. 48:

..."

*Paragraph 6.13.2.*, amend to read:

"6.13.2. Number

One or two of approved type according to UN Regulation No. 87 or 148."

*Insert a new paragraph 6.15.*, to read:

"6.15. Exterior courtesy lamp

6.15.1. Presence

Optional for motorcycles.

6.15.2. Number

One or two; however further exterior courtesy lamps to illuminate footrest are permitted. Each footrest shall be illuminated by not more than one lamp.

6.15.3. Arrangement

No special requirement, however the requirements of paragraph 6.15.9.3. apply.

6.15.4. Position

No special requirement.

6.15.5. Geometric visibility

No special requirement.

- 6.15.6. Orientation  
No special requirement.
- 6.15.7. Electrical connections  
No special requirement.
- 6.15.8. Tell-tale  
No special requirement.
- 6.15.9. Other requirements
- 6.15.9.1. The exterior courtesy lamp shall not be activated unless the vehicle is stationary and one or more of the following conditions is satisfied:
- (a) The device which starts and/or stops the engine (propulsion system) is set in a position which makes it impossible for the engine (propulsion system) to operate; or
  - (b) A load compartment is opened for access.
- The provisions of paragraph 5.9. shall be met in all fixed positions of use.
- 6.15.9.2. Approved lamps emitting white light with the exception of main beam headlamps and day time running lamps may be activated as courtesy lamp function. They may also be activated together with the exterior courtesy lamps and the condition of paragraphs 5.10. and 5.11. above may not apply.
- 6.15.9.3. The technical service shall, to the satisfaction of the Type Approval Authority, perform a visual test to verify that there is no direct visibility of the apparent surface of the exterior courtesy lamps, if viewed by an observer moving on the boundary of a zone on a transverse plane 10 m from the front of the vehicle, a transverse plane 10 m from the rear of the vehicle, and two longitudinal planes 10 m from each side of the vehicle; these four planes to extend from 1 m to 3 m above and perpendicular to the ground as shown in Annex 7.
- In addition to the conditions described in paragraph 5.4., the requirements prescribed above shall be verified in the following vehicle conditions:
- Stand: On a prop stand or a centre stand, and both if applicable
- Steering: Straight ahead, and locked in each available position
- At the request of the applicant and with the consent of the Technical Service this requirement may be verified by a drawing or simulation."

*Annex 1, insert a new item 9.22., to read:*

"9.22. Exterior courtesy lamp: yes/no<sup>2</sup>"

*Annex 5*

*Paragraph 1.2.1., amend to read:*

"1.2.1. The angles of geometric visibility shall be checked in accordance with paragraph 2.13. of UN Regulation No. 48. The values measured for the angles shall be such that the individual specifications applicable to each lamp are fulfilled except that the limits of the angles may have an allowance corresponding to the  $\pm 3^\circ$  variation permitted in paragraph 5.3. of this Regulation for the mounting of the light-signalling devices."

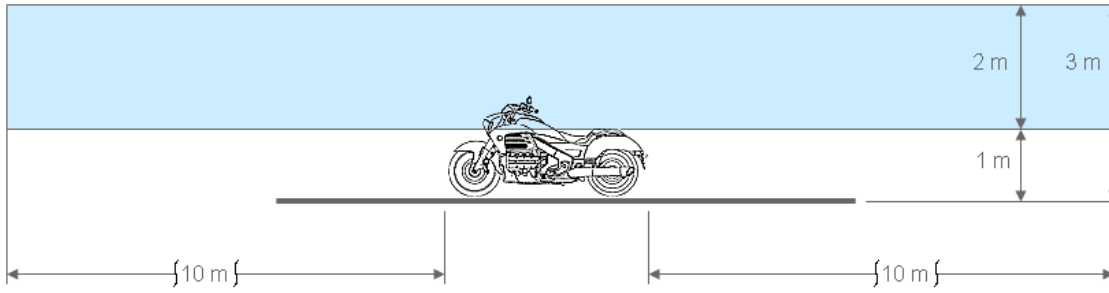
*Insert a new Annex 7, to read:*

"Annex 7

**Observing area towards the apparent surface of exterior  
courtesy lamps**

Zones of observation

This drawing shows the zone from one side, the other zones are from the front, the rear  
and from the other side of the vehicle.



Boundaries of the zones

