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World Forum for Harmonization of Vehicle Regulations**Working Party on Lighting and Light-Signalling****Eighty-second session**

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Item 6 (b) of the provisional agenda

UN Regulation No. 48 (Installation of lighting and light-signalling devices):**Proposals for new series of amendments to UN Regulation No. 48****Proposal for a new 07 series of amendments to UN Regulation No. 48****Submitted by the expert from the Special Interest Group***

The text reproduced below was prepared by the expert from Special Interest Group on the 07 series of amendments to UN Regulation No. 48 with the aim to clarify the definitions of "switching" and "activation" as well as to introduce the mandatory use of Emergency Stop Signal (ESS) to align UN Regulation No. 48 with the General Safety Regulation of the European Union. The modifications to the current text of the Regulation are marked in bold for new or strikethrough for deleted characters.

* In accordance with the programme of work of the Inland Transport Committee for 2018–2019 (ECE/TRANS/274, para. 123 and ECE/TRANS/2018/21 and Add.1, Cluster 3), the World Forum will develop, harmonize and update Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

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I. Proposal

Paragraph 2.3.5., amend to read:

"2.3.5. "Operating tell-tale" means a visual or auditory signal (or any equivalent signal) indicating that a device has been switched ~~on~~ **ON** and is operating correctly or not."

Paragraph 2.3.6., amend to read:

"2.3.6. "Closed-circuit tell-tale" means a visual (or any equivalent signal) indicating that a device has been switched **ON** ~~on~~, but not indicating whether it is operating correctly or not."

Paragraph 2.3.10., amend to read:

"2.3.10. "Normal condition of use of a vehicle" means:

2.3.10.1. For a motor vehicle, when the vehicle is ready to move with its propulsion ~~engine~~ **system** running and its movable components are in the normal position(s) as defined in paragraph 2.3.9.;

2.3.10.2. And for a trailer, when the trailer is connected to a drawing motor vehicle in the conditions as prescribed in paragraph 2.3.10.1. and its movable components are in the normal position(s) as defined in paragraph 2.3.9."

Paragraph 2.3.11., amend to read:

"2.3.11. "Park condition of a vehicle" means:

2.3.11.1. For a motor vehicle, when the vehicle is at standstill and its propulsion ~~engine~~ **system** is not running and its movable components are in the normal position(s) as defined in paragraph 2.3.9.;"

Paragraph 2.7.6., amend to read:

"2.7.6. **Definitions with regard to switching and activation:**

2.7.6.1. **"Switch ON" means to manually or automatically operate an illuminating or signalling function to effectively emit light, irrespective of whether the function is operating correctly or not.**

2.7.6.2. **"Switch OFF" means to manually or automatically operate an illuminating or signalling function to stop emitting light, irrespective of whether the function is operating correctly or not.**

2.7.6.3. **"Activate" means to manually or automatically enable an illuminating or signalling function, irrespective of whether light is emitted or not (e.g. enable stand-by mode).**

2.7.6.4. **"Deactivate" means to manually or automatically disable an illuminating or signalling function, irrespective of whether light is emitted or not (e.g. disable stand-by mode).**

2.7.6.5. **"Sequential activation" means an electrical connection where the individual light sources of a lamp are wired such that they are activated **switched ON** in a predetermined sequence **according to the relevant Regulations.**"**

Insert new paragraph 2.10.11., to read:

"2.10.11. **"V plane" means a vertical plane parallel to the median longitudinal plane of the vehicle and containing the center of reference of the lamp.**"

Renumber paragraphs 2.10.11. to 2.10.17., to read:

- ~~2.10.11.~~ **2.10.12.** "*Transverse plane*" means a vertical plane perpendicular to the median longitudinal plane of the vehicle.
- ~~2.10.12.~~ **2.10.13.** "*Angle of divergence*" means the angle between the straight lines connecting the center of reference to the center of the receiver and to the center of the source of illumination.
- ~~2.10.13.~~ **2.10.14.** "*Illumination angle*" means the angle between the axis of reference and the straight line connecting the center of reference to the center of the source of illumination.
- ~~2.10.14.~~ **2.10.15.** "*Angle of rotation*" means the angle through which the retro-reflective device is rotated about its axis of reference starting from one given position.
- ~~2.10.15.~~ **2.10.16.** "*Angular diameter of the retro-reflective device*" means the angle subtended by the greatest dimension of the visible area of the illuminating surface, either at the center of the source of illumination or at the center of the receiver.
- ~~2.10.16.~~ **2.10.17.** "*Illumination of the retro-reflective device*" is the abbreviated expression used conventionally to designate the illumination measured in a plane perpendicular to the incident rays and passing through the center of reference.
- ~~2.10.17.~~ **2.10.18.** "*Coefficient of luminous intensity (CIL)*" means the quotient of the luminous intensity reflected in the direction considered, divided by the illumination of the retro-reflective device for given angles of illumination, divergence and rotation."

Paragraph 4.2., amend to read:

- "4.2. An approval number shall be assigned to each type approved. Its first two digits (at present **07**, corresponding to the **07** series of amendments) shall indicate the series of amendments incorporating the most recent major technical amendments made to the Regulation at the time of issue of the approval. The same Contracting Party shall not assign this number to another vehicle type or to the same vehicle type submitted with equipment not specified in the list referred to in paragraph 3.2.2. above, subject to the provisions of paragraph 7. of this Regulation."

Paragraph 5.7.1.1., amend to read:

- "5.7.1.1. The photometric and colorimetric requirements of a lamp shall be fulfilled when all other functions with which this lamp is grouped, combined or reciprocally incorporated are switched OFF.
However, when a front or rear position lamp is reciprocally incorporated with one or more other function(s) which can be activated **switched ON** together with them, the requirements regarding colour of each of these other functions shall be fulfilled when the reciprocally incorporated function(s) and the front or rear position lamps are switched ON."

Paragraph 5.9., amend to read:

- "5.9. In the absence of specific instructions, the photometric characteristics (e.g. intensity, colour, apparent surface, etc.) of a lamp shall not be intentionally varied during the period of activation of **when the lamp is switched ON.**"

Paragraph 5.9.2., amend to read:

- "5.9.2. The photometric characteristics of any lamp may vary:
(a) In relation to the ambient light;

- (b) As a consequence of ~~the activation of~~ other lamps **being switched ON or OFF**; or
- (c) When the lamps is being used to provide another lighting function; provided that any variation in the photometric characteristics is in compliance with the technical provisions for the lamp concerned."

Paragraph 5.11. and related sub paragraphs, amend to read:

- "5.11. The electrical connections shall be such that the front and rear position lamps, the end-outline marker lamps, if they exist, the side-marker lamps, if they exist, and the rear registration plate lamp can only be switched ON and OFF simultaneously.
- 5.11.1. This ~~condition~~ **requirement** does not apply **while one or more of the following conditions exist:**
- ~~5.11.1.1.~~ (a) ~~When~~ front and rear position lamps ~~are switched ON~~, as well as side-marker lamps when combined or reciprocally incorporated with said lamps, **are switched ON** as parking lamps; ~~or~~
 - ~~5.11.1.2.~~ (b) ~~When~~ side-marker lamps flash in conjunction with direction indicators; ~~or~~
 - (c) **daytime running lamps are switched ON;**
 - ~~5.11.2.~~ (d) ~~to~~ front position lamps ~~when their~~ function is substituted under the provisions of paragraph 5.12.1. below.
- 5.11.32. In the case of an interdependent lamp system, all light sources shall be switched ON and OFF simultaneously."

Paragraph 5.12., amend to read:

- "5.12. The electrical connections shall be such that the main-beam and dipped-beam headlamps and the front fog lamps cannot be switched ~~on~~ **ON** unless the lamps referred to in paragraph 5.11. are also switched ~~on~~ **ON**. This requirement shall not apply, however, to main-beam or dipped-beam headlamps when their luminous warnings consist of the intermittent lighting up at short intervals of the main-beam headlamp or the intermittent lighting up at short intervals of the dipped-beam headlamp or the alternate lighting up at short intervals of the main-beam and dipped-beam headlamps."

Paragraph 5.12.1.1., amend to read:

- "5.12.1.1. Their electrical connections are such that in case of failure of any of these lighting devices the front position lamps are automatically ~~reactivated~~ **switched ON again**; and"

Paragraph 5.14.3., amend to read:

- "5.14.3. It shall be possible to move the lamps into the position of use and to switch them ~~on~~ **ON** by means of a single control, without excluding the possibility of moving them into the position of use without switching them ~~on~~ **ON**. However, in the case of grouped main-beam and dipped-beam headlamps, the control referred to above is required only to activate the dipped-beam headlamps."

Paragraph 5.14.4., amend to read:

- "5.14.4. It shall not be possible deliberately, from the driver's seat, to stop the movement of switched ~~on~~ **ON** lamps before they reach the position of use. If there is a danger of dazzling other road users by the movement of the lamps, they may light up only when they have reached their position of use."

Paragraph 5.18.3., amend to read:

"5.18.3. Where additional lamps for the above functions are fitted and are ~~activated~~ **switched ON**, when the movable component is in any fixed open position, provided that these additional lamps satisfy all the position, geometric visibility and photometric requirements applicable to the lamps installed on the movable component."

Paragraph 5.18.4., amend to read:

"5.18.4. In the case where the functions referred to in paragraph 5.18. are obtained by an interdependent lamp system either of the following conditions shall apply:

(a) Should the complete interdependent lamp system be mounted on the moving component(s), the requirements of paragraph 5.18.1. shall be satisfied. However, additional lamps for the above functions may be ~~activated~~ **switched ON**, when the movable component is in any fixed open position, provided that these additional lamps satisfy all the position, geometric visibility, colorimetric and photometric requirements applicable to the lamps installed on the movable component.

or

(b) Should the interdependent lamp system be partly mounted on the fixed component and partly mounted on a movable component, with the exception of direction indicator lamps, the interdependent lamp(s) specified by the Applicant during the device approval procedure shall meet all the position, outwards geometric visibility, colorimetric and photometric requirements for those lamps, at all fixed positions of the movable component(s).

The inwards geometric visibility requirement(s) is(are) deemed to be satisfied if this(these) interdependent lamp(s) still conform(s) to the photometric values prescribed in the field of light distribution for the approval of the device, at all fixed positions of the movable component(s).

For direction indicator lamps, the interdependent lamp(s) specified by the Applicant during the device approval procedure shall meet all the position, geometric visibility, photometric and colorimetric requirements at all fixed positions of the movable component(s). This does not apply where, to fulfil or complete the geometric visibility angle, additional lamps are ~~activated~~ **switched ON** when the movable component is in any fixed open position, provided that these additional lamps satisfy all the position, photometric and colorimetric requirements applicable to the direction indicator lamps installed on the movable component."

Paragraph 5.21.1., amend to read:

"5.21.1. Additional lamps satisfying all the position, geometric visibility, colorimetric and photometric requirements for the above indicated lamps shall be ~~activated~~ **switched ON** when the apparent surface in the direction of the reference axis of these lamps is more than 50 per cent hidden by the movable component;"

Paragraph 6.1., amend to read:

"6.1. Main-beam headlamp (UN Regulations Nos. 98, 112 ~~or~~ **and 149** ~~[RID]~~)"

Paragraph 6.1.2., amend to read:

"6.1.2. Number

Two or four, type approved according to

(a) UN Regulation No. 98 or 112, excluding Class A headlamp or

(b) UN Regulation No. 149 [RID], Classes B and D headlamps only

For vehicles of the category N₃: Two extra main-beam headlamps may be installed.

Where a vehicle is fitted with four concealable headlamps the installation of two additional headlamps shall only be authorized for the purpose of light-signalling, consisting of intermittent ~~illumination~~ **switching ON**, at short intervals (see paragraph 5.12. above) in daylight."

Paragraph 6.1.7.1., amend to read:

"6.1.7.1. Except when they are used to give intermittent luminous warnings at short intervals, the main-beam headlamps may be switched ON only when ~~the master light switch is in headlamps ON position or in "AUTO" (automatic) position and the dipped-beam headlamps are manually activated~~ or the conditions for automatic ~~activation~~ **switching ON** of dipped-beam **headlamps** exist. ~~In the latter case, Consequently,~~ the main beam headlamps shall be switched ~~OFF~~ **OFF** automatically when ~~the dipped-beam headlamps are manually deactivated or~~ the conditions for automatic ~~activation~~ **switching ON** of dipped-beam **headlamps** ceased to exist."

Paragraph 6.1.7.2., amend to read:

"6.1.7.2. The control of the main-beam headlamps may be automatic regarding their ~~activation and deactivation~~ **switching ON and OFF**, the control signals being produced by a sensor system which is capable of detecting and reacting to each of the following inputs:

- (a) Ambient lighting conditions;
- (b) The light emitted by the front lighting devices and front light-signalling devices of oncoming vehicles;
- (c) The light emitted by the rear light-signalling devices of preceding vehicles.

Additional sensor functions to improve performance are allowed.

For the purpose of this paragraph, "vehicles" means vehicles of categories L, M, N, O, T, as well as bicycles, such vehicles being equipped with retro-reflectors, with lighting and light-signalling devices, which are switched ON."

Paragraphs 6.1.7.3. to 6.1.7.6., amend to read:

"6.1.7.3. It shall always be possible to switch the main-beam headlamps ON and OFF manually and to manually ~~switch off~~ **deactivate** the automatic control of the main-beam headlamps. Moreover, the switching OFF of the main-beam headlamps and ~~the~~ **deactivation** of their automatic control shall be by means of a simple and immediate manual operation; the use of sub-menus is not allowed.

6.1.7.4. The main-beam headlamps may be switched ~~on~~ **ON** either simultaneously or in pairs. In case the extra two main-beam headlamps are installed, as permitted under paragraph 6.1.2. for vehicles of the category N₃ only, no more than two pairs may be simultaneously lit. For changing over from the dipped to the main beam at least one pair of main-beam headlamps shall be

switched ~~on~~ **ON**. For changing over from the main-beam to the dipped-beam all main-beam headlamps shall be switched ~~off~~ **OFF** simultaneously.

- 6.1.7.5. The dipped-beams may remain switched ~~on~~ **ON** at the same time as the main beams.
- 6.1.7.6. Where four concealable headlamps are fitted their raised position shall prevent the simultaneous operation of any additional headlamps fitted, if these are intended to provide light signals consisting of intermittent illumination ~~switching ON~~ **switching ON** at short intervals (paragraph 5.12.) in daylight. ."

Paragraph 6.1.9.1., amend to read:

- "6.1.9.1. The aggregate maximum intensity of the main-beam headlamps which can be switched ~~on~~ **ON** simultaneously shall not exceed 430,000 cd, which corresponds to a reference value of 100."

Paragraph 6.1.9.3., amend to read:

- "6.1.9.3. Automatic ~~activation and deactivation~~ **switching ON and OFF** of the main-beam headlamps:"

Paragraph 6.1.9.3.1., amend to read:

- "6.1.9.3.1. The sensor system used to control the automatic ~~activation and deactivation~~ **switching ON and OFF** of the main-beam headlamps, as described in paragraph 6.1.7.1., shall comply with the following requirements:"

Paragraph 6.2., amend to read:

- "6.2. Dipped-beam headlamp (UN Regulations Nos. 98, 112 ~~or and~~ **149 [RID]**)"

Paragraph 6.2.7. and its sub-paragraphs, amend to read:

- "6.2.7. Electrical connections
- 6.2.7.1. ~~The control for changing over to the dipped-beam shall switch off all main-beam headlamps simultaneously.~~ **When changing from main beam to dipped-beam, all main-beams shall be switched OFF simultaneously.**
- 6.2.7.2. The dipped-beam may remain switched ~~on~~ **ON** at the same time as the main-beam."

Paragraph 6.2.7.3., amend to read:

- "6.2.7.3. In the case of dipped-beam headlamps according to Regulation Nos. 98 or **149 [RID]** the gas-discharge light sources shall remain switched ~~on~~ **ON** during the main-beam operation."

Paragraph 6.2.8.2., amend to read:

- "6.2.8.2. A visual tell-tale whether flashing or not is mandatory:
- (a) In the case where the whole beam or the kink of the elbow of the cut-off is moved to produce bend lighting; or
 - (b) If one or more LED modules are used to produce the principal dipped-beam, except when they are wired so that the failure of any one LED module causes all of them to stop emitting light.

It shall be activated:

- (a) In the event of a malfunction of the displacement of the kink of the elbow of the cut-off; or

- (b) In case of a failure of any one of the LED module(s) producing the principal dipped-beam, except when they are wired so that the failure of any one LED module causes all of them to stop emitting light.

It shall remain activated while the failure is present. It may be cancelled temporarily, but shall be repeated whenever the device, which starts and stops the **engine propulsion system**, is switched ~~on~~ **ON** and ~~off~~ **OFF**."

Paragraph 6.2.9., amend to read:

"6.2.9. Other requirements
The requirements of paragraph 5.5.2. shall not apply to dipped-beam headlamps.

Dipped-beam headlamps with a light source or LED module(s) producing the principal dipped-beam and having a total objective luminous flux which exceeds 2,000 lumen shall only be installed in conjunction with the installation of headlamp cleaning device(s) according to Regulation No. 45¹.

With respect to vertical inclination the provisions of paragraph 6.2.6.2.2. above shall not be applied for dipped-beam headlamps with a light source or LED module(s) producing the principal dipped beam and having an objective luminous flux which exceeds 2,000 lumens.

In the case of filament lamps for which more than one test voltage is specified, the objective luminous flux which produces the principal dipped-beam, as indicated in the communication form for the type approval of the device, is applied.

In the case of dipped-beam headlamps equipped with an approved light source, the applicable objective luminous flux is the value at the relevant test voltage as given in the relevant data sheet in the Regulation, according to which the applied light source was approved, without taking into account the tolerances to the objective luminous flux specified on this datasheet.

Only dipped-beam headlamps according to Regulation Nos. 98, ~~or~~ 112 **or** 149 ~~[RID]~~ may be used to produce bend lighting.

If bend lighting is produced by a horizontal movement of the whole beam or the kink of the elbow of the cut-off, it shall be ~~activated~~ **switched ON** only if the vehicle is in forward motion; this shall not apply if bend lighting is produced for a right turn in right hand traffic (left turn in left hand traffic).

¹ Contracting Parties to the respective UN Regulations can still prohibit the use of mechanical cleaning systems when headlamps with plastic lenses, marked "PL", are installed."

Paragraph 6.4.7.1., amend to read:

"6.4.7.1. They shall be such that the lamp can ~~light up~~ **be switched ON** only if the reverse gear is engaged and if the device which controls the starting and stopping of the **engine propulsion system** is in such a position that operation of the **engine propulsion system** is possible. It shall not ~~light up~~ **switch ON** or remain ~~lit~~ **ON** if either of the above conditions is not satisfied."

Paragraph 6.4.7.2., amend to read:

"6.4.7.2. Moreover, the electrical connections of the two optional devices mentioned in paragraph 6.4.2.2. shall be such that these devices cannot ~~illuminate~~ **be**

switched ON unless the lamps referred to in paragraph 5.11. are switched ~~on~~ **ON**.

The devices fitted on the side of the vehicle may be switched ~~on~~ **ON** for slow manoeuvres in forward motion of the vehicle up to a maximum speed of ~~10 km/h~~ **15 km/h**, provided that the following conditions are fulfilled:

- (a) The devices shall be switched ON and OFF manually by a separate ~~switch~~ **control**;
- (b) If so switched ON, they may remain ON after reverse gear is disengaged;
- (c) They shall be automatically switched ~~off~~ **OFF** if the forward speed of the vehicle exceeds ~~10 km/h~~ **15 km/h**, regardless of the position of the separate ~~switch~~ **control**; in this case they shall remain switched ~~off~~ **OFF** until deliberately being switched ~~on~~ **ON** again."

Paragraph 6.5.7., amend to read:

- "6.5.7. Electrical connections
Direction-indicator lamps shall switch ~~on~~ **ON** independently of the other lamps. All direction-indicator lamps on one side of a vehicle shall be switched ~~on~~ **ON** and ~~off~~ **OFF** by means of one control and shall flash in phase.
- On M₁ and N₁ vehicles less than 6 m in length, with an arrangement complying with paragraph 6.5.5.2. above, the amber side-marker lamps, when mounted, shall also flash at the same frequency (in phase) with the direction-indicator lamps."

Paragraph 6.6.7.2., amend to read:

- "6.6.7.2. The hazard warning signal may be ~~activated~~ **switched ON** automatically in the event of a vehicle being involved in a collision or after ~~the de-activation~~ **of the emergency stop signal has been switched OFF**, as specified in paragraph 6.23. below. In such cases, it may be ~~turned off~~ **switched OFF** manually.
- In addition, the hazard warning signal may be switched ~~on~~ **ON** automatically to indicate to other road-users the risk of imminent danger as defined by Regulations; in this case, the signal shall remain switched ~~on~~ **ON** until it is manually or automatically switched ~~off~~ **OFF**."

Paragraph 6.6.9., amend to read:

- "6.6.9. Other requirements
As specified in paragraph 6.5.9. If a power-driven vehicle is equipped to draw a trailer the hazard warning signal control shall also be capable of bringing the direction-indicator lamps on the trailer into action. The hazard warning signal shall be able to function even if the device which starts or stops the ~~engine~~ **propulsion system** is in a position which makes it impossible to start the ~~engine~~ **propulsion system**."

Paragraph 6.7.7.1., amend to read:

- "6.7.7.1. All stop lamps shall ~~light up~~ **be switched ON** simultaneously when the braking system provides the relevant signal defined in Regulations Nos. 13 and 13-H."

Paragraph 6.7.7.2., amend to read:

"6.7.7.2. The stop lamps need not function if the device, which starts and/or stops the ~~engine~~ **propulsion system**, is in a position that makes it impossible for the ~~engine~~ **propulsion system** to operate. "

Paragraph 6.8.9., amend to read:

"6.8.9. Other requirements
When the rear registration plate lamp is combined with the rear position lamp, reciprocally incorporated in the stop lamp or in the rear fog lamp, the photometric characteristics of the rear registration plate lamp may be modified during the ~~illumination of~~ **entire time** the stop lamp or the rear fog lamp is switched **ON**."

Paragraph 6.9.7., amend to read:

"6.9.7. Electrical connections
In accordance with paragraph 5.11.

However, if a front position lamp is reciprocally incorporated with a direction-indicator the electrical connection of the front position lamp on the relevant side of the vehicle or the reciprocally incorporated part of it may be such that it is switched ~~off~~ **OFF** during the ~~entire period~~ **time** (both ON and OFF cycle) of ~~activation~~ **operation** of the direction-indicator lamp."

Paragraph 6.9.8., amend to read:

"6.9.8. Tell-tale
Circuit-closed tell-tale mandatory.

This tell-tale shall be non-flashing and shall not be required if the instrument panel lighting can only be ~~turned on~~ **switch ON** simultaneously with the front position lamps.

This requirement does not apply when light signalling system operates according to paragraph 6.19.7.4.

However, a tell-tale indicating failure is mandatory if required by the component regulation."

Paragraph 6.9.9.1., amend to read:

"6.9.9.1. If one or more infrared radiation generator(s) is (are) installed inside the front position lamp, it (they) is (are) allowed to be ~~activated~~ **switched ON** only when the headlamp on the same side of the vehicle is switched ~~on~~ **ON** and the vehicle is in forward motion. In the event that the front position lamp or the headlamp on the same side fails, the infrared radiation generator(s) shall be automatically switched ~~off~~ **OFF**."

Paragraph 6.10.7., amend to read:

"6.10.7. Electrical connections
In accordance with paragraph 5.11.

However, if a rear position lamp is reciprocally incorporated with a direction-indicator, the electrical connection of the rear position lamp on the relevant side of the vehicle or the reciprocally incorporated part of it may be such that it is switched OFF during the ~~entire period~~ **time** (both ON and OFF cycle) of ~~activation~~ **operation** of the direction-indicator lamp."

Paragraph 6.11.7. and related sub-paragraphs, amend to read:

"6.11.7. Electrical connections

These shall be such that:

- 6.11.7.1. The rear fog-lamp(s) cannot be switched ~~on~~ **ON** unless the main beams, dipped-beams or front fog-lamps are ~~lit~~ **switched ON**;
- 6.11.7.2. The rear fog-lamp(s) can be switched ~~off~~ **OFF** independently of any other lamp;
- 6.11.7.3. Either of the following applies:
 - 6.11.7.3.1. The rear fog lamp(s) may continue to operate until the position lamps are switched ~~off~~ **OFF**, and the rear fog lamp(s) shall then remain ~~off~~ **OFF** until deliberately switched ~~on~~ **ON** again;
 - 6.11.7.3.2. A warning, at least audible, additional to the mandatory tell-tale (paragraph 6.11.8.) shall be given if the ignition is switched ~~off~~ **OFF** or the ignition key is withdrawn and the driver's door is opened, whether the lamps in (paragraph 6.11.7.1.) are ~~on~~ **ON** or ~~off~~ **OFF**, whilst the rear fog lamp ~~switch~~ **control** is in the ~~on~~ **ON** position.
- 6.11.7.4. Except as provided in paragraphs 6.11.7.1., 6.11.7.3. and 6.11.7.5., the operation of the rear fog lamp(s) shall not be affected by switching ~~on~~ **ON** or ~~off~~ **OFF** any other lamps.
- 6.11.7.5. The rear fog lamp(s) of a drawing motor vehicle may be automatically switched ~~off~~ **OFF** while a trailer is connected and the rear fog lamp(s) of the trailer is (are) ~~activated~~ **switched ON**."

Paragraph 6.12.7., amend to read:

- "6.12.7. Electrical connections
The connection shall allow the parking lamp(s) on the same side of the vehicle to be ~~lit~~ **switched ON** independently of any other lamps.
- The parking lamp(s) and, if applicable, the front and rear position lamps according to paragraph 6.12.9. below, shall be able to operate even if the device which starts the ~~engine~~ **propulsion system** is in a position which makes it impossible for the ~~engine~~ **propulsion system** to operate. A device which automatically ~~deactivates~~ **switches OFF** these lamps as a function of time is prohibited."

Paragraph 6.12.9., amend to read:

- "6.12.9. Other requirements
- The functioning of this lamp may also be performed by simultaneously switching ~~on~~ **ON** the front and rear position lamps on the same side of the vehicle. In this case, lamps that meet the requirements of front or rear position lamps are deemed to meet the requirements of parking lamps."

Paragraph 6.18.9., amend to read:

- "6.18.9. Other requirements
- When the rearmost side-marker lamp is combined with the rear position lamp reciprocally incorporated with the rear fog-lamp or stop lamp, the photometric characteristics of the side-marker lamp may be modified during the ~~illumination~~ **entire time** of the rear fog lamp or stop lamp **are switched ON**.
- Rear side-marker lamps shall be amber if they flash with the rear direction-indicator lamp."

Paragraph 6.19.7.1., amend to read:

"6.19.7.1. The daytime running lamps shall be switched ON automatically when the device which starts and/or stops the ~~engine (propulsion system)~~ is set in a position which makes it possible for the ~~engine (propulsion system)~~ to operate. However, the daytime running lamps may remain OFF while the following conditions exist:"

Paragraph 6.19.7.1.3., amend to read:

"6.19.7.1.3. prior to the vehicle being set in motion for the first time after each manual activation of **the device, which starts and/or stops** the propulsion system. :"

Paragraph 6.19.7.2., amend to read:

"6.19.7.2. The daytime running lamps may be switched OFF manually when, provided they switch ON automatically when the vehicle speed exceeds 15 km/h or when the vehicle has travelled more than 100 m and they remain ON until deliberately switched **OFF** ~~off~~ again."

Paragraph 6.19.7.3., amended to read:

"6.19.7.3. The daytime running lamp shall switch OFF automatically 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 or the front fog lamps or headlamps are switched ON, except when the latter are used to give intermittent luminous warnings at short intervals."

Paragraph 6.20.7., amend to read:

"6.20.7. Electrical connections

The cornering lamps shall be so connected that they cannot be ~~activated~~ **switched ON** unless the main-beam headlamps or the dipped-beam headlamps are switched ON at the same time."

Paragraph 6.20.7.2., amend to read:

"6.20.7.2. When the reversing lamp is switched ON, both cornering lamps may be switched ~~on~~ **ON** simultaneously, independently from the steering wheel **position** or direction-indicator ~~position~~ **operation**.

If so ~~activated~~ **switched ON**, both cornering lamps shall be switched OFF either:

(a) When the reversing lamp is switched OFF;

or

(b) When the forward speed of the vehicle exceeds ~~40 km/h~~ **15 km/h**."

Paragraph 6.20.9., amend to read:

"6.20.9. Other requirements

The cornering lamps shall not be ~~activated~~ **switched ON** at vehicle speeds above 40 km/h."

Paragraph 6.22.7.1.1., amend to read:

"6.22.7.1.1. The lighting units for the main-beam may be ~~activated~~ **switched ON** either simultaneously or in pairs. For changing over from the dipped-beam to the main-beam at least one pair of lighting units for the main-beam shall be ~~activated~~ **switched ON**. For changing over from the main-beam to the dipped-beam all lighting units for the main-beam shall be ~~de-activated~~ **switched OFF** simultaneously."

Paragraph 6.22.7.1.3., amend to read:

"6.22.7.1.3. It shall always be possible to switch the main-beam headlamps, adaptive or non-adaptive, ON and OFF manually and to manually ~~switch OFF~~ **deactivate** the automatic control.

Moreover, the switching OFF, of the main-beam headlamps and **the deactivation** of their automatic control shall be by means of a simple and immediate manual operation; the use of sub-menus is not allowed."

Paragraph 6.22.7.1.5., amend to read:

"6.22.7.1.5. Where four concealable lighting units are fitted their raised position shall prevent the simultaneous operation of any additional headlamps fitted, if these are intended to provide light signals consisting of intermittent ~~illumination~~ **switching ON** at short intervals (see paragraph 5.12.) in day-light."

Paragraph 6.22.7.2., amend to read:

"6.22.7.2. Passing-beam lighting:

- (a) The control for changing over to the dipped-beam shall switch ~~off~~ **OFF** all main-beam headlamps or ~~de-activated~~ **switch OFF** all AFS lighting units for the main-beam simultaneously;
- (b) The dipped-beam may remain switched ~~on~~ **ON** at the same time as the main-beams;
- (c) In the case of lighting units for the dipped-beam being equipped with gas discharge light sources, the gas-discharge light sources shall remain switched ~~on~~ **ON** during the main-beam operation."

Paragraph 6.22.7.3., amend to read:

"6.22.7.3. **The dipped-beam headlamps** ~~switching ON and OFF of the passing-beam is subject to~~ **shall fulfil** the requirements for "Electrical connection" in paragraph 5.12. and 6.2.7. of this Regulation."

Paragraph 6.22.7.4.4., amend to read:

"6.22.7.4.4. The class W-mode(s) of the passing-beam shall not operate unless the front fog lamps, if any, are switched OFF and one or more of the following conditions is/are automatically detected (W-signal applies):

- (a) The wetness of the road has been detected automatically;
- (b) The windshield wiper is ~~switched ON~~ **operating** and its continuous or automatically controlled operation has occurred for a period of at least two minutes."

Paragraph 6.22.8.2., amend to read:

"6.22.8.2. A visual failure tell-tale for AFS is mandatory. It shall be non-flashing. It shall be activated whenever a failure is detected with respect to the AFS control signals or when a failure signal is received in accordance with paragraph 5.9. of Regulation No. 123. It shall remain activated while the failure is present. It may be cancelled temporarily, but shall be repeated whenever the device which starts and stops the ~~engine~~ **propulsion system** is switched ~~on~~ **ON** and ~~off~~ **OFF.**"

Paragraph 6.22.9.3.1.3., amend to read:

"6.22.9.3.1.3. The adaptive main-beam shall be switched ~~off~~ **OFF** when the illuminance produced by ambient lighting conditions exceeds 7,000 lx.

Compliance with this requirement shall be demonstrated by the applicant, using simulation or other means of verification accepted by the Type Approval Authority. If necessary the illuminance shall be measured on a horizontal surface, with a cosine corrected sensor on the same height as the mounting position of the sensor on the vehicle. This may be demonstrated by the manufacturer by sufficient documentation or by other means accepted by the Type Approval Authority."

Paragraphs 6.23., amend to read:

"6.23. Emergency stop signal

6.23.1. Presence

~~Optional.~~ **Mandatory on motor vehicles**

Optional on trailers.

The emergency stop signal shall be given by the simultaneous operation of all the stop or direction-indicator lamps fitted as described in paragraph 6.23.7."

Paragraph 6.23.7.3. and related sub-paragraphs, amend to read:

"6.23.7.3. The emergency stop signal shall be ~~activated and deactivated~~ **switched ON and OFF** automatically.

6.23.7.3.1. The emergency stop signal shall be ~~activated~~ **switched ON** only when the vehicle speed is above 50 km/h and the braking system is providing the emergency braking logic signal defined in Regulations Nos. 13 and 13-H.

6.23.7.3.2. The emergency stop signal shall be automatically ~~deactivated~~ **switched OFF** if the emergency braking logic signal as defined in Regulations Nos. 13 and 13-H is no longer provided or if the hazard warning signal is activated."

Paragraph 6.24.9.1., amend to read:

"6.24.9.1. The exterior courtesy lamp shall not be ~~activated~~ **switched ON** unless the vehicle is stationary and one or more of the following conditions is satisfied:

- (a) The ~~engine~~ **propulsion system** is stopped; or
- (b) A driver or passenger door is opened; or
- (c) A load compartment door is opened.

The provisions of paragraph 5.10. shall be met in all fixed positions of use."

Paragraph 6.24.9.2., amend to read:

"6.24.9.2. Approved lamps emitting white light with the exception of main beam head lamps, day time running lamps and reversing lamps may be ~~activated~~ **switched ON** as courtesy lamp function. They may also be ~~activated~~ **switched ON** together with the exterior courtesy lamps and the condition of paragraphs 5.11. and 5.12. above may not apply."

Paragraphs 6.25.7.3. to 6.25.7.6., amend to read:

"6.25.7.3. The rear-end collision alert signal shall be ~~activated and deactivated~~ **switched ON and OFF** automatically.

6.25.7.4. The rear-end collision alert signal shall not be ~~activated~~ **switched ON** if the direction indicator lamps, the hazard warning signal or the emergency stop signal is activated.

6.25.7.5. The rear-end collision alert signal may only be ~~activated~~ **switched ON** under the following conditions:

V_r	<i>activation switch ON</i>
$V_r > 30 \text{ km/h}$	$TTC \leq 1.4$
$V_r \leq 30 \text{ km/h}$	$TTC \leq 1.4 / 30 \times V_r$

" V_r (Relative Speed)": means the difference in speed between a vehicle with rear-end collision alert signal and a following vehicle in the same lane.

"TTC (Time to collision)": means the estimated time for a vehicle with rear-end collision alert signal and a following vehicle to collide assuming the relative speed at the time of estimation remains constant.

6.25.7.6. The ~~activation switch ON~~ period of the rear-end collision alert signal shall be not more than 3 seconds."

Paragraph 6.26.7., amend to read:

"6.26.7. Electrical Connections
Manoeuvring lamps shall be so connected that they cannot be ~~activated~~ **switched ON** unless the main-beam headlamps or the dipped-beam headlamps are switched ON at the same time.

The manoeuvring lamp(s) shall be ~~activated~~ **switched ON** automatically for slow manoeuvres up to 10 km/h provided that one of the following conditions is fulfilled:

- (a) Prior to the vehicle being set in motion for the first time after each manual activation of the propulsion system; or
- (b) Reverse gear is engaged; or
- (c) A camera based system which assists parking manoeuvres is ~~activated~~ **operating**.

The manoeuvring lamps shall be automatically switched ~~off~~ **OFF** if the forward speed of the vehicle exceeds ~~10 km/h~~ **15 km/h** and they shall remain switched ~~off~~ **OFF** until the **switch ON** conditions ~~for activation~~ are met again."

At the end of paragraph 12., add a new paragraph 12.6. and its sub-paragraphs to read:

"12.6. Transitional provisions applicable to 07 series of amendments.

12.6.1. As from the official date of entry into force of the 07 series of amendments, no Contracting Party applying this UN Regulation shall refuse to grant or refuse to accept UN type approvals under this UN Regulation as amended by the 07 series of amendments.

12.6.2. As of 1 September [2021] Contracting Parties applying this UN Regulation shall not be obliged to accept UN type approvals to the preceding series of amendments, first issued after 1 September [2021].

12.6.3. Notwithstanding the transitional provisions above, Contracting Parties who start to apply this UN Regulation after the date of entry into force of the most recent series of amendments are not obliged to accept UN type

approvals which were granted in accordance with any of the preceding series of amendments to this UN Regulation.

12.6.4. Contracting Parties applying this UN Regulation shall continue to accept UN type approvals to the preceding series of amendments to this UN Regulation, for the vehicle types which are not affected by the changes introduced by the 07 series of amendments.

12.6.5. Contracting Parties applying this UN Regulation shall not refuse to grant type approvals according to any preceding series of amendments to this UN Regulation or extensions thereof."

Annex 2, amend to read:

"Arrangements of approval marks

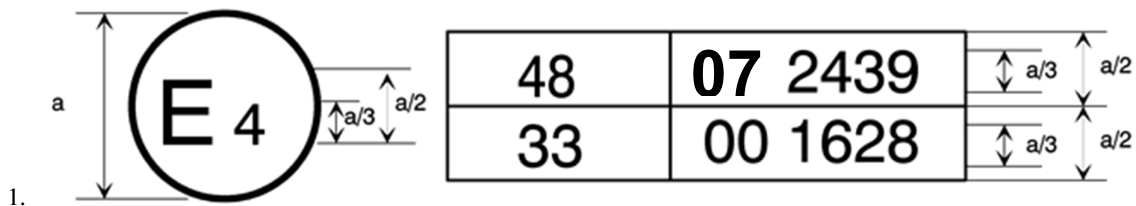
Model A
(See paragraph 4.4. of this Regulation)



a = 8 mm min.

The above approval mark affixed to a vehicle shows that the vehicle type concerned has, with regard to the installation of lighting and light-signalling devices, been approved in the Netherlands (E 4) pursuant to UN Regulation No. 48 as amended by the 07 series of amendments. The approval number indicates that the approval was granted in accordance with the requirements of UN Regulation No. 48 as amended by the 07 series of amendments.

Model B
(See paragraph 4.5. of this Regulation)



a = 8 mm min.

The above approval mark affixed to a vehicle shows that the vehicle type concerned has been approved in the Netherlands (E 4) pursuant to UN Regulation No. 48 as amended by the 07 series of amendments and UN Regulation No. 33.⁵ The approval number indicates that, at the dates when the respective approvals were given, Regulation No. 48 was amended by the 07 series of amendments and Regulation No. 33 was still in its original form.

⁵ The second number is given merely as an example."

Annex 6, paragraph 5.4.3., amend to read

"5.4.3. Vehicles with non-conventional suspension, where the ~~engine~~ **propulsion system** has to be running"

II. Justification

An informal document will be submitted in time to give detailed explanations for all modifications.
