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**CONSISTENCY BETWEEN THE CONVENTION ON ROAD TRAFFIC, 1968, AND THE
VEHICLE TECHNICAL REGULATIONS**

Note by the secretariat

1. At its seventy-first session the Inland Transport Committee, “**requested** WP.1 to treat the identification of a solution as a priority, including the consideration of solutions proposed by WP.29, to ensure a continuous consistency between the Convention on Road Traffic (1968) and the regulations developed by WP.29”. (ECE/TRANS/206, paragraph 82).
2. The Working Party on Road Traffic Safety (WP.1) at its fifty-seventh session had a thorough exchange of views on the contradictions between the Convention on Road Traffic, 1968, and the vehicle technical regulations developed by the World Forum for Harmonization of Vehicle Regulations (WP.29) and agreed that these might create real problems for drivers of modern vehicles in international traffic.
3. In order to maintain the Convention relevant for vehicles and keep one of its *raison d’être*, i.e. to facilitate international road transport, WP.1 asked the secretariat, in cooperation with a small group of volunteers (France, Germany, Turkey, International Motorcycle Manufacturers Association (IMMA) and Laser Europe) and with the secretariat of WP.29, to prepare and submit at

the fifty-eighth session a list of existing inconsistencies and an official document proposing solutions that would ensure timely consistency between the Convention on Road Traffic 1968 and the WP.29 vehicle technical regulations, and avoid too frequent amendments of the Convention (ECE/TRANS/WP.1/122, paragraphs 42-46).

4. The present document is based on an analysis prepared mainly by IMMA and aims at supporting considerations of the issue and contributing to the solution of the problem in the eventual update of the Convention. For the purpose of the present document “vehicle technical regulations”, “regulations”, “vehicle regulations” or “technical regulations” shall be understood as the Regulations annexed to the “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 20 March 1958, including the amendments to the Agreement that entered into force on 16 October 1995.

I. The problem

5. There is a difference between, on one hand, the rather quick pace and often frequency of change of vehicle technical regulations and, on the other hand, the slow pace and low frequency of amending the Convention on Road Traffic, 1968. This difference is mainly generated by the nature of the regulations which is technical, following technical progress and taking into account modern technology, and that of the Convention, which is legal, following strict amendment procedures, as well as by the working manner of the two bodies administering these instruments.

6. This difference results in the technical provisions related to vehicles, such as Annex 5 of the Convention, being often out-of-date, situation that has led to drivers in international traffic being occasionally fined when driving vehicles that are perfectly complying with the technical regulations but not (anymore) with the Convention.

7. One essential point to remember is that not all Contracting Parties to the Convention on Road Traffic, 1968, are also parties to the “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 20 March 1958. This means that any changes will have to be added to the Convention in a generally acceptable way.

8. The Legal Group of WP.1 as well as other experts started years ago considering different possibilities to establish the right mechanism of linking the requirements of the Convention with the vehicle technical regulations so as to ensure a permanent and continuous consistency between them. The possibility that appeared to be the most feasible was to introduce in the appropriate article(s)/annex(es) of the Convention a general clause recognizing the vehicle technical regulations as equivalent to the corresponding provisions of the Convention.

II. Examples of inconsistencies

9. Taking into account the changes that were made in the regulations and the work in progress in WP.29, it is very difficult to draw a comprehensive inventory of the inconsistencies. However, some relevant examples could be identified, as follows.

10. In article 1 (“Definitions”) the definition (n) of "motorcycle" is conflicting with the definition of L5 from the Consolidated Resolution on the Construction of Vehicles (R.E.3) which has no mass limit. The definition (u) of "Articulated vehicle" is conflicting with the definition of an articulated bus as contained in Regulation No. 107 on "M₂ or M₃ category of vehicles" (hereafter Regulation No. 107) and should therefore be amended to read

"(u) "Articulated vehicle" means a combination of vehicles comprising **either** a motor vehicle and semi-trailer coupled to the motor vehicle **or, in the case of a passenger-carrying vehicle, two or more rigid sections which articulate relative to one another.**"

11. Concerning “Definitions,” it is important to note that WP.29 is considering how best to consolidate and update all the common elements from the vehicle technical regulations, e.g. the definitions. This project is presently known as "the Horizontal Regulation" but it could, instead, result in changes to the R.E.3. The project has been delayed by complications in the European Union but once it is completed it is possible that amendments to the Convention might be necessary. For the time being, the general opinion is that the definitions in the Convention are adequate to deal with new technical developments; however this should also be checked in the context of the next updating of the technical requirements of the Convention. It is also important to note that amending the definitions in the Convention on Road Traffic, 1968, may result in an obligation to amend the definitions in the Convention on Road Signs and Signals, 1968.

12. Article 32 “Rules of the use of lamps” contains a typing error that must be corrected as well as several contradictions with Regulation No. 48 on "Installation of lighting and light-signalling devices" (hereafter Regulation No. 48).

13. The typing error is in item 4: “Fog lamps may be lit only in thick fog, falling snow, heavy rain or similar conditions and, as regards front fog ~~maps~~ **lamps**, as a substitute for passing lamps”.

14. To solve the contradictions, item 7 should read “Domestic legislation may make it compulsory for drivers of motor vehicles to use during the day either passing lamps or daytime running lamps. Rear position lamps ~~shall~~ **may** in this case be used together with the front lamps”. The reason for the proposed change is that lighting regulations now take account of the fuel consumption due to the use of lamps. It is currently considered unnecessary to have the rear lights on in daytime as they are not strong enough to be seen and do not add to the conspicuity of the vehicle.

15. Regulation No. 48 allows the optional additional reversing lamps to be illuminated in slow forward manoeuvres; item 12 should therefore read “Reversing lamps may be used only when the

vehicle is reversing or about to reverse; **optional additional reversing lamps may remain illuminated during slow forward manoeuvres.**”

16. Annex 1, item 2 should be amended so as to align it with various regulations as follows:

“2. For the purposes of paragraph 1 of this Annex, the lateral projection of the following shall not be regarded as projection beyond the permissible maximum width:

(a) Tyres, near their point of contact with the ground and connections of tyre-pressure ~~indicators~~ **gauges**; - to align it with Regulation No. 26 on "Exterior projection" (hereafter Regulation No. 26)

(c) ~~Driving mirrors~~ **Rear view mirrors/devices for indirect vision** so designed as to yield ~~both forwards and~~ backwards under moderate pressure so that they no longer project beyond the permissible maximum width; - Regulation No. 46 on "Rear-view mirrors" (hereafter Regulation No. 46) requires for a “folding back” action when the mirror is struck by a pendulum. Some vehicles, particularly large buses and trucks are now being equipped with on-board cameras and so “devices for indirect vision” need to be included.

(d) Side direction-indicators, marker lamps, **position lamps, and parking lamps**. ~~provided that such projection does not exceed a few centimetres~~; - to align it with Regulation No. 26

(e) Customs seals affixed to the load, and devices for the securing and protection of such seals

(f) **Service-door lighting** - to align it with Regulation No. 107

(g) **Exterior courtesy lamp** - to align it with Regulation No. 48

17. Annex 5, Chapter I, D (Braking of motor cycles), item 18 should take into account the new possibility that has been included in the Global Technical Regulation for motorcycle braking and should therefore read as follows:

“18.(a) Every motor cycle shall be equipped with two brakes, one of which acts at least on the rear wheel or wheels and the other at least on the front wheel or wheels; if a side-car is attached to a motor cycle, braking of the side-car wheel shall not be required. These braking devices shall be capable of slowing down the motor cycle and of stopping it safely, rapidly and effectively, whatever its conditions of loading and whatever the upward or downward gradient of the road on which it is moving.

(b) as an alternative to the provisions of subparagraph (a) of this paragraph, a motorcycle may be equipped with a brake system that operates the brakes on all wheels, consisting of two or more subsystems actuated by a single control designed so that a single failure in any subsystem (such as a leakage-type failure of a hydraulic subsystem) does not impair the operation of any other subsystem.

(c) In addition to the provisions of subparagraph (a) of this paragraph, motor cycles having three wheels symmetrically arranged in relation to the vehicle's median longitudinal plane

shall be equipped with a parking brake that fulfils the conditions stated in paragraph 5 (b) of this Annex.”

18. Annex 5, Chapter II (Vehicle lighting and light-signalling devices), items 40, 42 and 42 quinquies should align with Regulations No. 53 on "Installation of lighting and light-signalling devices for L3 category vehicles" and No. 48 respectively and read as follows:

“40. If front fog lamps are fitted on a motor vehicle they shall emit white or selective-yellow light, be two or, in the case of motor cycle, one **or two** in number and be placed in such a way that no point on their illuminating surface is above the highest point on the illuminating surface of the passing lamps.”

“42. No lamps, other than direction-indicator lamps, **emergency stop-lamp signals** and special warning lamps, shall emit a winking or flashing light. Side lamps may wink at the same time as direction-indicator lamps.”

“42 quinquies. Every motor vehicle and every trailer more than 6 m long shall be fitted with amber side reflex-reflectors.”-this is in contradiction with Regulation No. 48, which allows the rearmost side reflector to be red if it is grouped with another rear lamp. Up to now, this has been covered by the exemption in paragraph 61 (d), which allows red light to show to the front for side reflectors, but an amendment process would be an occasion to clarify the text, if there is any doubt about the Convention’s requirements.

19. In order to align with Regulation No. 46, in Annex 5, Chapter III (Other requirements) the sub-title should read “Driving (rear-view) mirror/**devices for indirect vision**” and item 47 should read

“47. Every motor vehicle shall be equipped with one or more driving (rear-view) mirrors/**devices for indirect vision**; the number, dimensions and arrangement of these mirrors shall be such as to enable the driver to see the traffic to the rear of his vehicle.”

20. The Appendix to Annex 5 should align with the Regulation No. 48 and read as in the annex to the present document.

III. Solution

21. The purpose of this debate is to urgently find a way to prevent the Convention on Road Traffic, 1968 from becoming irrelevant as a facilitation instrument. It is obvious that a thorough amendment process would be lengthy and difficult, requiring joint work at international level between WP.1 and WP.29 and their respective secretariats, as well as at national level, between technical and legal experts.

22. Taking into account that:

- (a) article 3 of the Convention contains several points under which the text allows a vehicle not to be exactly as specified in the Convention and still be acceptable because they are "deemed to be in conformity with the object of this Convention";
- (b) in effect this gives such vehicles a dispensation from being exactly in conformity with Chapter III (and therefore Annex 5), but this is justified because although the requirements may be different, they are to the highest possible level;
- (c) older vehicles can be judged on whether they meet the older versions of the ECE regulations (in force at the time of their registration) or the requirements of Chapter III;
- (d) the 1958 Agreement can be considered as a multilateral agreement that harmonizes the specifications of new vehicles in international traffic to the highest level; and therefore vehicles meeting those regulations can be "deemed to be in conformity with the object of the Convention",

the solution proposed is to amend article 3.3 of the Convention as follows:

“Article 3

Obligations of the Contracting Parties

[...]

3. Subject to the exceptions provided for in Annex 1 to this Convention, Contracting Parties shall be bound to admit to their territories in international traffic motor vehicles and trailers which fulfill the conditions laid down in Chapter III of this Convention and whose drivers fulfill the conditions laid down in Chapter IV; they shall also be bound to recognize registration certificates issued in accordance with the provisions of Chapter III as *prima facie* evidence that the vehicles to which they refer fulfil the conditions laid down in the said Chapter III. **Vehicles that have been type approved in conformity with the Regulations annexed to the “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 20 March 1958, including the amendments to the Agreement that entered into force on 16 October 1995, shall be deemed to be in conformity with the object of this Convention.**

[...]”

23. Taking into account that the previous analysis on this subject was made two years ago and in the meantime the regulations have changed and/or new regulations have been adopted, it is also proposed that WP.1 request WP.29 to kindly check and possibly revise the list prepared by WP.1 of the technical inconsistencies between the vehicle technical regulations and the provisions of the Convention on Road Traffic, 1968.

Annex

DEFINITION OF COLOUR **BOUNDARIES** FOR OBTAINING THE COLOURS REFERRED TO IN THIS ANNEX (TRICHROMATIC COORDINATES 1/)

"Red" means the chromaticity coordinates (x,y) */ of the light emitted lie inside the chromaticity areas defined by the boundaries:

R₁₂ yellow boundary: $y = 0.335$

R₂₃ the spectral locus

R₃₄ the purple line (its linear extension across the purple range of colours between the red and the blue extremities of the spectral locus).

R₄₁ purple boundary: $y = 0.980 - x$

with intersection points:

	x	y
R₁:	0.645	0.335
R₂:	0.665	0.335
R₃:	0.735	0.265
R₄:	0.721	0.259

"White" means the chromaticity coordinates (x,y) */ of the light emitted lie inside the chromaticity areas defined by the boundaries:

W₁₂ green boundary: $y = 0.150 + 0.640 x$

W₂₃ yellowish green boundary: $y = 0.440$

W₃₄ yellow boundary: $x = 0.500$

W₄₅ reddish purple boundary: $y = 0.382$

W₅₆ purple boundary: $y = 0.050 + 0.750 x$

W₆₁ blue boundary: $x = 0.310$

with intersection points:

	x	y
W₁:	0.310	0.348
W₂:	0.453	0.440
W₃:	0.500	0.440
W₄:	0.500	0.382
W₅:	0.443	0.382
W₆:	0.310	0.283

"Amber"₂ means the chromaticity coordinates (x,y) of the light emitted lie inside the chromaticity areas defined by the boundaries:

A₁₂	green boundary:	$y = x - 0.120$
A₂₃	the spectral locus	
A₃₄	red boundary:	$y = 0.390$
A₄₁	white boundary:	$y = 0.790 - 0.670 x$

with intersection points:

	x	y
A₁:	0.545	0.425
A₂:	0.557	0.442
A₃:	0.609	0.390
A₄:	0.597	0.390

"Selective-yellow"₃ means the chromaticity coordinates (x,y) * of the light emitted lie inside the chromaticity areas defined by the boundaries:

SY₁₂	green boundary:	$y = 1.290 x - 0.100$
SY₂₃	the spectral locus	
SY₃₄	red boundary:	$y = 0.138 + 0.580 x$
SY₄₅	yellowish white boundary:	$y = 0.440$
SY₅₁	white boundary:	$y = 0.940 - x$

with intersection points:

	x	y
SY₁:	0.454	0.486
SY₂:	0.480	0.519
SY₃:	0.545	0.454
SY₄:	0.521	0.440
SY₅:	0.500	0.440

"Blue" means the chromaticity coordinates (x,y) * of the light emitted lie inside the chromaticity areas defined by the boundaries:

B₁₂	green boundary:	$y = 0.805 x + 0.065$
B₂₃	white boundary:	$y = -x + 0.400$
B₃₄	purple boundary:	$y = 1.670 x - 0.222$
B₄₁	the spectral locus:	

with intersection points:

	x	y
B₁:	0.090	0.137
B₂:	0.186	0.214
B₃:	0.233	0.167
B₄:	0.148	0.025

To verify the colorimetric characteristics of ~~these filters~~ **the light emitted:**

- (a) a source of white light at a colour temperature of 2854E K (corresponding to illuminate A of the International Commission on Illumination [CIE]) shall be used **in the case of replaceable filament lamps (incandescent lamps);**
- (b) **in all other cases, the test voltage specified for this lamp (function) shall be applied to the terminals of the lamp (function).**

This covers the high-intensity gas discharge lamps (HID) and light emitting diode (LED) types of lamps.

*/ **CIE Publication 15.2, 1986, Colorimetry, the CIE 1931 standard colorimetric observer."**

1/ In these cases, different limits have been adopted from those recommended by the CIE **Standard CIE S 004/E-2001.**

2/ Corresponds to **the specification "yellow"**, a specific part of the "yellow" zone of the triangle of CIE colours.

3/ Applies only to the particular case of **front** fog-lights.
