Transmitted by the expert from India

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Comments on ECE/TRANS/WP.29/2009/123, ECE/TRANS/WP.29/2009/123/corr1, ECE/TRANS/WP.29/2009/123 corr2, ECE/TRANS/WP.29/2009/123 corr3, ECE/TRANS/WP.29/2009/123 corr4,

1 India welcomes the proposal for inclusion Items B, C, D, F and G in chapter IX of RE3, so that these items can be cross referred in the individual regulations and hence be simplified.

2 Item B of Chapter IX- LIGHTING AND LIGHT-SIGNALLING DEVICES : MINIMUM REQUIREMENTS FOR SAMPLING BY AN INSPECTOR:

The table appearing in Chapter IV, in the last column indicate applicability of Item B of Chapter IX to various regulations for lighting and light signalling devices. A comparison of the details given in Item B of chapter IX and these regulations, indicate the following:

2.1 The details covered in this item match with the requirements given in the relevant annexes for the regulations, listed in Table 1 below:

Table 1 : Regulations where Item B of Chapter IX tallies	
Reg. No	Subject
3[(a)]	Retro-reflecting devices
6	Direction indicators
7	Front and rear position (side) lamps, stop-lamps and end-outline marker lamps
23	Reversing lights
38	Rear fog lamps
65[(a)]	Special warning lamps
69[(a)]	Rear marking plates for slow-moving vehicles
70[(a)]	Rear marking plates for heavy and long vehicles
77	Parking lamps
87	Daytime running lamps
91	Side-marker lamps
119	Cornering lamps
[(a)]	In these regulations, there are additional requirements, such as R3 : Resistance to water penetration R 65: Rain test R 69 & R 70: Resistance to External Agents and Resistance to Heat

2.2 However, the details given in the relevant annexes regarding minimum requirements for sampling by an inspector, listed in table 2 have many differences.

Table 2 : Regulations where Item B of Chapter IX differs considerably	
Reg. No	Subject
1, 2	Headlamps equipped with filament lamps of categories R2 and/or HS1
5	Sealed beam headlamps (SB)
19	Front fog lamps
20	Headlamps equipped with halogen filament lamps (H4 lamps)
31	Sealed-beam headlamps (SB)
57	Headlamps for motor cycles
98	Headlamps equipped with gas-discharge light sources
112	Headlamps equipped with filament lamps
113	Headlamps emitting a symmetrical passing beam equipped with filament lamps
123	Adaptive front-lighting

2.2 Nature of these differences in general are:

- Permitted deviations on photometric requirement at some points are different from 20% in unfavourable direction.
- Alternate prescriptions instead of the 20% deviation mentioned above.
- Tests with realignment of cut off, where necessary
- Ignoring of reference mark
- Additional COP requirements for vertical cut off (except in R 113)

2.3 Regulations where the requirements of checks by inspector are totally different from those given in Item B of Chapter IX are listed in table 3

Table 3 : Regulations where Item B of Chapter IX are totally different or not covered at all	
Reg. No	Subject
4	Rear registration plates lamp
8	Headlamps halogen filament lamps
37	Filament lamps
45	Headlamp cleaners,
50	Small lamps 2W
56	Headlamps for mopeds
72	Headlamps equipped with HS1
88	Retro reflective tyres for two-wheeled vehicles
99	Gas-discharge light sources
104	Retro-reflective markings M, N and O

2.4 In summary, the Item B is applicable only to regulations listed in Table 1. In addition, there are some editorial changes needed.

3. Item C of Chapter IX- LIGHTING AND LIGHT-SIGNALLING DEVICES: MINIMUM REQUIREMENTS FOR CONFORMITY OF PRODUCTION CONTROL PROCEDURES:

The table appearing in Chapter IV, in the last column indicate applicability of Item C of Chapter IX to various regulations for lighting and light signalling devices. A comparison of the details given in Item C of chapter IX and these regulations, indicate the following:

3.1 The details covered in this item match with the requirements given in the

relevant annexes for the regulations, listed in Table 1 above.

3.2 In other regulations, listed in table 4, there are considerable differences.

Table 4 : Regulations where Item C of Chapter IX are totally different	
Reg. No	Subject
1,2	Headlamps R2 and/or HS1
4	Rear registration plates lamp
5	Sealed beam headlamps (SB)
8	Headlamps halogen filament lamps
19	Front fog lamps
20	Headlamps equipped with H4
31	Sealed-beam headlamps
37	Filament lamps
45	Headlamp cleaners,
48	Installation 4W
53	Installation 2W
56	Headlamps for mopeds
57	Headlamps for motor cycles
76	Headlamps for mopeds
82	Moped headlamps with (HS2)
98	Headlamps gas-discharge light sources
99	Gas-discharge light sources
112	Headlamps asymmetrical passing
113	headlamps emitting a symmetrical passing beam equipped with filament lamps
123	Adaptive front-lighting systems (AFS)

3.3 In summary, the Item B is applicable only to regulations listed in Table 1. In addition, there are some editorial changes needed.

4 Item D of Chapter IX : COLOUR OF LIGHTS:

The table appearing in Chapter IV, in the last column indicate applicability of Item D of Chapter IX to various regulations for lighting and light signalling devices. A comparison of the details given in Item D of chapter IX and these regulations, indicate the following:

4.1 Item D is not applicable to R45 (headlamp cleaners)

4.2 Item D is also applicable to the regulations listed in Table 5

4.3 The colour coordinates were rationalised and incorporated in Regulation 48 as item number 2.29. The text given in Item D is substantially different from what is prescribed in R 48.

4.4 While many of the regulations were amended to give the cross reference of R48 for colour coordinates, this has not been carried out in regulations listed in Table 5

Table 5 : Regulations where Item D of Chapter IX are not applicable as the colour coordinates are separately specified	
Reg. No	Subject
1, 2	Headlamps equipped with filament lamps of categories R2 and/or HS1
8	Headlamps halogen filament lamps
20	Headlamps equipped with halogen filament lamps (H4 lamps)
56	Headlamps for mopeds
57	Headlamps for motor cycles
72	Headlamps equipped with HS1
76	Headlamps for mopeds

82	Moped headlamps with (HS2)
88	Retro-reflective tyres for two-wheeled vehicles

4.5 Considering all this, the regulations for which Item D of chapter IX is applicable are listed in table 6

Table 6 : Regulations where Item D of Chapter IX are also applicable	
Reg. No	Subject
3	Retro-reflecting devices
4	Rear registration plates lamp
5	Sealed beam headlamps (SB)
6	Direction indicators
7	Front and rear position (side) lamps, stop-lamps and end-outline marker lamps
19	Front fog lamps
23	Reversing lights
31	Sealed-beam headlamps (SB)
37	Filament lamps
38	Rear fog lamps
48	Installation 4W
50	Small lamps 2W
53	Installation 2W
65	Special warning lamps
69	Rear marking plates for slow-moving vehicles
70	Rear marking plates for heavy and long vehicles
77	Parking lamps
87	Daytime running lamps
91	Side-marker lamps
98	Headlamps equipped with gas-discharge light sources
99	Gas-discharge light sources
104	Retro-reflective markings M, N and O
112	Headlamps equipped with filament lamps
113	Headlamps emitting a symmetrical passing beam equipped with filament lamps
119	Cornering lamps
123	Adaptive front-lighting

5 Item E of Chapter IX - REQUIREMENTS FOR HEADLAMPS INCORPORATING LENSES OF PLASTIC MATERIAL - TESTING OF LENS OR MATERIAL SAMPLES AND OF COMPLETE LAMPS:

The table appearing in Chapter IV, in the last column indicate applicability of Item E of Chapter IX to various regulations for lighting and light-signalling devices. A comparison of the details given in Item E of chapter IX and these regulations, indicate the following:

5.1 Item E is not applicable to R50

5.2 The points, on which photometric measurements are taken, are same in many of the regulation. However, these are different in the case of R113.

5.3 The requirements of resistance to light source radiation are applicable only in R98 and R113 when gas discharge light sources or LED modules are used. Also there is an exemption from this requirement if low radiation light source if or filters are used.

5.4 The headlamp regulations also prescribe verification of the conformity of production, which are not covered in this item.

5.5 The regulations or which Item E is applicable to the regulations listed in Table-7

Table 7 : Regulations where Item E of Chapter IX are also applicable	
Reg. No	Subject
1, 2	Headlamps equipped with filament lamps of categories R2 and/or HS1
5	Sealed beam headlamps (SB)
8	Headlamps halogen filament lamps
20	Headlamps equipped with halogen filament lamps (H4 lamps)
31	Sealed-beam headlamps (SB)
57	Headlamps for motor cycles
72	Headlamps equipped with HS1
98	Headlamps equipped with gas-discharge light sources
112	Headlamps equipped with filament lamps
113	Headlamps emitting a symmetrical passing beam equipped with filament lamps

6 Item F of Chapter IX-TESTS FOR STABILITY OF PHOTOMETRIC PERFORMANCE OF HEADLAMPS IN OPERATION:

Requirements of stability of photometric performance are applicable basically for headlamps and front fog lamp. Even though the general test procedure is common, there is considerable difference regarding the points on which photometric points are to be measured.

It is felt that it may not be possible to prepare a document which will cover all the devices where this requirement is applicable and hence this item may be deleted.

7 Taking all the above into consideration, India suggests that the following changes may be carried out in ECE/TRANS/WP.29/2009/123**.** (After incorporating various corrigenda.)

(Proposed deletions shown by crossing out and additions in bold and a separate font)

Proposal A1	Chapter IX : STANDARD ANNEXES TO REGULATIONS AND RULES The note may be changed as: - Note: The texts of the "Annexes" reproduced below appear, with almost the same text, in several (more than three) Regulations and Rules. The aim of their insertion in this document is to permit to replace their reproduction in extenso in the Regulations. The original numbering of paragraphs has been kept in order to show their relation with Regulations and Rules in which they appear. ***These will become applicable, when the regulations and rules are amended to replace the annexes by a cross reference to the items in this document.*** ***However, this does not prevent for additional verifications over and above those covered in these items to be included in the "Annexes" as may be required for the individual Regulation of the Rules.*** ***Applicability of these items given in Chapter IV is for reference and covers current position and these items may be used in Regulations or Rules (new or otherwise) without an amendment to chapter IV of this document.***
Justification	1. It is necessary that individual regulations refer to relevant portion of RE3 to provide proper clarity. 2. Some of the regulations have additional requirements in addition to the "common requirements" covered by the items. Examples are given in foot note "a" of table 1.

	3. When new Regulation are developed, where these "common requirements" can be cross referred, it should be sufficient to do so in such regulations, without a need to carry out an amendment in RE 3.

Proposal A2	In the table appearing in Chapter IV, Row D may be changed as: -

SUBJECT		RELEVANT DOCUMENTS		
		Regulations/Rules annexed to the 1958/1997 Agreements	**Recommendations (Chapter VIII)**	**Standard Annexes (Chapter IX)**
D.	**Lighting and light-signalling devices, power-driven vehicles**	1, 2, 4, 5, 6, 7, 8, 19, 20, 23, 31, 37, 38, 45, 65, 77, 87, 91, 98, 99, 112, 119, 123	Y	B [(1)] , C [(1)], D[(2)] , *E*[(3)] ~~F,~~ G

(1) Item B and C are applicable to regulations 6, 7, 23, 38, 65, 77, 87, 91 and 119.
(2) Item D is not applicable to Regulations 1, 2, 8, 20 and 45.
(3) Item E is applicable to regulations 1, 2, 5, 20, 31, 98, and 112.

Justification	1. Applicability of Items B and C are explained in Paragraphs 2.1 and 2.2 above. 2. Applicability for item D is explained in Para 4. above. 3. Applicability of Item E is explained in Paragraph 5. above. 4. Item F may be deleted as explained in Paragraph 6.

Proposal A3	In the table appearing in Chapter IV, Row E may be

E.	**Lighting and light-signalling devices, motor cycles**	50, 57, 72, 113	Y	~~B~~, D[(4)], E [(5)] ~~F~~, G

(4) Item D is not applicable to regulation 57 and 72
(5) Item E is not applicable to regulation 50.

Justification	1. Applicability of Item B is explained in Paragraph 2 above 2. Applicability of Item D is explained in paragraph 4 above 3. Applicability of Item E is explained in Paragraph 5 above. 4. Item F may be deleted as explained in Paragraph 6.

Proposal A4	In the table appearing in Chapter IV, Row F may be changed as: -

F.	**Lighting and light-signalling devices, mopeds**	56, 76, 82	Y	~~C~~ ***C[(6)] D, G***

(6) Items C applicable to regulation 56.

Justification	1. Applicability of Item C is explained in Paragraphs 3 above. 2. Items D and G are applicable to these regulations also.

Proposal A5	In the table appearing in Chapter IV, Row G may be changed as: -

G.	**Lighting and light-signalling, installation, motor vehicles**	48	Y	~~C~~ ***D, G***

Justification	1. Item C is not applicable to R 48 2. Item D is applicable is R 48 3. Item G is applicable to all regulations

Proposal A6	In the table appearing in Chapter IV, Row H may be changed as: -

H.	**Lighting and light-signalling, installation, motor cycles**	53	Y	~~C~~ ***D, G***

Justification	1. Item C is not applicable to R 53 2. Item D is applicable is R 53 3. Item G is applicable to all regulations

Proposal A7	In the table appearing in Chapter IV, Row I may be changed as: -

I .	**Lighting and light-signalling, installation, mopeds**	74	Y	***D, G***

Justification	1. Item D is applicable to R 74. 2. Item G is applicable to all regulations

Proposal A8	In the table appearing in Chapter IV, Row J may be changed as: -

J.	**Lighting and light-signalling, installation, agricultural tractors**	86	Y	***D, G***

Justification	1. Item D is applicable to R 86. 2. Item G is applicable to all regulations	Item G i

Proposal A9	In the table appearing in Chapter IV, Row K may be changed as: -

K.	**Retro reflecting devices, markings**	3, 69, 70, 88, 104	**AJ**	B[(5)], C[(5)], ***D[(6)], G***
[(5)]	***Items B and C are applicable for regulations 3, 69 and 70***			
[(6)]	***Item D is not applicable for regulation 88***			

Justification: 1. Applicability of Item B is explained in para. 2 above.

2. Applicability of Item C is explained in para. 3 above.

3. Applicability of Items D is explained in para. 4 above.

Proposed changes in Item B of Chapter IX

Proposal A10	Para 1.1 may be changed as: The conformity requirements shall be considered satisfied from a mechanical and a geometric standpoint, if the differences do not exceed inevitable manufacturing deviations, within the requirements of ~~this~~ ***the applicable*** Regulation
Justification	Editorial change considering that the Item B will be cross referred in the individual regulations.
Proposal A11	Para 1.2 may be changed as: With respect to photometric performances, the conformity of mass-produced ~~lamp~~ ***device*** shall not be contested if, when testing photometric performances of any ~~lamp~~ ***device, according to relevant paragraph of the applicable Regulation for the device,*** chosen at random ~~according to paragraph [x] of this Regulation:~~
Justification	1. Editorial change considering that the Item B will be cross referred in the individual regulations. 2. The current wording gives a wrong impression that the random selection only need be done as per the Regulation.
Proposal A12	Para 1.2.1 may be changed as: No measured value deviates unfavourably by more than 20 per cent from the values prescribed in ~~this regulation~~ ***the applicable regulation for the device***
Justification	Editorial change considering that the Item B will be cross referred in the individual regulations.
Proposal A13	Para 1.3. may be changed as: The chromaticity coordinates shall be complied when tested under conditions of ~~paragraph [x] of this~~ ***applicable*** Regulation.
Justification	Editorial change considering that the Item B will be cross referred in the

	individual regulations.
Proposal A14	Para 2.3 and 3.3. may be changed as: Conformity shall be contested and ~~paragraph 11.~~ ***conditions prescribed in the applicable regulation for Penalties for non-conformity of production*** applied if, following the ----- are:
Justification	Paragraph 11 prescribes the penalties of nonconformity in some regulations. (e.g. R6). This requirement is covered by different numbers in different regulations. (e.g. para 10 in R 23)
Proposal A15	The expression "direction indicator" may be changed to "device" at all places where it appears.
Justification	Editorial. Item B of chapter IX is applicable for many devices.

Proposed changes in Item C of Chapter IX

Proposal A16 **Justification**	Para 1.2 may be changed as: With respect to photometric performances, the conformity of mass-produced lamps shall not be contested if, when testing photometric performances of any ~~lamp~~ ***device, according to relevant paragraph of the applicable Regulation for the device,*** chosen at random ~~according to paragraph [x] of this Regulation:~~ 1. Editorial change considering that the Item C will be cross referred in the individual regulations. 2. The current wording gives a wrong impression that the random selection only need be done as per the Regulation.
Proposal A17	Para 1.2.1 may be changed as: No measured value deviates unfavourably by more than 20 per cent from the values prescribed in ~~this regulation~~ ***the applicable regulation for the device***
Justification	Editorial change considering that the Item C will be cross referred in the individual regulations.
Proposal A18	Para 1.3. may be changed as: The chromaticity coordinates shall be complied when tested under conditions of ~~paragraph [x] of this~~ ***applicable*** Regulation.
Justification	Editorial change considering that the Item C will be cross referred in the individual regulations.

Proposal A19	Para 2.5 may be changed as: <u>Criteria governing acceptability</u> The manufacturer is responsible for carrying out a statistical study of the test results and for defining, in agreement with the competent authority, criteria governing the acceptability of his products in order to meet the specifications laid down for verification of conformity of products in ~~paragraph [x] of this Regulation~~ ***relevant paragraph of the applicable Regulation for the device***. The criteria governing the acceptability shall be such that, with a confidence

Justification	level of 95 per cent, the minimum probability of passing a spot check in accordance with ~~Annex [x]~~ ***Item B of this chapter*** (first sampling) would be 0.95. 1. Editorial change considering that the Item C will be cross referred in the individual regulations. 2. The reference has to be item B of RE3.

Proposed changes in Item D of Chapter IX

Proposal A20	This item may be replaced by the following;

D: COLOUR OF THE LIGHT EMITTED FROM A DEVICE

1 Chromaticity coordinates for white:

"White" means the chromaticity coordinates (x,y) 1/ of the light emitted that lie inside the chromaticity areas defined by the boundaries:

W_{12}	green boundary:	y = 0.150 + 0.640 x
W_{23}	yellowish green boundary:	y = 0.440
W_{34}	yellow boundary:	x = 0.500
W_{45}	reddish purple boundary:	y = 0.382
W_{56}	purple boundary:	y = 0.050 + 0.750 x
W_{61}	blue boundary:	x = 0.310

with intersection points:

	x	y
W_1:	0.310	0.348
W_2:	0.453	0.440
W_3:	0.500	0.440
W_4:	0.500	0.382
W_5:	0.443	0.382
W_6:	0.310	0.283

2 Chromaticity coordinates for selective yellow

"Selective-yellow" means the chromaticity coordinates (x,y) 1/ of the light emitted that lie inside the chromaticity areas defined by the boundaries:

SY_{12}	green boundary:	y = 1.290 x - 0.100
SY_{23}	the spectral locus	
SY_{34}	red boundary:	y = 0.138 + 0.580 x
SY_{45}	yellowish white boundary:	y = 0.440
SY_{51}	white boundary:	y = 0.940 - x

with intersection points:

	x	y
SY_1:	0.454	0.486
SY_2:	0.480	0.519
SY_3:	0.545	0.454
SY_4:	0.521	0.440
SY_5:	0.500	0.440

3 Chromaticity coordinates for Amber

"Amber" means the chromaticity coordinates (x,y) 1/ of the light emitted that lie inside the chromaticity areas defined by the boundaries:

	A_{12} green boundary: y = x - 0.120 ***A_{23} the spectral locus*** ***A_{34} red boundary: y = 0.390*** ***A_{41} white boundary: y = 0.790 - 0.670 x*** ***with intersection points:*** ***x y*** ***A_1: 0.545 0.425*** ***A_2: 0.560 0.440*** ***A_3: 0.609 0.390*** ***A_4: 0.597 0.390*** ***4 Chromaticity coordinates for Red*** ***Red" means the chromaticity coordinates (x,y) 1/ of the light emitted that lie inside the chromaticity areas defined by the boundaries:*** ***R_{12} yellow boundary: y = 0.335*** ***R_{23} the spectral locus*** ***R_{34} the purple line (its linear extension across the purple range of colours between the red and the blue extremities of the spectral locus).*** ***R_{41} purple boundary: y = 0.980 – x*** ***with intersection points:*** ***x y*** ***R_1: 0.645 0.335*** ***R_2: 0.665 0.335*** ***R_3: 0.735 0.265*** ***R_4: 0.721 0.259*** ***1/ CIE Publication 15.2.1986, Colorimetry, the CIE 1931 standard colorimetric observer.***
Justification	To align with para 2.29 of ECE R48

Proposed changes in Item E of Chapter IX

Proposal A21	Para 2.1.2.1 may be modified as: Method Photometric measurements------- These measurements shall be made using a standard lamp, at the following points: B 50 L and 50 R for the passing beam of a passing lamp or a passing/driving lamp (B 50 R and 50 L in the case of headlamps intended for left-hand traffic); E_{max} for the driving beam of a driving lamp or a passing/driving lamp. ***Or the points specified in the individual regulation***
Justification	As explained in Para 5 above.
Proposal A22	Para 2.2.4 may be changed as: Resistance to light source radiations ***Applicable only when a gas discharge light source or an LED modules or is used. In the following cases also this requirement is not applicable:*** • ***if low-UV-type gas-discharge light sources are being applied as specified inn Regulation No. 99, or*** • ***LED modules other than low-UV-types (described in annex 10***

	of Regulation 112. • ***if provisions are taken to shield the relevant headlamp components from UV radiation, e.g. by glass filters.*** The following test shall be done:---, scalings or deformation.
Justification	As explained in Para 5 above.
Proposal A23	Following new para may be inserted ***3. VERIFICATION OF THE CONFORMITY OF PRODUCTION*** ***3.1. With regard to the materials used for the manufacture of lenses, the lamps of a series shall be recognised as complying with this Regulation if:*** ***3.1.1. After the test for resistance to chemical agents and the test for resistance to detergents and hydrocarbons, the outer face of the samples exhibits no cracks, chipping or deformation visible to the naked eye (see Paragraphs 2.2.2, 2.3.1 and 2.3.2);*** ***3.1.2. After the test described in Paragraph 2.6.1.1, the photometric values at the points of measurement considered in Paragraph 2.6.1.2 are within the limits prescribed for conformity of production by this Regulation.*** ***3.2. I f the test results fail to satisfy the requirements, the tests shall be repeated on another sample of headlamps selected at random.***
Justification	As explained in Para 5 above.
