United Nations ECE/TRANS/WP.29/GRE/79

Economic and Social Council

Distr.: General
7 June 2018

Original: English

Economic Commission for Europe

Inland Transport Committee

World Forum for Harmonization of Vehicle Regulations

Working Party on Lighting and Light-Signalling

Seventy-ninth session
Geneva, 24-27 April 2018

Report of the Working Party on Lighting and Light-Signalling on its seventy-ninth session

Contents

		Paragraphs	*Page*
I.	Attendance	1	3
II.	Adoption of the agenda (agenda item 1)	2-5	3
III.	1998 Agreement - Global Technical Regulations: Development (agenda item 2)	6	3
IV.	1997 Agreement – Rules: Development (agenda item 3)	7	4
V.	Simplification of lighting and light-signalling Regulations (agenda item 4)	8-18	4
VI.	Regulations Nos. 37 (Filament lamps), 99 (Gas discharge light sources), 128 (Light emitting diodes light sources) and the Consolidated Resolution on the common specifications of light source categories (agenda item 5)	19-22	6
VII.	Regulation No. 48 (Installation of lighting and light-signalling devices) (agenda item 6)	23-31	6
	A. Proposals for amendments to the 05 and 06 series of amendments	23-28	6
	B. Other proposals for amendments to Regulation No. 48	29-31	7
VIII.	Other Regulations (agenda item 7)	32-42	8
	A. Regulation No. 10 (Electromagnetic compatibility)	32	8
	B. Regulation No. 50 ((Position, stop, direction indicators lamps for mopeds and motorcycles)	33	8
	C. Regulation No. 53 (Installation of lighting and light-signalling devices for L_3 vehicles)	34-40	9
	D. Regulation No. 74 (Installation of lighting and light-signalling devices		

GE.18-09161(E)

1809161

Please recycle

	for mopeds)	41-42	10
IX.	Other business (agenda item 8)	43-46	10
	A. Amendments to the Convention on Road Traffic (Vienna, 1968)	43	10
	B. Decade of action for road safety 2011-2020	44	10
	C. Development of the International Whole Vehicle Type Approval	45	10
	D. Phantom light and colour washout	46	11
X.	New business and late submissions (agenda item 9)	47-48	11
XI.	Direction of future work of GRE (agenda item 10)	49	11
XII.	Provisional agenda for the next session (agenda item 11)	50	11

Annexes

I.	List of informal documents considered during the session	12
II.	Modifications to ECE/TRANS/WP.29/GRE/2018/2, ECE/TRANS/WP.29/GRE/2018/3 and ECE/TRANS/WP.29/GRE/2018/4 (based on GRE-79-14)	14
III.	Modifications to ECE/TRANS/WP.29/GRE/2018/6, ECE/TRANS/WP.29/GRE/2018/7, ECE/TRANS/WP.29/GRE/2018/8, ECE/TRANS/WP.29/GRE/2018/9, ECE/TRANS/WP.29/GRE/2018/10, ECE/TRANS/WP.29/GRE/2018/14, ECE/TRANS/WP.29/GRE/2018/15, ECE/TRANS/WP.29/GRE/2018/17, ECE/TRANS/WP.29/GRE/2018/30 (based on GRE-79-13)	17
IV.	Corrections to ECE/TRANS/WP.29/GRE/2018/2 (based on GRE-79-17-Rev.1)	23
V.	Corrections to ECE/TRANS/WP.29/GRE/2018/3 (based on GRE-79-18-Rev.1)	24
VI.	Amendments to definitions in Regulations Nos. 53 and 74 (based on GRE-79-08 and GRE-79-09)	25
VII.	Modifications to ECE/TRANS/GRE/2018/16 and ECE/TRANS/GRE/2018/18 (based on GRE-79-11)	37
VIII.	Modifications to ECE/TRANS/WP.29/GRE/2018/2, ECE/TRANS/WP.29/GRE/2018/3 and ECE/TRANS/WP.29/GRE/2018/4 (based on GRE-79-10)	39
IX.	Revised French version of ECE/TRANS/WP.29/GRE/2017/24 (proposed by the expert from France)	41
X.	Proposals for amendments to the 05 and 06 series of amendments to Regulation No. 48 (based on GRE-77-25-Rev.2)	42
XI.	Corrections to the 05 and 06 series of amendments to Regulation No. 48 (based on GRE-78-05)	44
XII.	GRE informal groups	48

I. Attendance

1. The Working Party on Lighting and Light-Signalling (GRE) held its seventy-ninth session from 24 to 27 April 2018 in Geneva, under the chairmanship of Mr. M. Loccufier (Belgium). Experts from the following countries participated in the work according to Rule 1 (a) of the Rules of Procedure of the World Forum for Harmonization of Vehicle Regulations (WP.29) (TRANS/WP.29/690, ECE/TRANS/WP.29/690/Amends. 1 and 2): Austria, China, Czechia, Finland, France, Germany, Hungary, India, Italy, Japan, Latvia, Luxemburg, Netherlands, Norway, Poland, Republic of Korea, Spain, United Kingdom of Great Britain and Northern Ireland (UK), United States of America and Viet Nam. An expert from the European Commission (EC) participated. Experts from the following non-governmental organizations also took part in the session: European Association of Automotive Suppliers (CLEPA), International Automotive Lighting and Light Signalling Expert Group (GTB), International Electrotechnical Commission (IEC), International Motorcycle Manufacturers Association (IMMA), International Organization of Motor Vehicle Manufacturers (OICA), Society of Automotive Engineers (SAE).

II. Adoption of the agenda (agenda item 1)

Documentation: ECE/TRANS/WP.29/GRE/2018/1, Informal documents GRE-79-01, GRE-79-02 and GRE-79-15

2. GRE considered and adopted the agenda (ECE/TRANS/WP.29/GRE/2018/1), as reproduced in GRE-79-01 together with the informal documents distributed during the session. GRE also noted the running order proposed by the Chair (GRE-79-02).

3. The list of informal documents is contained in Annex I to the report. The list of GRE informal groups is reproduced in Annex XII to the report.

4. GRE took note of the highlights of the November 2017 and March 2017 sessions of WP.29 and the official document submission deadline of 27 July 2018 for the October 2018 session of GRE (GRE-79-15).

5. Mr. W. Nissler, WP.29 Secretary and Chief, Vehicle Regulations and Transport Innovations Section, reported on the main results of the February 2018 session of the Inland Transport Committee (ITC) and of the March 2018 session of WP.29. He also briefed GRE on Resolution A/RES/72/271 "Improving global road safety" adopted on 12 April 2018 by the General Assembly of the United Nations as well as on the launch of the United Nations Road Safety Trust Fund.

III. 1998 Agreement - Global Technical Regulations: Development (agenda item 2)

6. The expert from GTB pointed out the growing interest in global harmonization of lighting and light-signalling norms, in particular in China and the United States of America. According to him, stage 2 of the ongoing process for Simplification of the Lighting and Light-signalling Regulations (SLR), which focused on technology-neutral requirements, could pave the way to developing of a new Global Technical Regulation (GTR). He also identified light-signalling functions of autonomous vehicles as a possible topic for a new GTR. The experts from the Netherlands, UK, EC, OICA and SAE supported this idea. The expert from the United States of America encouraged all stakeholders to start a dialogue on this issue.

IV. 1997 Agreement – Rules: Development (agenda item 3)

Documentation: ECE/TRANS/WP.29/2017/90, ECE/TRANS/WP.29/2017/91

7. No information was reported under this agenda item.

V. Simplification of lighting and light-signalling Regulations (agenda item 4)

Documentation: ECE/TRANS/WP.29/GRE/2018/2,
ECE/TRANS/WP.29/GRE/2018/3,
ECE/TRANS/WP.29/GRE/2018/4,
ECE/TRANS/WP.29/GRE/2018/6,
ECE/TRANS/WP.29/GRE/2018/7,
ECE/TRANS/WP.29/GRE/2018/8,
ECE/TRANS/WP.29/GRE/2018/9,
ECE/TRANS/WP.29/GRE/2018/10,
ECE/TRANS/WP.29/GRE/2018/11,
ECE/TRANS/WP.29/GRE/2018/12,
ECE/TRANS/WP.29/GRE/2018/13,
ECE/TRANS/WP.29/GRE/2018/14,
ECE/TRANS/WP.29/GRE/2018/15,
ECE/TRANS/WP.29/GRE/2018/16,
ECE/TRANS/WP.29/GRE/2018/17,
ECE/TRANS/WP.29/GRE/2018/18,
ECE/TRANS/WP.29/GRE/2018/30,
Informal documents GRE-79-08, GRE-79-09, GRE-79-10, GRE-79-11, GRE-79-12, GRE-79-13, GRE-79-14, GRE-79-17, GRE-79-18, GRE-79-19, GRE-79-22, GRE-79-28, GRE-79-31, GRE-79-32-Rev.1

8. On behalf of the Informal Working Group on Simplification of the Lighting and Light-Signalling Regulations (IWG SLR), the expert from GTB reported on the finalization of stage 1 of SLR (GRE-79-28). He further provided a draft schedule for stage 2 which would include two steps. Step 1 would cover objectives which could be achieved by the end of 2019, such as introducing technology neutral and performance based requirements, as well as objectively testable provisions. Step 2 would start in 2020 with the aim to simplify the installation Regulations Nos. 48, 53, 74 and 86. As an additional task, he suggested harmonization with the applicable standards in China. GRE experts also proposed other issues for stage 2 of SLR.

9. The expert from GTB presented the full package of amendment proposals drafted by IWG SLR under stage 1 of SLR:

(a) The three new simplified UN Regulations on Light-Signalling Devices (LSD), Road Illumination Devices (RID) and Retro-Reflective Devices (RRD) (ECE/TRANS/WP.29/GRE/2018/2, ECE/TRANS/WP.29/GRE/2018/3, ECE/TRANS/WP.29/GRE/2018/4, GRE-79-10 and GRE-79-14);

(b) Draft amendments to Regulations Nos. 48, 53, 74 and 86 that group the definitions and introduce references to the new simplified Regulations (ECE/TRANS/WP.29/GRE/2018/6, ECE/TRANS/WP.29/GRE/2018/7, ECE/TRANS/WP.29/GRE/2018/8, ECE/TRANS/WP.29/GRE/2018/9, ECE/TRANS/WP.29/GRE/2018/10, ECE/TRANS/WP.29/GRE/2018/12, ECE/TRANS/WP.29/GRE/2018/13, ECE/TRANS/WP.29/GRE/2018/14,

ECE/TRANS/WP.29/GRE/2018/15, ECE/TRANS/WP.29/GRE/2018/17, ECE/TRANS/WP.29/GRE/2018/30, GRE-79-08, GRE-79-09 and GRE-79-13);

(c) Transitional provisions to "freeze" Regulations Nos. 3, 4, 6, 7, 19, 23, 27, 38, 50, 69, 70, 77, 87, 91, 98, 104, 112, 113, 119 and 123 (ECE/TRANS/WP.29/GRE/2018/11).

10. The expert from EC was not in a position to support the indefinite validity of type approvals granted under the frozen Regulations, as proposed in ECE/TRANS/WP.29/GRE/2018/11, because of the General Safety Regulation of the European Union. He proposed revised transitional provisions for these Regulations (GRE-79-31, part I), together with new transitional provisions for the installation Regulations Nos. 48, 53, 74 and 86 (GRE-79-31, part II). While several experts agreed in principle with part I, they were not in a position to support part II. The experts from Finland and UK made study reservations. The expert from OICA expressed the concern that the revised transitional provisions might be rejected by WP.29.

11. To not delay the submission of the whole package of amendment proposals that had been developed in stage 1 of SLR, GRE decided to provisionally adopt the transitional provisions in ECE/TRANS/WP.29/GRE/2018/11, but to put in square brackets the third transitional provision for each Regulation mentioned in the document. At the same time, GRE recognized the urgency of the issue raised by the expert from EC and requested all GRE experts, as well as IWG SLR, to carefully consider the EC proposals with a view to taking a final position at the next session.

12. The expert from IWG SLR proposed correcting minor errors and inconsistencies identified in the documents mentioned under para. 9 (a) above (GRE-79-14). GRE adopted these corrections, as laid down in Annex II.

13. The expert from IWG SLR also suggested rectifying minor errors and inconsistencies in the documents listed in para. 9 (b) above (GRE-79-13). GRE adopted these corrections, as laid down in Annex III, and decided to opt for the alternative wording (in square brackets) of paragraph 6.3.9. of different series of amendments to Regulation No. 48.

14. The expert from India suggested corrections to ECE/TRANS/WP.29/GRE/2018/2 and ECE/TRANS/WP.29/GRE/2018/3 (GRE-79-17-Rev.1 and GRE-79-18-Rev.1 new text). GRE adopted the corrections, as laid down in Annexes IV and V. The expert from India withdrew GRE-79-19, in order to first present it at the next session of IWG SLR.

15. The expert from IWG SLR recalled that all identical definitions should only be kept in Regulation No. 48. Thus, he proposed to review the definitions in Regulations Nos. 53 and 74 (GRE-79-08 and GRE-79-09, respectively). GRE adopted these modifications, as contained in Annex VI.

16. The expert from IWG SLR presented the concept of "change index" developed for the LSD, RID and RRD Regulations (GRE-79-12-Rev.1). He further introduced amendment proposals on the change index to Regulations Nos. 48, 53, 74 and 86 (ECE/TRANS/WP.29/GRE/2018/16, ECE/TRANS/WP.29/GRE/2018/18 and GRE-79-11). GRE adopted these proposals, as amended by Annex VII). In addition, GRE agreed to include transitional provisions on the change index in the text of the LSD, RID and RRD Regulations (GRE-79-10 and Annex VIII). The expert from India pointed out that he would refer GRE-79-22 to IWG SLR.

17. Subject to the modifications mentioned in paras. 10–16 above, GRE adopted the package of amendment proposals drafted by IWG SLR and listed in para. 9 (a) - (c). The secretariat was requested to submit the amendments proposals to WP.29 and to the Administrative Committee of the 1958 Agreement (AC.1) for consideration and vote at their November 2018 sessions. GRE noted that any modification of the transitional provisions, mentioned in para. 11 above, that GRE might agree upon at the next GRE session in October

2018, would be submitted to the November 2018 session of WP.29 as corrigenda to the basic SLR package which otherwise would be issued in August 2018.

18. The expert of SAE proposed to keep Regulations Nos. 98, 112, 113 and 123 "alive" for the purpose of the recently updated Canadian Federal Motor Vehicle Safety Standard (CMVSS) No. 108 (GRE-79-32-Rev.1). GRE referred this document to IWG SLR for consideration.

VI. Regulation Nos. 37 (Filament lamps), 99 (Gas discharge light sources), 28 (Light emitting diodes light sources) and the Consolidated Resolution on the common specification of light source categories (agenda item 5)

Documentation: ECE/TRANS/WP.29/GRE/2017/14,
ECE/TRANS/WP.29/GRE/2017/15,
ECE/TRANS/WP.29/GRE/2018/21, Informal documents GRE-77-04, GRE-78-04, GRE-78-18 and GRE-79-16

19. The expert from IEC proposed amendments to Regulations Nos. 37, 99 and 128 that aligned the approval code for light sources with the approval number as prescribed by Revision 3 of the 1958 Agreement (ECE/TRANS/WP.29/GRE/2018/21 and GRE-78-18). GRE adopted the amendments and requested the secretariat to submit them to WP.29 and AC.1 for consideration and vote at their November 2018 sessions.

20. On behalf of the Task Force on LED retrofits and substitutes (TF SR), the expert from Germany presented their status report (GRE-79-16). GRE supported the proposed two-step approach and mechanical interlock as a solution to avoid misuse of light emitting diode (LED) substitutes.

21. GRE recalled the earlier proposals by GTB to introduce LED substitutes and replaceable light sources into the new LSD and RID Regulations (ECE/TRANS/WP.29/GRE/2017/14, ECE/TRANS/WP.29/GRE/2017/15 and GRE-78-04) and noted that ECE/TRANS/WP.29/GRE/2017/15 had been incorporated in ECE/TRANS/WP.29/GRE/2018/3. GRE invited TF SR to update ECE/TRANS/WP.29/GRE/2017/14 and GRE-78-04.

22. The expert from GTB pointed out that the GTB guidelines for introducing and evaluating LED light source categories that were intended for forward lighting applications (GRE-77-04) should be published as a reference document on the GRE website. GRE agreed to this request.

VII. Regulation No. 48 (Installation of lighting and light-signalling devices) (agenda item 6)

A. Proposals for amendments to the 05 and 06 series of amendments

Documentation: ECE/TRANS/WP.29/GRE/2017/23,
ECE/TRANS/WP.29/GRE/2017/24,
ECE/TRANS/WP.29/GRE/2018/20,
ECE/TRANS/WP.29/GRE/2018/22,
Informal documents GRE-77-25-Rev.2, GRE-78-05, GRE-78-29, GRE-79-03, GRE-79-26 and GRE-79-25

23. The expert from GTB proposed to harmonize the switching requirements for side-marker and position lamps when mutually incorporated (ECE/TRANS/WP.29/GRE/2017/24). GRE adopted this proposal and requested the secretariat to submit it to WP.29 and to the Administrative Committee of the 1958 Agreement (AC.1) for consideration and vote at their November 2018 sessions as a draft Supplement 11 to the 06 series of amendments to Regulation No. 48. The expert from France corrected the French text of the adopted amendment (Annex IX).

24. The expert from OICA introduced a revised proposal which defined and described the operation of the external status indicator for vehicle alarm systems, alarm systems and immobilizers, as contained in Regulations Nos. 97 and 116 (GRE-77-25-Rev.2). Following an in-depth discussion, GRE adopted this proposal, as contained in Annex X, and requested the secretariat to submit it to WP.29 and AC.1 for consideration and vote at their November 2018 sessions as a draft Supplement 11 to the 06 series of amendments and a draft Supplement 12 to the 05 series of amendments to Regulation No. 48.

25. The expert from GTB proposed correcting errors and discrepancies in the text of the 05 and 06 series of amendments to Regulation No. 48 (GRE-78-05). GRE adopted the proposals, as contained in Annex XI, and requested the secretariat to submit them to WP.29 and AC.1 for consideration and vote at their November 2018 sessions as a draft Supplement 11 to the 06 series of amendments and a draft Supplement 12 to the 05 series of amendments to Regulation No. 48. GRE also requested GTB to verify whether or not these amendments are relevant for the 03 and 04 series of amendments to Regulation No. 48 and to report back to GRE at its next session in October 2018.

26. The experts from the Task Force on Headlamp Switching (TF HS) and from SAE introduced alternative proposals which corrected and clarified the requirements for Daytime Running Lamps (DRL) (ECE/TRANS/WP.29/GRE/2018/20, ECE/TRANS/WP.29/GRE/2018/22 and GRE-79-26). The expert from Japan commented on the proposals (GRE-79-03-Rev.1). Following a brief exchange of views, GRE invited the Co-Chairs of TF HS to prepare a consolidated proposal for consideration at the next session.

27. The expert from Czechia proposed to correct and clarify the requirements for DRLs in conjunction with rear position lamps (ECE/TRANS/WP.29/GRE/2017/23). GRE invited the Co-Chairs of TF HS to take these proposals into account when preparing a consolidated document.

28. The experts of Germany and Italy proposed a new series of amendments to Regulation No. 48 to clarify the DRL switching-off conditions and/or light intensity reduction when DRL and front direction indicators were totally or partially reciprocally incorporated and when the distance between them was equal or less than 40 mm (GRE-79-25). The expert from OICA submitted a counter-proposal (GRE-79-30). GRE invited the proponents to prepare a consolidated document for the next session.

B. Other proposals for amendments to Regulation No. 48

Documentation: Informal documents GRE-79-23, GRE-79-24, GRE-79-29 and GRE-79-33

29. The expert from Poland provided a summary of initial aiming and levelling tolerance issue (GRE-79-23, GRE-79-24). The experts from Italy and the Netherlands briefly introduced GRE-79-29 as a discussion paper for the possible introduction of new requirements for headlamp levelling, in particular on the vertical inclination in relation to the dipped-beam headlamp mounting height. GRE agreed to keep GRE-79-29 as a reference document for the next session.

30. GRE noted the slow progress in the work of the Informal Working Group on Visibility, Glare and Levelling (IWG-VGL). To advance the topic, the expert from GTB proposed to bring together various experts on glare and levelling issues for a one-day event, in conjunction with the next session of GRE. GRE supported this idea.

31. GRE took note that WP.29 had extended the mandate of IWG VGL for the year 2018 and recalled its request to IWG VGL to revise its Terms of Reference. The expert from Poland presented his proposals (GRE-79-33). Due to the late availability of GRE-79-33, GRE decided to revert to this issue at the next session. Some experts were of the view that IWG VGL had completed phase I of its mandate and that phase II should be taken over by IWG SLR to avoid duplication in the work of the two IWGs. The Chair invited IWG SLR to address this issue at the next sessions.

VIII. Other Regulations (agenda item 7)

A. Regulation No. 10 (Electromagnetic compatibility)

Documentation: ECE/TRANS/WP.29/GRE/2018/5, Informal documents GRE-79-04, GRE-79-05, GRE-79-21, GRE-79-27 and GRE-79-34

32. On behalf of the Task Force on Electromagnetic Compatibility (TF EMC), the expert from OICA presented a status report (GRE-79-04) and revised amendment proposals to Regulation No. 10 (ECE/TRANS/WP.29/GRE/2018/5 and GRE-79-05). The expert from India suggested a minor modification (GRE-79-21). The expert from France proposed to extend paragraph 2.12. on immunity-related functions with the aim to cover new car systems recently introduced by other Regulations (GRE-79-27). The expert from EC was of the view that the transitional provisions in ECE/TRANS/WP.29/GRE/2018/5 should be checked for consistency. He further pointed out the need to align the provisions on charging with the new GTR on safety of electric vehicles. The expert from the United States of America called for cooperation between TF EMC and IWG on Electric Vehicle Safety. The expert from OICA invited all interested parties to take part in the next TF EMC meeting in May 2018 (GRE-79-34) and/or provide their written comments to TF EMC before July 2018, to facilitate preparing revised amendment proposals for consideration at the next session of GRE.

B. Regulation No. 50 (Position, stop, direction indicators lamps for mopeds and motorcycles)

Documentation: ECE/TRANS/WP.29/GRE/2018/27, ECE/TRANS/WP.29/GRE/2018/28

33. The expert from IMMA presented amendments to Regulation No. 50 regarding inward geometric visibility requirements for rear position lamps, together with corresponding proposal for amendments to regulation No. 53 (ECE/TRANS/WP.29/GRE/2018/27 and ECE/TRANS/WP.29/GRE/2018/28). GRE generally supported these proposals, but recalled its earlier decision to "freeze" Regulation No. 50 which would be replaced by the new LSD regulation. Therefore, GRE invited IMMA to resubmit the proposals once the LSD Regulation would have entered into force.

C. Regulation No. 53 (Installation of lighting and light-signalling devices for L_3 vehicles)

Documentation: ECE/TRANS/WP.29/GRE/2017/26,
ECE/TRANS/WP.29/GRE/2018/19,
ECE/TRANS/WP.29/GRE/2018/25,
ECE/TRANS/WP.29/GRE/2018/26,
ECE/TRANS/WP.29/GRE/2018/29, Informal documents GRE-77-08, GRE-77-09, GRE-77-17, GRE-78-22, GRE-78-24, GRE-79-20

34. On behalf of the Special Interest Group for DRL of L-category vehicles, the expert from Japan proposed a new requirement for automatic switching from DRL to the headlamp for L_3 category (ECE/TRANS/WP.29/GRE/2018/19). The expert from India suggested deletion of the wording "passing beam" from the text (GRE-79-20). Some GRE experts supported in principal ECE/TRANS/WP.29/GRE/2018/19, but expressed concerns about the proposed introduction of a new category of daytime running lamps with the maximum luminous intensity of 700 cd. GRE invited experts to send their comments to the Special Interest Group and agreed to continue consideration of the proposal at the next session.

35. The expert from IMMA proposed to clarify that direction indicators may be activated to show the vehicle status when the engine is stopped (ECE/TRANS/WP.29/GRE/2018/25). The experts from Finland, Italy and Netherlands recalled that Regulation No. 48 in similar situations makes clear references to Regulations Nos. 97 and 116. The Chair invited IMMA to consider its proposal in line with the logic of Regulation No. 48.

36. The expert from IMMA introduced a revised proposal which allowed the use of different stop lamp activation methods and aligned the stop lamp provisions with those applicable for four-wheelers (ECE/TRANS/WP.29/GRE/2018/29). GRE adopted the proposal and mandated the secretariat to submit it to WP.29 and AC.1 for consideration and vote at their November 2018 sessions as a draft Supplement 20 to the 01 series of amendments to Regulation No. 53 and as a draft Supplement 2 to the 02 series of amendments to Regulation No. 53.

37. The expert from IMMA presented a proposal on exterior courtesy lamps (ECE/TRANS/WP.29/GRE/2018/26). The experts from Austria and Netherlands asked for clarification under which motorcycle rest positions (main and/or side) the courtesy lamps would be activated. GRE agreed to revert to this issue at the next session.

38. The expert from IMMA proposed to align the text of Regulation No. 53 with Regulation No. 48 and to correct a mistake in the past amendment process (ECE/TRANS/WP.29/GRE/2017/26). GRE adopted the proposal and mandated the secretariat to submit it to WP.29 and AC.1 for consideration and vote at their November 2018 sessions as a draft Supplement 20 to the 01 series of amendments to Regulation No. 53 and as a draft Supplement 2 to the 02 series of amendments to Regulation No. 53.

39. The expert from India presented GRE-78-24, which replaced GRE-77-08, with the aim to make, under certain conditions, the front position lamp optional for L_3 category of vehicles. The experts from Austria, Italy, Finland and Netherlands pointed out the need to study this proposal in more detail. The Chair invited the expert from India to submit an official document for consideration at the next session.

40. GRE noted that GRE-77-09, GRE-77-17 and GRE-78-22, which had not been addressed at the previous sessions due to lack of time, had been superseded by other proposals considered at this session.

D. Regulation No. 74 (Installation of lighting and light-signalling devices for mopeds)

Documentation: ECE/TRANS/WP.29/GRE/2018/23,
ECE/TRANS/WP.29/GRE/2018/24

41. The expert from the Netherlands briefly presented ECE/TRANS/WP.29/GRE/2018/23 to initiate a discussion on the possible mandatory installation of direction indicators on mopeds. The Chair invited experts to provide their comments to the expert from the Netherlands before the end of May with a view to preparing a revised proposal for consideration at the next session.

42. The expert from Czechia proposed to clarify the requirements of driving and passing beam headlamps for mopeds (ECE/TRANS/WP.29/GRE/2018/24). GRE adopted the proposal and requested the secretariat to submit it to WP.29 and AC.1 for consideration and vote at their November 2018 sessions as a draft Supplement 10 to the 01 series of amendments to Regulation No. 74.

IX. Other business (agenda item 8)

A. Amendments to the Convention on Road Traffic (Vienna, 1968)

43. The Secretary of the Global Forum for Road Traffic Safety (WP.1) briefed GRE on the outcome of the March 2018 session of WP.1. In particular, WP.1 had nearly finalized considering the amendment proposals to Article 32 and Chapter II of Annex 5 on lighting and light-signalling (ECE/TRANS/WP.1/2017/1[1]). A summary of the WP.1 discussions could be found in the session's report (ECE/TRANS/WP.1/163, paras. 10-12[2]). According to the WP.1 Secretary, the Global Forum would finalize the amendment proposals at its next regular session in September 2018. He also pointed out that, in May 2018, WP.1 would hold an extraordinary meeting to consider a Draft resolution on the deployment of highly and fully automated vehicles in road traffic (ECE/TRANS/WP.1/2018/4/Rev.1[3]). The Chair invited GRE experts to review ECE/TRANS/WP.1/2017/1 and to provide their comments, if any, to the secretariat.

B. Decade of action for road safety 2011-2020

44. GRE recalled the developments in field of road safety mentioned in the opening statement (para. 5).

C. Development of the International Whole Vehicle Type Approval

Documentation: ECE/TRANS/WP.29/2017/108

45. GRE noted that UN Regulation No. 0 on the International Whole Vehicle Type Approval (IWVTA) had been adopted at the November 2017 sessions of WP.29 and AC.1 (ECE/TRANS/WP.29/2017/108) and was expected to enter into force in July 2018.

[1] www.unece.org/fileadmin/DAM/trans/doc/2017/wp1/ECE-TRANS-WP1-2017-1e.pdf
[2] www.unece.org/fileadmin/DAM/trans/doc/2018/wp1/ECE-TRANS-WP1-163-e.pdf
[3] www.unece.org/fileadmin/DAM/trans/doc/2018/wp1/ECE-TRANS-WP1-2018-4-Rev1e.pdf

D. Phantom light and colour washout

46. No information was reported on this topic.

X. New business and late submissions (agenda item 9)

Documentation: Informal documents GRE-78-03, GRE-79-06, GRE-79-07

47. The experts of France and Germany initiated a discussion on how to treat lamps with apparent surfaces in the form of a company logo or other brand-identifying figures (GRE-78-03). The experts from Finland, France, Italy Netherlands, Poland, Spain and UK reported on their national experiences on the subject. GRE noted that, in many countries, specific illuminated advertisement on vehicles was prohibited. However, no clear restrictions existed for lamps which otherwise met the requirements of lighting and light-signalling Regulations, and particularly of Regulation No. 48. GRE was also informed about optional additional lamps that were allowed in some countries for the purposes of road safety, for example, additional direction indicators for trucks in the form of a cyclist. The experts from France and Germany pointed out that they would distribute a questionnaire to GRE experts to solicit detailed information on relevant national practices. In addition, the expert from the Netherlands suggested establishing a task force. GRE agreed to revert to this issue at the next session, based on the outcome of the survey.

48. The expert from SAE informed GRE about the recent changes of the national regulation on motor vehicle lighting and light signalling in Canada and of the associated technical standard document (GRE-79-06 and GRE-79-07). GRE took note of this information.

XI. Direction of future work of GRE (agenda item 10)

Documentation: Informal documents GRE-79-35 and GRE-79-36

49. The expert from GTB briefed GRE on the issues that had been addressed at the GTB forum on lighting for automated vehicles in February 2018 (GRE-79-35 and GRE-79-36). GRE noted that this topic would also be raised at the June 2018 session of the WP.29 IWGs on Intelligent Transport Systems and Automated Driving.

XII. Provisional agenda for the next session (agenda item 11)

50. GRE provided no guidance on the provisional agenda for the next session.

Annex I

List of informal documents considered during the session

Informal documents GRE-79-…

No.	*(Author) Title*	*Follow-up*
1	(Secretariat) - Updated provisional agenda for the seventy-ninth session of GRE	b
2	(Chair) - Running order	b
3-Rev.1	(Japan) - Proposal for a Supplement to the 06 series of amendments of Regulation No. 48	e
4	(TF EMC) - Status report	f
5	(TF EMC) - Correction of transitional provisions in ECE/TRANS/WP.29/GRE/2018/5	e
6	(SAE) - Amending the Regulation on motor vehicle lighting and light-signalling in Canada	f
7	(SAE) - Revised Technical Standards Document on Lamps, Reflective Devices, and Associated Equipment in Canada	f
8	(IWG SLR) - Proposal for amendments to the 02 series of amendments to Regulation No. 53	a
9	(IWG SLR) - Proposal for amendments to the 01 series of amendments to Regulation No. 74	a
10	(IWG SLR) - Proposal to introduce transitional provisions in the text of the draft new UN Regulations on LSD (ECE/TRANS/WP.29/GRE/2018/2), RID (ECE/TRANS/WP.29/GRE/2018/3) and RRD (ECE/TRANS/WP.29/GRE/2018/4)	a
11	(IWG SLR) - Proposal to improve the general requirements for the "Change Index" as proposed in documents ECE/TRANS/WP.29/GRE/2018/16 and ECE/TRANS/WP.29/GRE/2018/18	a
12-Rev.1	(IWG SLR) - Explanation of the “Change Index” (animated presentation)	f
13	(IWG SLR) - Proposal to improve and correct the official documents to introduce references to the three new simplified UN Regulations on LSD, RID and RRD	b
14	(IWG SLR) - Proposal to improve and correct the text of the three new simplified UN Regulations on LSD, RID and RRD	a
15	(Secretariat) - General information and WP.29 highlights	f
16	(TF SR) - Status report	f
17-Rev.1	(India) - Comments on ECE/TRANS/WP.29/GRE/2018/2	b
18-Rev.1	(India) - Comments on ECE/TRANS/WP.29/GRE/2018/3	b
19	(India) - Comments on ECE/TRANS/WP.29/GRE/2018/13	g
20	(India) - Comments on ECE/TRANS/WP.29/GRE/2018/19	d
21	(India) - Comments on ECE/TRANS/WP.29/GRE/2018/5	e
22	(India) - Comments on GRE-78-35-Rev.1	g
23	(Poland) - Summary of initial aiming and levelling tolerance issue	d
24	(Poland) - Detailed explanations of GRE-79-23	d

No.	*(Author) Title*	*Follow-up*
	(Germany and Italy) - Proposal for the 07 series of amendments to Regulation No. 48	e
25	(Installation of lighting and light-signalling devices) and for Supplement 20 to Regulation No. 87 (Daytime running lamps)	
26	(TF HS) - Proposal for Supplement 11 to the 06 series of amendments to Regulation No. 48 (Installation of lighting and light-signalling devices)	e
27	(France) - Proposal for a Supplement to Regulation No. 10 (Electromagnetic compatibility)	e
28	(IWG SLR) - Progress report	f
29	(Italy and Netherlands) - Proposal for a new 07 series of amendments to Regulation No. 48 (Installation of lighting and light-signalling devices)	d
30	(OICA) - Comments on GRE-79-25	e
31	(European Commission) - Proposal to improve ECE/TRANS/WP.29/GRE/2018/11 and to introduce new requirements into the 06 series of amendments to Regulation No. 48 with regard to the validity and installation of type approved lighting and light-signalling devices	d
32-Rev.1	(SAE) - Proposal for amendments to Regulations Nos. 98, 112, 113 and 123	d
33	(Chair of IWG VGL) - Proposal to amend the Terms of Reference for IWG VGL	d
34	(TF EMC) - Invitation to a teleconference	f
35	(GTB) - Lighting for automated vehicles: discussion on ways forward	d
36	(GTB) - Special light-signalling needs for vehicles equipped with ADS (Automated Driving Systems)	d

Notes:

(a) Endorsed or adopted without amendment;

(b) Endorsed or adopted with amendments;

(c) Resume consideration on the basis of a document with an official symbol;

(d) Kept as a reference document/continue consideration;

(e) Revised proposal for the next session;

(f) Consideration completed or to be superseded;

(g) Withdrawn.

Annex II

Modifications to ECE/TRANS/WP.29/GRE/2018/2, ECE/TRANS/WP.29/GRE/2018/3 and ECE/TRANS/WP.29/GRE/2018/4 (based on GRE-79-14)

A. Correction of typos in ECE/TRANS/WP.29/GRE/2018/3

Annex 1, paragraph 9.1., amend to read:

"9.1. For Headlamps of Classes A and B~~10~~**10**"

Annex 4, Figure A4-XII, bottom line, replace 15º with 30º.

Annex 13, Figure A13-II and description, amend to read:

"…

Figure A13-II - Marking example 2  	The lamp bearing the approval mark shown on the left is a gas-discharge **passing beam** headlamp (DC) for left-hand traffic only (arrow) using a plastic lens (PL) approved in France (E2) pursuant to this Regulation ([RID]) as set in the original series of amendments (00) combined with a front position lamp (A) as set in the original series of amendments (00) of the Regulation on Light Signalling Devices ([LSD]). Both lamps (functions) are approved under approval number 3223.

…"

B. Amendments to Annex 1 of ECE/TRANS/WP.29/GRE/2018/2, ECE/TRANS/WP.29/GRE/2018/3 and ECE/TRANS/WP.29/GRE/2018/4

ECE/TRANS/WP.29/GRE/2018/2, Annex 1, table, amend to read:

"…

Category of the lamp:		~~[~~Change index:~~]~~	
Approval No:		~~Extension No:~~	
Unique Identifier (UI) (If applicable)			

"

ECE/TRANS/WP.29/GRE/2018/3, Annex 1, amend to read:

" …

Class of the device: …… ~~[~~Change index: ……~~]~~

Approval No. ……~~Extension No. ……~~

Unique Identifier (UI) (If applicable): … …

…"

Document ECE/TRANS/WP.29/GRE/2018/4, Annex 1, amend to read:

" …

Class of the device: …… ~~[~~Change index: ……~~]~~

Approval No: ..... ~~Extension No: .....~~

Unique Identifier (UI) (If applicable): … …

…"

C. Correction of references in ECE/TRANS/WP.29/GRE/2018/4

Table A22-3, text below, amend to read:

"…

[d] The data from Table 4 in CIE No. 85 ~~[1]~~ plus window glass was determined by multiplying the CIE No. 85, Table 4 data by the spectral transmittance of 3 mm thick window glass (see ISO 11341 ~~[2]~~). These data are target values for xenon-arc with window glass filters.

…"

D. Introduction of a new Annex to ECE/TRANS/WP.29/GRE/2018/4

Table of Contents, Annexes, amend to read:

"…

24 Examples of arrangement of approval marks

25 Guidelines for installation of rear marking plates on slow-moving vehicles (by construction) and their trailers"

Insert a new Annex 25 to read:

"Annex 25

Guidelines for installation of rear marking plates on slow-moving vehicles (by construction) and their trailers

1. It is recommended to the Governments to require on slow-moving vehicles which, by construction, cannot travel faster than 30 km/h, "Rear marking plates for slow-moving vehicles and their trailers" which conform to this Regulation and the specific requirements relating to its scope in accordance with the guidelines given in this annex.

2. <u>Scope</u>

The main purpose of these guidelines is to establish requirements for installation, arrangement, position and geometric visibility of rear marking plates on slow-moving vehicles and their trailers which, by

construction, cannot travel faster than 30 km/h. It increases the visibility and permits an easy identification of these vehicles.

3. Number

At least one.

4. Arrangement

The rear marking plate(s) shall be type approved and meet the requirements of this UN Regulation.

The apex of a rear marking plate shall be directed upwards.

Every part of a rear marking plate shall lie within 5° of a transverse vertical plane at right angles to the longitudinal axis of the vehicle and shall face to the rear.

5. Position

In width: **If there is only one rear marking plate, it must be on the opposite side of the median longitudinal plane of the vehicle to the direction of traffic prescribed in the country of registration.**

In height: **Above the ground, not less than 250 mm (lower edge), not more than 1,500 mm (upper edge).**

In length: **At the rear of the vehicle.**

6. Geometric visibility

Horizontal angle: **30° inwards and outwards, covering by indispensable constructional parts of the vehicle up to 10 per cent of the rear marking plate surface is permitted;**

Vertical angle: **15° above and below the horizontal;**

Orientation: **rearwards."**

Annex III

Modifications to ECE/TRANS/WP.29/GRE/2018/6, ECE/TRANS/WP.29/GRE/2018/7, ECE/TRANS/WP.29/GRE/2018/8, ECE/TRANS/WP.29/GRE/2018/9, ECE/TRANS/WP.29/GRE/2018/10, ECE/TRANS/WP.29/GRE/2018/14, ECE/TRANS/WP.29/GRE/2018/15, ECE/TRANS/WP.29/GRE/2018/17, ECE/TRANS/WP.29/GRE/2018/30 (based on GRE-79-13)

A. ECE/TRANS/WP.29/GRE/2018/6

Paragraph 6.3.9., amend to read:

"6.3.9. Other requirements

In the case where there is a positive indication in the communication form in ~~item 10.8. of~~ Annex 1 of Regulation No. 19 **or ~~item 9.5.8. of~~ in Annex 1 of Regulation No. [RID]** the alignment and the luminous intensities of the Class "F3" front fog beam may be automatically adapted ..."

Paragraph 6.22.6.1.2.1., amend to read:

"6.22.6.1.2.1. In case the passing-beam is generated by several beams from different lighting units, the provisions according to paragraph 6.22.6.1.2. above apply to each said beam's "cut-off" (if any), which is designed to project into the angular zone, as indicated under item ~~9.4.~~ **9.3.** of the communication form conforming to the model in Annex 1 to Regulations Nos. 123 **or item 9.3.3. in Annex 1 to [RID]**."

Paragraph 6.22.9.1., amend to read:

"6.22.9.1. An AFS shall be permitted only in conjunction with the installation of headlamp cleaning device(s) according to Regulation No. 45[18] for at least those lighting units, which are indicated under item ~~9.3.~~ **9.2.3.** of the communication form conforming to the model in Annex 1 to Regulation No. 123 **or under item ~~9.3.3.~~ 9.3.2.3. in Annex 1 to Regulation No. [RID]**, if the total objective luminous flux of the light sources of these units exceeds 2,000 lm per side, and which contribute to the Class C (basic) passing-beam."

B. ECE/TRANS/WP.29/GRE/2018/7

Paragraph 6.3.9., amend to read:

"6.3.9. Other requirements

In the case where there is a positive indication in the communication form in ~~item 10.8. of~~ Annex 1 of Regulation No. 19 **or ~~item 9.5.8. of~~ in Annex 1 of Regulation No. [RID]** the alignment and the luminous intensities of the Class "F3" front fog beam may be automatically adapted ..."

Paragraph 6.22.6.1.2.1., amend to read:

"6.22.6.1.2.1. In case the passing-beam is generated by several beams from different lighting units, the provisions according to paragraph 6.22.6.1.2. above apply to each said beam's "cut-off" (if any), which is designed to project into the angular zone, as indicated under item ~~9.4.~~ **9.3.** of the communication form conforming to the model in Annex 1 to Regulations Nos. 123 **or item 9.3.3. in Annex 1 to [RID]**."

Paragraph 6.22.9.1., amend to read:

"6.22.9.1. An AFS shall be permitted only in conjunction with the installation of headlamp cleaning device(s) according to Regulation No. 45[19] for at least those lighting units, which are indicated under item ~~9.3.~~ **9.2.3.** of the communication form conforming to the model in Annex 1 to Regulation No. 123 **or under item ~~9.3.3.~~ 9.3.2.3. in Annex 1 to Regulation No. [RID]**, if the total objective luminous flux of the light sources of these units exceeds 2,000 lm per side, and which contribute to the Class C (basic) passing-beam."

C. ECE/TRANS/WP.29/GRE/2018/8

Paragraph 6.22.6.1.2.1., amend to read:

"6.22.6.1.2.1. In case the passing-beam is generated by several beams from different lighting units, the provisions according to paragraph 6.22.6.1.2. above apply to each said beam's "cut-off" (if any), which is designed to project into the angular zone, as indicated under item ~~9.4.~~ **9.3.** of the communication form conforming to the model in Annex 1 to Regulations Nos. 123 **or item 9.3.3. in Annex 1 to [RID]**."

Paragraph 6.3.9., amend to read:

"6.3.9. Other requirements

In the case where there is a positive indication in the communication form in ~~item 10.8. of~~ Annex 1 of Regulation No. 19 **or ~~item 9.5.8. of~~ in Annex 1 of Regulation No. [RID]** the alignment and the luminous intensities of the Class "F3" front fog beam may be automatically adapted ..."

Paragraph 6.22.9.1., amend to read:

"6.22.9.1. An AFS shall be permitted only in conjunction with the installation of headlamp cleaning device(s) according to Regulation No. 45[19] for at least those lighting units, which are indicated under item ~~9.3.~~ **9.2.3.** of the communication form conforming to the model in Annex 1 to Regulation No. 123 **or under item ~~9.3.3.~~ 9.3.2.3. in Annex 1 to Regulation No. [RID]**, if the total objective luminous flux of the light sources of these units exceeds 2,000 lm per side, and which contribute to the Class C (basic) passing-beam."

D. ECE/TRANS/WP.29/GRE/2018/9

Paragraphs 6.22.2. to 6.22.6., amend to read:

"6.22.2. Number: According to Annex 15 of Regulation No. 69 **or Annex ~~24~~ 25 of Regulation No.** [RRD].

6.22.3. Arrangement: According to Annex 15 of Regulation No. 69 **or Annex ~~24~~ 25 of Regulation No.** [RRD].

6.22.4. Position

Width: According to Annex 15 of Regulation No. 69 **or Annex ~~24~~ 25 of Regulation No.** [RRD].

Height: No individual specifications.

Length: According to Annex 15 of Regulation No. 69 **or Annex ~~24~~ 25 of Regulation No.** [RRD].

6.22.5. Geometric visibility: According to Annex 15 of Regulation No. 69 **or Annex ~~24~~ 25 of Regulation No.** [RRD].

6.22.6. Orientation: According to Annex 15 of Regulation No. 69 **or Annex ~~24~~ 25 of Regulation No.** [RRD]."

E. ECE/TRANS/WP.29/GRE/2018/10

Paragraphs 6.22.2. to 6.22.6., amend to read:

"6.22.2. Number: According to Annex 15 of Regulation No. 69 **or Annex ~~24~~ 25 of Regulation No.** [RRD].

6.22.3. Arrangement: According to Annex 15 of Regulation No. 69 **or Annex ~~24~~ 25 of Regulation No.** [RRD].

6.22.4. Position

Width: According to Annex 15 of Regulation No. 69 **or Annex ~~24~~ 25 of Regulation No.** [RRD].

Height: No individual specifications.

Length: According to Annex 15 of Regulation No. 69 **or Annex ~~24~~ 25 of Regulation No.** [RRD].

6.22.5. Geometric visibility: According to Annex 15 of Regulation No. 69 **or Annex ~~24~~ 25 of Regulation No.** [RRD].

6.22.6. Orientation: According to Annex 15 of Regulation No. 69 **or Annex ~~24~~ 25 of Regulation No.** [RRD]."

Amendment to Annex 6, paragraph 2, delete:

~~*Annex 6, paragraph 2.*, amend to read:~~

~~"2. Colours and photometric minimum requirements~~

~~Each panel or foil shall be according to the specifications of Regulation No. 70, class 5 or Regulation No. 104, class F **or Regulation No.** [RRD], **class 5 or class F**."~~

F. ECE/TRANS/WP.29/GRE/2018/14

Paragraph 6.1.1., amend to read:

"6.1.1. Number

…

(g) Class ┤A, BS, CS, DS or ES├ of Regulation No. [RID]"

*Paragraph 6.2.1. and footnote *, amend to read:*

"6.2.1. Number

…

(i) Class ┤A, AS*, BS, CS, DS or ES├ of Regulation No. [RID][22]

*Headlamps of Class A of Regulation No. 113 **with LED modules or class ┤AS├ of Regulation No. [RID]** with LED modules only on vehicles with a maximum design speed not exceeding 25 km/h.**"**

G. ECE/TRANS/WP.29/GRE/2018/15

Paragraph 6.1.1.1., amend to read:

"6.1.1.1. For motorcycles having a cylinder capacity ≤ 125 cm^3

…

(i) Class ┤A, B, D, CS, DS or ES├ of Regulation No. [RID]"

Paragraph 6.1.1.2., amend to read:

"6.1.1.2. For motorcycles having a cylinder capacity > 125 cm^3

…

(h) Class ┤A, B, D, DS or ES├ of Regulation No. [RID]

…"

Paragraph 6.2.1.1., amend to read:

"6.2.1.1. For motorcycles having a cylinder capacity ≤ 125 cm^3

…

(i) Class ┤A, B, D, CS, DS or ES├ of Regulation No. [RID]"

Paragraph 6.2.1.2., amend to read:

"6.2.1.2. For motorcycles having a cylinder capacity > 125 cm^3

…

(h) Class ┤A, B, D, DS or ES├ of Regulation No. [RID]

…"

H. ECE/TRANS/WP.29/GRE/2018/17

Paragraph 6.1.1.1., amend to read:

"6.1.1.1. For motorcycles having a cylinder capacity ≤ 125 cm^3

…

(i) Class ┤A, B, D, BS, CS, DS or ES├ of Regulation No. [RID]"

Paragraph 6.1.1.2., amend to read:

"6.1.1.2. For motorcycles having a cylinder capacity > 125 cm^3

…

(h) Class ┤A, B, D, BS, DS or ES├ of Regulation No. [RID]

…"

Paragraph 6.2.1.1., amend to read:

"6.2.1.1. For motorcycles having a cylinder capacity ≤ 125 cm^3

…

(i) Class ┤A, B, D, BS, CS, DS or ES├ of Regulation No. [RID]"

Paragraph 6.2.1.2., amend to read:

"6.2.1.2. For motorcycles having a cylinder capacity > 125 cm^3

…

(h) Class ┤A, B, D, BS, DS or ES├ of Regulation No. [RID]

…"

I. ECE/TRANS/WP.29/GRE/2018/30

Paragraph 6.20., amend to read:

"6.20. CORNERING LAMP (Regulation**s** No**s**. 119 **or [~~LSD~~RID]**)"

Paragraph 6.5.8., amend to read:

"…

It shall be activated by the signal produced according to paragraph ~~6.4.2.~~ **6.2.2.** of Regulation No. 6 **or according to paragraph 5.6.3. of Regulation No. [LSD]** or another suitable way. 15/

…"

*Paragraph 6.22.6.1.2.**1.**,* amend to read:

"6.22.6.1.2.**1.**In case the passing-beam is generated by several beams from different lighting units, the provisions according to paragraph 6.22.6.1.2. above apply to each said beam's "cut-off" (if any), which is designed to project into the angular zone, as indicated under item ~~9.4.~~ **9.3.** of the communication form conforming to the model in Annex 1 to Regulations Nos. 123 **or item 9.3.3. in Annex 1 to [RID]**."

Paragraph 6.3.9., amend to read:

"6.3.9. Other requirements

In the case where there is a positive indication in the communication form in ~~item 10.8. of~~ Annex 1 of Regulation No. 19 **or ~~item 9.5.8. of~~ in Annex 1 of Regulation No. [RID]** the alignment and the luminous intensities of the Class "F3" front fog beam may be automatically adapted ..."

Paragraph 6.22.9.1., amend to read:

"6.22.9.1. An AFS shall be permitted only in conjunction with the installation of headlamp cleaning device(s) according to Regulation No. 45[22] for at least those lighting units, which are indicated under item ~~9.3.~~ **9.2.3.** of the communication

form conforming to the model in Annex 1 to Regulation No. 123 **or under item ~~9.3.3.~~ 9.3.2.3. in Annex 1 to Regulation No. [RID]**, if the total objective luminous flux of the light sources of these units exceeds 2,000 lm per side, and which contribute to the Class C (basic) passing-beam."

Annex IV

Corrections to ECE/TRANS/WP.29/GRE/2018/2 (based on GRE-79-17-Rev.1)

Paragraph 5.6.3., amend to read:

"5.6.3. Failure provisions

For direction-indicator lamps of categories 1, 1a, 1b, 2a, 2b, ~~11, 11a, 11b, 11c and 12~~, a signal for activation of the tell-tale prescribed in paragraph 6.5.8. of Regulation No. 48 or paragraph 6.3.8. of Regulation No. 53 shall be produced if (notwithstanding the provisions stated in paragraph 4.6.):

…"

Paragraph 5.1.4., amend to read:

"5.1.4. The colour of the light emitted **shall be white, however the lamp identified by symbol 'MA' may be amber."**

Annex 2, table A2-1, amend to read:

"

Lamp	***Minimum horizontal angles (inboard / outboard)***	***Minimum vertical angles (above / below)***	***Additional information***
…	…	…	…
Rear position pair (MR)	45° / 80° 20° / 80°	15° / ~~15°~~ **10°** 15° / 5°[2]	-
…	…	…	…

"

Annex V

Corrections to ECE/TRANS/WP.29/GRE/2018/3 (based on GRE-79-18-Rev.1)

Paragraph 3.2.4.3., table 1, title, amend to read:

"Table 1: List of symbols/**combinations** (full list is provided in Annex 1 "Communication")"

Paragraph 4.5.2.4., amend to read:

"4.5.2.4. The headlamp of class D **and /or class ES** and its ballast system or light source control gear shall not generate radiated or power line disturbances which cause a malfunction of other electric/electronic systems of the vehicle."

Annex 2, after paragraph 1.2.1.3., insert a new paragraph 1.2.1.3.1. to read:

"1.2.1.3.1. If the results of the test described above do not meet the requirements, the alignment of the headlamp may be changed, provided that the axis of the beam is not displaced laterally by more than 0.5 degree, to the right or left and not by more than 0.2 degree up and down."

Annex VI

Amendments to definitions in Regulations Nos. 53 and 74 (based on GRE-79-08 and GRE-79-09)

A. Proposal for Supplement 2 to the 02 series of amendments to Regulation No. 53

Paragraph 2, 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. "*Approval of a vehicle*" means the approval of a vehicle type with regard to the number and mode of installation of the lighting and light-signalling devices;~~

~~2.2.~~**2.1.** "*Vehicle type*" means a category of vehicles which do not differ from each other in such essential respects as:

~~2.2.1.~~**2.1.1.** The dimensions and external shape of the vehicle;

~~2.2.2.~~**2.1.2.** The number and position of the devices;

~~2.2.3.~~**2.1.3.** The following shall likewise not be deemed to be "vehicles of a different type":

~~2.2.3.1.~~**2.1.3.1.** Vehicles which differ within the meaning of paragraphs ~~2.2.1.~~**2.1.1.** and ~~2.2.2.~~**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

~~2.2.3.2.~~**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;

~~2.3. "*Transverse plane*" means a vertical plane perpendicular to the median longitudinal plane of the vehicle;~~

~~2.4.~~**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;

~~2.5.~~**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;

~~2.5.1.~~**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;

~~2.5.2.~~**2.3.2.** "*Independent lamp*" means devices having separate apparent surfaces, separate light sources and separate lamp bodies;

~~2.5.3.~~**2.3.3.** "*Grouped lamps*" means devices having separate apparent surfaces and separate light sources, but a common lamp body;

~~2.5.4.~~**2.3.4.** "*Combined*" means devices having separate apparent surfaces, but a common light source and a common lamp body;

~~2.5.5.~~**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;

~~2.5.6. "*Driving beam (main beam) headlamp*" means the lamp used to illuminate the road over a long distance ahead of the vehicle;~~

~~2.5.7. "*Passing beam (dipped beam) headlamp*" means the lamp used to illuminate the road ahead of the vehicle without dazzling of causing undue discomfort to oncoming drivers and other road users;~~

~~2.5.7.1. "*Principal passing beam (principal dipped beam)*" means the dipped beam produced without the contribution of infrared (IR) emitters and/or additional light sources for bend lighting.~~

~~2.5.8.~~**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 Regulation No. 97.

~~2.5.9. "*Stop lamp*" means the lamp used to indicate to other road users to the rear of the vehicle that its driver is applying the service brake;~~

~~2.5.10. "*Rear registration plate illuminating device*" means the device used to illuminate the space reserved for the rear registration plate; such a device may consist of several optical components;~~

~~2.5.11.~~**2.3.7.** "*Front position lamp*" means the lamp used to indicate the presence of the vehicle when viewed from the front;

~~2.5.12.~~**2.3.8.** "*Rear position lamp*" means the lamp used to indicate the presence of the vehicle when viewed from the rear;

~~2.5.13.~~**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;

~~2.5.14. "*Hazard warning signal*" means the simultaneous operation of all of a vehicle's direction indicator lamps to show that the vehicle temporarily constitutes a special danger to other road users;~~

~~2.5.15. "*Front fog lamp*" means the lamp used to improve the illumination of the road in case of fog, snowfall, rainstorms or dust clouds;~~

~~2.5.16. "*Rear fog lamp*" means the lamp used to make the vehicle more easily visible from the rear in dense fog;~~

~~2.5.17. "*Daytime running lamp*" means a lamp facing in a forward direction used to make the vehicle more easily visible when driving during daytime.~~

~~2.5.18. "*Interdependent lamp system*" means an assembly of two or three interdependent lamps providing the same function.~~

~~2.5.18.1. "*Interdependent lamp marked "Y"*" means a device operating as part of an~~

~~interdependent lamp system. Interdependent lamps operate together when activated, have separate apparent surfaces in the direction of the reference axis and separate lamp bodies, and may have separate light source(s).~~

~~2.5.19. *"Lamps marked "D""* means independent lamps, approved as separate devices in such a way that they are allowed to be used either independently or in an assembly of two lamps to be considered as a "single lamp".~~

~~2.6.~~**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;

~~2.7.~~**2.5.** "*Illuminating surface*" (see Annex 3);

~~2.7.1.~~**2.5.1.** "*Illuminating surface of a lighting device*" (**driving beam (main beam) headlamp, passing beam (dipped beam) headlamp, front fog lamp** ~~paragraphs. 2.5.6., 2.5.7. and 2.5.15. above~~) 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 ~~2.7.2.~~**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.

~~2.7.2.~~**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** ~~paragraphs 2.5.8., 2.5.9., 2.5.11., 2.5.12., 2.5.14. and 2.5.16. above~~) 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;

~~2.7.3.~~**2.5.3.** "*Illuminating surface of a retro-reflector*" (para. ~~2.5.13.~~**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;

~~2.8.~~**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);

~~2.9. "*Axis of reference*" (or "*reference axis*") means the characteristic axis of the lamp determined by the manufacturer (of the lamp) for use as the direction of reference (H = 0°, V = 0°) for angles of field for photometric measurements and for installing the lamp on the vehicle;~~

~~2.10.~~**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;

~~2.11. "*Angles of geometric visibility*" means the angles which determine the field of the minimum solid angle in which the apparent surface of the lamp shall be visible. That field of the solid angle is determined by the segments of the sphere of which the centre coincides with the centre of reference of the lamp and the equator is parallel with the ground. These segments are determined in relation to the axis of reference. The horizontal angles β, correspond to the longitude and the vertical angles α to the latitude;~~

~~2.12.~~**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:

~~2.12.1.~~**2.8.1.** Of rear-view mirrors,

~~2.12.2.~~**2.8.2.** Of direction indicator lamps,

~~2.12.3.~~**2.8.3.** Of front and rear position lamps and retro-reflectors;

~~2.13.~~**2.9.** "*Over-all width*" means the distance between the two vertical planes defined in paragraph ~~2.12.~~**2.8.** above;

~~2.14. "*A single lamp*" means:~~

~~(a) A device or part of a device having one lighting or light-signalling function, one or more light source(s) and one apparent surface in the direction of the reference axis, which may be a continuous surface or composed of two or more distinct parts; or~~

~~(b) Any assembly of two lamps marked "D", whether identical or not, having the same function, or~~

~~(c) Any assembly of two independent retro-reflectors, whether identical or not, that have been approved separately; or~~

~~(d) Any interdependent lamp system composed of two or three interdependent lamps marked "Y" approved together and providing the same function.~~

~~2.15. "*Distance between two lamps*" which face in the same direction means the shortest distance between the two apparent surfaces in the direction of the reference axis. Where the distance between the lamps clearly meets the requirements of the Regulation, the exact edges of apparent surfaces need not be determined;~~

~~2.16. "*Operating tell-tale*" means a visual or auditory signal (or any equivalent signal) indicating that a device has been switched on and whether or not it is operating correctly;~~

~~2.17. "*Circuit-closed tell-tale*" means a visual (or any equivalent signal) indicating that a device has been switched on, but not indicating whether or not it is operating correctly;~~

~~2.18. "*Optional lamp*" means a lamp, the installation of which is left to the discretion of the manufacturer;~~

~~2.19. "*Ground*" means the surface on which the vehicle stands which should be substantially horizontal;~~

~~2.20. "*Device*" means a component or combination of components used in order to perform one or several functions.~~

~~2.21.~~**2.10.** "*Colour of the light emitted from the device*". The definitions of the colour of the light emitted given in Regulation No. 48 and its series of amendments in force at the time of application for type approval shall apply to this Regulation.

~~2.22.~~**2.11.** "*Gross vehicle mass*" or "maximum mass" means the technically permissible maximum laden mass as declared by the manufacturer.

~~2.23.~~**2.12.** "*Laden*" means so loaded as to attain the gross vehicle mass as defined in paragraph ~~2.22.~~**2.11.** above.

~~2.24.~~**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);

~~2.25.~~**2.14.** "*Horizontal inclination adjustment system (HIAS)*" means a device that adjusts the horizontal inclination of the headlamp towards zero;

~~2.26.~~**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);

~~2.27.~~**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;

~~2.28.~~**2.17.** "*HIAS signal generator*" means a device, reproducing one or more of the HIAS signals for system test;

~~2.29.~~**2.18.** "*HIAS test angle*" means the angle δ 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).

~~2.30.~~**2.19.** "*Bend lighting*" means a lighting function to provide enhanced illumination in bends.

~~2.31.~~**2.20.** "*H plane*" means the horizontal plane containing the centre of reference of *the lamp*.

~~2.32.~~**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.*

~~2.33.~~**2.22.** *"Emergency stop signal"* means a signal to indicate to other road users to the rear of the vehicle that a high retardation"

Paragraph 3.2.1., amend to read:

"3.2.1. A description of the vehicle type with regard to the items mentioned in paragraphs ~~2.2.1.~~**2.1.1.** to ~~2.2.3.~~**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 ~~2.6.~~**2.4.** above, the axis of reference as defined in ~~paragraph 2.9. above~~ **Regulation No. 48** and the centre of reference as defined in ~~paragraph 2.10. above~~ **Regulation No. 48**. This information is not necessary in the case of the rear registration plate lamp (~~paragraph 2.5.10. above~~ **as defined in Regulation No. 48**).

3.2.5. The application shall include a statement of the method used for the definition of the apparent surface (paragraph ~~2.8.~~**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 ~~2.14.~~ **2.16.1. of 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 ~~2.14.~~**2.16.1. of 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 ~~2.14.~~**2.16.1. of 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 5.19.2., 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 ~~2.14.~~**2.16.1. of 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."

Paragraph 6.2.4., amend to read:

"6.2.4. Geometric visibility

Defined by angles α and β as specified in paragraph ~~2.11.~~**2.13.** of ~~this~~ Regulation **No. 48**:

…"

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 ~~2.11.~~**2.13.** of ~~this~~ Regulation **No. 48** are applied even when the registration plate is mounted;"

Paragraph 6.10.4., amend to read:

"6.10.4. Geometric visibility

Defined by angles α and β as specified in paragraph ~~2.11.~~**2.13. of Regulation No. 48**:

…"

Paragraph 6.11.4., amend to read:

"6.11.4. Geometric visibility

Defined by angles α and β as specified in paragraph ~~2.11.~~**2.13.** of ~~this~~ Regulation **No. 48**:

…"

Annex 5, paragraph 1.2.1., amend to read:

"1.2.1. The angles of geometric visibility shall be checked in accordance with paragraph ~~2.11.~~**2.13.** of ~~this~~ 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 ±3° variation permitted in paragraph 5.3. of this Regulation for the mounting of the light-signalling devices."

B. Proposal for Supplement 10 to the 01 series of amendments to Regulation No. 74

Paragraph 2., 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. "*Approval of a vehicle*" means the approval of a vehicle type with regard to the number and mode of installation of the lighting and light-signalling devices;~~

~~2.2.~~**2.1.** "*Vehicle type*" means a category of power-driven vehicles which do not differ from each other in such essential respects as:

~~2.2.1.~~ **2.1.1.** the dimensions and external shape of the vehicle;

~~2.2.2.~~ **2.1.2.** the number and position of the devices;

~~2.2.3.~~ **2.1.3.** the following shall likewise not be deemed to be "vehicles of a different type":

~~2.2.3.1.~~**2.1.3.1.** vehicles which differ within the meaning of paragraphs ~~2.2.1.~~**2.1.1.** and ~~2.2.2.~~ **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;

~~2.2.3.2.~~**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;

~~2.3. "*transverse plane*" means a vertical plane perpendicular to the median longitudinal plane of the vehicle;~~

~~2.4.~~ **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;

~~2.5.~~ **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;

~~2.5.1.~~ **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;

~~2.5.2.~~ **2.3.2.** "*Independent lamps*" means devices having separate illuminating surfaces, separate light sources and separate lamp bodies;

~~2.5.3.~~**2.3.3.** "*Grouped lamps*" means devices having separate illuminating surfaces and separate light sources, but a common lamp body;

~~2.5.4.~~ **2.3.4.** "*Combined*" means devices having separate illuminating surfaces, but a common light source and a common lamp body;

~~2.5.5.~~**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 illuminating surfaces and a common lamp body;

~~2.5.6. "*Driving beam (main beam) headlamp*" means the lamp used to illuminate the road over a long distance ahead of the vehicle;~~

~~2.5.7. "*Passing beam (dipped beam) headlamp*" means the lamp used to illuminate the road ahead of the vehicle without dazzling of causing undue discomfort to oncoming drivers and other road users;~~

~~2.5.8.~~**2.3.6.** "*Front position lamp*" means the lamp used to indicate the presence of the vehicle when viewed from the front;

~~2.5.9.~~**2.3.7.** "*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:

~~2.5.10.~~**2.3.8.** "*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

Regulation No. 97.

~~2.5.11. "*Stop lamp*" means the lamp used to indicate to other road users to the rear of the vehicle that its driver is applying the service brake;~~

~~2.5.12.~~**2.3.9.** "*Rear position lamp*" means the lamp used to indicate the presence of the vehicle when viewed from the rear;

~~2.5.13. "*Rear registration plate illuminating device*" means the device used to illuminate the space reserved for the rear registration plate; such a device may consist of several optical component.~~

~~2.5.14. "*Hazard warning signal*" means the simultaneous operation of all of a vehicle's direction indicator lamps to show that the vehicle temporarily constitutes a special danger to other road users;~~

~~2.6.~~**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;

~~2.7.~~**2.5.** "*Illuminating surface*" (see Annex 3);

~~2.7.1.~~**2.5.1.** "*Illuminating surface of a lighting device*" (**driving beam (main beam) headlamp and passing beam (dipped beam) headlamp** ~~paragraphs 2.5.6. and 2.5.7.~~) 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.** ~~2.7.2.~~ 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;

~~2.7.2.~~**2.5.2.** "*Illuminating surface of a light-signalling device other than a retro-reflector*" (**front position lamp, direction indicator lamp, stop lamp and rear position lamp** ~~paragraphs 2.5.8., 2.5.10., 2.5.11. and 2.5.12.~~) 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;

~~2.7.3.~~**2.5.3.** "*Illuminating surface of a retro-reflector*" (paragraph **2.3.7.**~~2.5.9.~~) 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;

~~2.8.~~**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);

~~2.9. "*Axis of reference*" (or "reference axis") means the characteristic axis of the lamp determined by the manufacturer (of the lamp) for use as the direction of reference (H = 0°, V = 0°) for angles of field for photometric measurements and for installing the lamp on the vehicle;~~

~~2.10.~~**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;

~~2.11.~~**2.8.** "*Angles of geometric visibility*" means the angles which determine the field of the minimum solid angle in which the apparent surface of the lamp must be visible. That field of the solid angle is determined by the segments of the sphere of which the centre coincides with the centre of reference of the lamp and the equator is parallel with the ground. These segments are determined in relation to the axis of reference. The horizontal angles β, correspond to the longitude and the vertical angles α to the latitude. There must be no obstacle on the inside of the angles of geometric visibility to the propagation of light from any part of the apparent surface of the lamp observed from infinity. If measurements are taken closer to the lamp, the direction of observation must be shifted parallel to achieve the same accuracy.

On the inside of the angles of geometric visibility no account is taken of obstacles, if they were already presented when the lamp was type approved.

If, when the lamp is installed, any part of the apparent surface of the lamp is hidden by any further parts of the vehicle, proof shall be furnished that the part of the lamp not hidden by obstacles still conforms to the photometric values prescribed for the approval of the device as an optical unit (see Annex 3 of this Regulation). Nevertheless, when the vertical angle of geometric visibility below the horizontal may be reduced to 5° (lamp at less than 750 mm above the ground) the photometric field of measurements of the installed optical unit may be reduced to 5° below the horizontal.

~~2.12.~~**2.9.** "*Extreme outer edge*", on either side of the vehicle means the plane parallel to the median longitudinal plane of the vehicle and tangent to the latter's lateral outer edge, disregarding rear-view mirrors, direction indicators, position lamps and retro-reflectors;

~~2.13.~~**2.10.** "*Over-all width*" means the distance between the two vertical planes defined in paragraph **2.10.**~~2.12.~~ above;

~~2.14.~~**2.11.** "*A single lamp*" means a device or part of a device, having one function and one apparent surface in the direction of the reference axis (see paragraph **2.6.**~~2.8.~~ of this Regulation) and one or more light sources.

For the purpose of installation on a vehicle, a "single lamp" also means any assembly of two independent or grouped lamps, whether identical or not, having the same function, if they are installed so that the projection of their apparent surfaces in the direction of the reference axis occupies not less than 60 per cent of the smallest rectangle circumscribing the projections of the said apparent surfaces in the direction of the reference axis. In such a case, each of these lamps shall, where approval is required, be approved as a type "D" lamp. This possible combination does not apply to driving beam headlamps and passing beam headlamps.

~~2.15. "*Distance between two lamps*" which face in the same direction means the~~

~~shortest distance between the two apparent surfaces in the direction of the reference axis. Where the distance between the lamps clearly meets the requirements of the Regulation, the exact edges of apparent surfaces need not be determined;~~

~~2.16. "*Operating tell-tale*" means a visual or auditory signal (or any equivalent signal) indicating that a device has been switched on and whether or not it is operating correctly;~~

~~2.17. "*Circuit-closed tell-tale*" means a visual (or any equivalent signal) indicating that a device has been switched on, but not indicating whether or not it is operating correctly;~~

~~2.18. "*Optional lamp*" means a lamp, the installation of which is left to the discretion of the manufacturer;~~

~~2.19. "*Ground*" means the surface on which the vehicle stands which should be substantially horizontal;~~

~~2.20. "*Device*" means a component or combination of components used in order to perform one or several functions.~~

~~2.21.~~**2.12.** "*Colour of the light emitted from the device*". The definitions of the colour of the light emitted given in Regulation No. 48 and its series of amendments in force at the time of application for type approval shall apply to this Regulation."

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.**~~2.2.1.~~ and **2.1.2.**~~2.2.2.~~ above; the vehicle type shall be specified;"

Paragraph 3.2.4., 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 **2.5.1.**~~2.7.1.~~ above, the light-emitting surface as defined in paragraph **2.4.**~~2.6.~~, the axis of reference ~~as defined in paragraph 2.9.~~ and the centre of reference as defined in paragraph **2.7.**~~2.10.~~ This information is not necessary in the case of the rear registration plate **illuminating device** ~~lamp (paragraph 2.5.13.)~~."

Paragraph 3.2.5., amend to read:

"3.2.5. The application shall include a statement of the method used for the definition of the apparent surface (paragraph **2.6.**~~2.8.~~)"

Paragraph 6.2.4., amend to read:

"6.2.4. Geometric visibility

Defined by angles α and β as specified in paragraph **2.8.**~~2.11.~~:

α = 15° and 10° downwards;

β = 45° to the left and to the right for a single lamp;

β = 45° outwards and 10° inwards for each pair of lamps.

The presence of partitions or other items of equipment near the head-lamp shall not give rise to secondary effects causing discomfort to other road users."

Annex 5, paragraph 1.2.1., amend to read:

"1.2.1. The angles of geometric visibility shall be checked in accordance with paragraph **2.8.**~~2.11.~~ of this Regulation."

Annex VII

Modifications to ECE/TRANS/GRE/2018/16 and ECE/TRANS/GRE/2018/18 (based on GRE-79-11)

A. ECE/TRANS/GRE/2018/16

New paragraph 5.32., amend to read:

"5.32. A device type approved according to any preceding series of amendments to UN Regulations **Nos. [LSD] and/or [RID] and/or [RRD]** ~~[LSD, RID and /or RRD]~~ is deemed equivalent to one approved according to the latest series of amendments to the pertinent **UN** Regulation**s Nos. [LSD] and/or [RID] and/or [RRD]**(~~[LSD], [RID] and [RRD])~~, when the change indexes (defined in paragraph 2.1.6.) 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** ~~there is no necessity to update~~ the device type approval documents and device markings."

B. ECE/TRANS/GRE/2018/18

Part A, new paragraph 5.19. for the 02 series of amendments to Regulation No. 53, renumber and amend to read:

"5.21. A device type approved according to any preceding series of amendments to UN Regulations **Nos. [LSD] and/or [RID] and/or [RRD]** ~~[LSD, RID and /or RRD]~~ is deemed equivalent to one approved according to the latest series of amendments to the pertinent **UN** Regulation**s Nos. [LSD] and/or [RID] and/or [RRD]**(~~[LSD], [RID] and [RRD])~~, when the change indexes (defined in ~~paragraph 2.1.6. of~~ 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** ~~there is no necessity to update~~ the device type approval documents and device markings."

Part B, new paragraph 5.19. for the 01 series of amendments to Regulation No. 74, amend to read:

"5.19. A device type approved according to any preceding series of amendments to UN Regulations **Nos. [LSD] and/or [RID] and/or [RRD]** ~~[LSD, RID and /or RRD]~~ is deemed equivalent to one approved according to the latest series of amendments to the pertinent **UN** Regulation**s Nos. [LSD] and/or [RID] and/or [RRD]**(~~[LSD], [RID] and [RRD])~~, when the change indexes (defined in ~~paragraph 2.1.6. of~~ 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** ~~there is no necessity to update~~ the device type approval documents and device markings."

Part C, new paragraph 5.20. for the 01 series of amendments to Regulation No. 86, amend to read:

"5.20. A device type approved according to any preceding series of amendments to UN Regulations **Nos. [LSD] and/or [RID] and/or [RRD]** ~~[LSD, RID and /or RRD]~~ is deemed equivalent to one approved according to the latest series of amendments to the pertinent **UN** Regulation**s Nos. [LSD] and/or [RID]**

and/or [RRD]~~([LSD], [RID] and [RRD])~~, when the change indexes (defined in ~~paragraph 2.1.6. of~~ 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** ~~there is no necessity to update~~ the device type approval documents and device markings."

Annex VIII

Modifications to ECE/TRANS/WP.29/GRE/2018/2, ECE/TRANS/WP.29/GRE/2018/3 and ECE/TRANS/WP.29/GRE/2018/4 (based on GRE-79-10)

A. ECE/TRANS/WP.29/GRE/2018/2

Paragraph 3.2.5., amend to read:

"3.2.5. The applicable change indexes for each device relating to the series of amendments shall be as follows **(see also paragraph 6.1.1.)**:"

Insert a new paragraph 6. to read:

"6. Transitional provisions

6.1. General

6.1.1. Contracting Parties applying this UN Regulation shall continue to accept UN type-approvals of the lamps (functions), to any of the preceding series of amendments to this UN Regulation, which are not affected by the changes introduced by the latest series of amendments.

To verify this, the change index applicable to the pertinent lamp (function) shall not differ from its change index as indicated in the latest series of amendments.

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

B. ECE/TRANS/WP.29/GRE/2018/3

Paragraph 3.2.4.4., amend to read:

"3.2.4.4. The applicable change indexes for each device relating to the series of amendments shall be as follows **(see also paragraph 6.1.1.)**:"

Insert a new paragraph 6. to read:

"6. Transitional provisions

6.1. General

6.1.1. Contracting Parties applying this UN Regulation shall continue to accept UN type-approvals of the lamps (functions), to any of the preceding series of amendments to this UN Regulation, which are not affected by the changes introduced by the latest series of amendments.

To verify this, the change index applicable to the pertinent lamp (function) shall not differ from its change index as indicated in the latest series of amendments.

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

C. ECE/TRANS/WP.29/GRE/2018/4

Paragraph 3.2.5., amend to read:

"3.2.5. The applicable change indexes for each device relating to the series of amendments shall be as follows **(see also paragraph 6.1.1.)**:"

Insert a new paragraph 6. to read:

"6. Transitional provisions

6.1. General

6.1.1. Contracting Parties applying this UN Regulation shall continue to accept UN type-approvals of the devices, to any of the preceding series of amendments to this UN Regulation, which are not affected by the changes introduced by the latest series of amendments.

To verify this, the change index applicable to the pertinent device shall not differ from its change index as indicated in the latest series of amendments.

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

Annex IX

[Original: français]

Revised French version of ECE/TRANS/WP.29/GRE/2017/24 (proposed by the expert from France)

"6.18.9 Autres prescriptions

Si les feux de position latéraux les plus en arrière sont combinés avec des feux de position arrière eux-mêmes mutuellement incorporés aux feux de brouillard arrière ou aux feux-stop, leurs caractéristiques photométriques peuvent être modifiées lorsque les feux de brouillard arrière sont allumés.

Les feux de position latéraux arrière doivent être orange s'ils clignotent avec le feu de position arrière.

Si un feu de position latéral facultatif est groupé ou combiné avec un feu de position lui-même mutuellement incorporé ou groupé avec le feu indicateur de direction, les branchements électriques du feu de position latéral du côté correspondant du véhicule peuvent être conçus de telle sorte que le feu de position latéral soit éteint pendant la totalité de la période d'activation du feu indicateur de direction (autant pendant les phases d'allumage que pendant les phases d'extinction)".

Annex X

Proposals for amendments to the 05 and 06 series of amendments to Regulation No. 48 (based on GRE-77-25-Rev.2)

A. Supplement 12 to the 05 series of amendments

Insert a new paragraph 2.37., to read:

"**2.37.** ***"External status indicator"*** **means an optical signal mounted on the outside of the vehicle to indicate the status or the change of the status for Vehicle Alarm System (VAS), Alarm System (AS) and immobiliser of Regulations No. 97 and No. 116, when the vehicle is parked.**

Paragraph 2.7., amend to read:

"2.7. "Lamp" means a device designed to illuminate the road or to emit a light signal to other road users. Rear registration plate lamps and retro-reflectors are likewise to be regarded as lamps. For the purpose of this Regulation, light-emitting rear registration plates, ~~and~~ the service-door-lighting system according to the provisions of Regulation No. 107 on vehicles of categories M_2 and M_3 **and external status indicator as defined in this Regulation** are not considered as lamps.

…"

Insert a new paragraph 5.30., to read:

"**5.30. External status indicator**

One external status indicator for Vehicle Alarm System (VAS), Alarm System (AS) and immobiliser is allowed if:

(a) The light intensity in any direction does not exceed 0.5 cd;

(b) The colour of the light emitted is white, red or amber;

(c) The area of the apparent surface is not larger than 20 cm^2.

Up to two external status indicators for Vehicle Alarm System (VAS), Alarm System (AS) and immobiliser are allowed on a vehicle provided that the apparent surface does not exceed 10 cm^2 per indicator."

A. Supplement 11 to the 06 series of amendments

Insert a new paragraph 2.37., to read:

"**2.37.** ***"External status indicator"*** **means an optical signal mounted on the outside of the vehicle to indicate the status or the change of the status for Vehicle Alarm System (VAS), Alarm System (AS) and immobiliser of Regulations No. 97 and No. 116, when the vehicle is parked.**

Paragraph 2.7., amend to read:

"2.7. "Lamp" means a device designed to illuminate the road or to emit a light signal to other road users. Rear registration plate lamps and retro-reflectors are

likewise to be regarded as lamps. For the purpose of this Regulation, light-emitting rear registration plates, ~~and~~ the service-door-lighting system according to the provisions of Regulation No. 107 on vehicles of categories M_2 and M_3 **and external status indicator as defined in this Regulation** are not considered as lamps.

…"

Insert a new paragraph 5.32., to read:

"**5.32. External status indicator**

One external status indicator for Vehicle Alarm System (VAS), Alarm System (AS) and immobiliser is allowed if:

(a) The light intensity in any direction does not exceed 0.5 cd;

(b) The colour of the light emitted is white, red or amber;

(c) The area of the apparent surface is not larger than 20 cm^2.

Up to two external status indicators for Vehicle Alarm System (VAS), Alarm System (AS) and immobiliser are allowed on a vehicle provided that the apparent surface does not exceed 10 cm^2 per indicator."

Annex XI

Corrections to the 05 and 06 series of amendments to Regulation No. 48 (based on GRE-78-05)

A. 05 series of amendments

Paragraph 5.7.2.1., amend to read:

"5.7.2.1. Single lamps as defined in paragraph 2.16.1., subparagraph (a), **the apparent surface of which is** 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 **of the apparent surface in the direction of the reference axis** 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 projection **of the said apparent surface in the direction of the reference axis;** or

(b) the minimum distance between the facing edges of two adjacent/tangential distinct parts **of the apparent surface in the direction of the reference axis** shall not exceed 75 mm when measured perpendicularly to the reference axis.

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

Paragraph 5.8., amend to read:

5.8. The maximum height above the ground shall be measured from the highest point and the minimum height from the lowest point of the apparent surface in the direction of the reference axis.

In the case of dipped-beam headlamp, the minimum height in relation to the ground is measured from the lowest point of the ~~effective outlet of the optical system (e.g. reflector, lens, projection lens)~~ **apparent surface in the direction of the reference axis** independent of its utilization.

Where the (maximum and minimum) height above the ground clearly meets the requirements of the Regulation, the exact edges of any surface need not be determined.

Paragraphs 5.10.1. and 5.10.2., amend to read:

5.10.1. For the visibility of red light towards the front of a vehicle, with the exception of a red rearmost side-marker lamp, there shall be no direct visibility of the apparent surface of a red lamp if viewed by an observer moving within Zone 1 **in a transverse plane situated 25 m in front of the vehicle (see Annex 4)** ~~as specified in Annex 4~~;

5.10.2. For the visibility of white light towards the rear **of a vehicle**, with the exception of reversing lamps and white side conspicuity markings ~~fitted to the vehicle~~, there shall be no direct visibility of the apparent surface of a white lamp if viewed by an observer moving within Zone 2 in a transverse plane situated 25 m behind the vehicle (see Annex 4);

Paragraph 6.2.9., amend to read:

"6.2.9. Other requirements

6.2.9.1. The requirements of paragraph 5.5.2. shall not apply to dipped-beam headlamps.

6.2.9.2. Dipped-beam headlamps with a light source or LED module(s) producing the principal dipped-beam ~~and~~ having a total objective luminous flux **for each headlamp** which exceeds 2,000 lumen shall only be installed in conjunction with the installation of headlamp cleaning device(s) according to Regulation No. 45.

6.2.9.3. 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 **for each headlamp** 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.

6.2.9.4. Only dipped-beam headlamps according to Regulation Nos. 98 or 112 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 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)."

Paragraph 6.3.6.1.2.1., amend to read:

"6.3.6.1.2.1. When the total objective luminous flux of the light source **for each front fog lamp** does not exceed 2,000 lumens:"

Paragraph 6.3.6.1.2.2., amend to read:

"6.3.6.1.2.2. When the total objective luminous flux of the light source **for each front fog lamp** exceeds 2,000 lumens:"

Paragraph 6.26.9.2., amend to read:

6.26.9.2. At the request of the applicant and with the consent of the Technical Service the requirement of 6.26.9.1 may be verified by a drawing or simulation or deemed be satisfied if the installation conditions comply with paragraph ~~6.2.3.~~ **6.2.2.** of Regulation No. 23, as noticed in the communication document in Annex 1, paragraph 9.

A. 06 series of amendments

Paragraph 5.7.2.1., amend to read:

"5.7.2.1. Single lamps as defined in paragraph 2.16.1., subparagraph (a), **the apparent surface of which is** 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 **of the apparent surface in the direction of the reference axis** 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 projection **of the said apparent surface in the direction of the reference axis;** or

(b) the minimum distance between the facing edges of two adjacent/tangential distinct parts **of the apparent surface in the direction of the reference axis** shall not exceed 75 mm when measured perpendicularly to the reference axis.

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

Paragraph 5.8.2., amend to read:

5.8.2. In the case of dipped-beam headlamp, the minimum height in relation to the ground is measured from the lowest point of the ~~effective outlet of the optical system (e.g. reflector, lens, projection lens)~~ **apparent surface in the direction of the reference axis** independent of its utilization.

Paragraphs 5.10.1 and 5.10.2., amend to read:

5.10.1. For the visibility of red light towards the front of a vehicle, with the exception of a red rearmost side-marker lamp, there shall be no direct visibility of the apparent surface of a red lamp if viewed by an observer moving within Zone 1 **in a transverse plane situated 25 m in front of the vehicle (see Annex 4)** ~~as specified in Annex 4~~;

5.10.2. For the visibility of white light towards the rear **of a vehicle**, with the exception of reversing lamps and white side conspicuity markings ~~fitted to the vehicle~~, there shall be no direct visibility of the apparent surface of a white lamp if viewed by an observer moving within Zone 2 in a transverse plane situated 25 m behind the vehicle (see Annex 4);

Paragraph 6.2.9., amend to read:

"6.2.9. Other requirements

6.2.9.1. The requirements of paragraph 5.5.2. shall not apply to dipped-beam headlamps.

6.2.9.2. Dipped-beam headlamps with a light source or LED module(s) producing the principal dipped-beam ~~and~~ having a total objective luminous flux **for each headlamp** which exceeds 2,000 lumen shall only be installed in conjunction with the installation of headlamp cleaning device(s) according to Regulation No. 45.

6.2.9.3. 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 **for each headlamp** 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.

6.2.9.4. Only dipped-beam headlamps according to Regulation Nos. 98 or 112 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 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)."

Paragraph 6.3.6.1.2.1., amend to read:

"6.3.6.1.2.1. When the total objective luminous flux of the light source **for each front fog lamp** does not exceed 2,000 lumens:"

Paragraph 6.3.6.1.2.2., amend to read:

"6.3.6.1.2.2. When the total objective luminous flux of the light source **for each front fog lamp** exceeds 2,000 lumens:"

Paragraph 6.26.9.2., amend to read:

6.26.9.2. At the request of the applicant and with the consent of the Technical Service the requirement of 6.26.9.1 may be verified by a drawing or simulation or deemed be satisfied if the installation conditions comply with paragraph ~~6.2.3.~~ **6.2.2.** of Regulation No. 23, as noticed in the communication document in Annex 1, paragraph 9.

Annex XII

GRE informal groups

Informal group	*Chair(s)*	*Secretary*
Simplification of the Lighting and Light-Signalling Regulations (SLR)	Mr. Michel Loccufier (Belgium) Phone: +32 474 989 023 Email: michel.loccufier@mobilit.fgov.be	Mr. Davide Puglisi (GTB) Phone: +39 011 562 11 49 Fax: +39 011 53 21 43 Email: secretary@gtb-lighting.org
Visibility, Glare and Levelling (VGL)	Mr. Tomasz Targosinski (Poland) Phone: +48 22 4385 157 Fax: + 48 22 4385 401 Email: tomasz.targosinski@its.waw.pl	Mrs. Françoise Silvani (OICA) Fax: +33 1 76 86 92 89 Email: francoise.silvani@renault.com