GRE Task Force on Substitutes / Retrofits (TF S/R)

6th meeting
15 May 2019, 11:00 – 17:00 CEST

CCFA
2 rue de Presbourg
75008 Paris
France

DRAFT REPORT (revision 1) *

***In Rev1 the section 5.0 was re-written based on the input from Mr. Rovers**

		Documents
1	Welcome and opening remarks	
	Mr. Bailey, the vice-chairman of the group, opened the meeting, since the chairman Mr. Manz was delayed. Mr. Manz took-over as chairman at agenda item 6.	
2	Organisational issues	
	Telephone-call-in and screen-sharing was used for the participants who could not attend in person. The list of participants is shown in Annex 1.	
2.1	Introduction of participants	
	The participants briefly introduced themselves.	
3	Adoption of the agenda	TFSR-06-01
	The agenda, as shown in document TFSR-06-01, was adopted.	
4	Approval of the report of the previous meeting	TFSR-05-09
	The report, as shown in document TFSR-05-09 was confirmed.	
5	LED Substitutes for signalling application	
5.0	Review of the discussions / decisions at GRE81	GRE-81-14rev1 [GRE-81 report, if available]
	The discussions during GRE81 were reviewed on the basis of document GRE81-14rev1, and it was noted that GRE had agreed for the TF to proceed with the 2-step approach as shown in GRE-81-14rev1 page 2. Mr. Rovers informed that the report of GRE-81 was not yet available. He expected the official report to reflect this understanding on the agreed way forward.	

5.1	R128 Body text	WP29/2019/19
5.2	R.E.5 PY21W/LED	GRE/2018/40 WP29/2019/29 GRE-81-06 [WP29/2019/xx]
	It was noted that GRE-81-06 had been approved by GRE81, and that GRE had agreed to be put in a package with GRE/2019/09 and GRE/2019/10 for submission to WP29 (November session).	
5.2.1	Additional category proposals R5W/LED, C5W/LEDK, W5W/LEDK	GRE/2019/09 GRE/2019/10 [WP29/2019/xx]
	It was noted that GRE81 had approved the 2 documents for submission to WP29 (November session).	
5.3	Mechanical keying, Interlock IEC 60061	GRE-80-03 GRE-81-07
	It was reported that the official proposals are progressing trough IEC, being at CDV stage: - The changes to IEC 60061-1 (cap): 34B/2032/CDV - The changes to IEC 60061-2 (holder): 34B/2033/CDV. Closing date for both CDVs was 2019-06-28.	
5.4	Equivalence Criteria	GRE-80-02
	The document GRE-80-02 was noted, and that this version was excluding light sources for road-illumination devices. It was confirmed that this document was intended as a GRE reference document, and was expected to be published on the GRE website.	
5.5	Changes to Device Regulations [R-148]	GRE/2018/42 [WP29/2019/xx]
	It was noted that, since R-LSD [R-148] had now been adopted by WP29, and was expected to enter into force in October 2019, this document will be sent to W29 for the session in November 2019.	
5.6	Changes to Installation Regulations	GRE/2018/41 [WP29/2019/xx]
	It was noted that the timeline of this document for changes to the installation regulations was linked to the timeline of the R-LSD change (see agenda item 5.5 above).	
6	LED Substitutes for road illumination application	
	Mr. Schlager introduced the topic by showing an updated presentation based on TFSR-05-04, after the meeting distributed with document number TFSR-06-07. The updates of the slides were related to • An improved picture on slide 2 • Discussion on the difference in photometry between 12V and 24V versions • the etalon (standard) light source specification	TFSR-06-07

	The general approach, as well as the principles and assumptions were confirmed by the group.	
6.0	Review of the discussion at GRE81	GRE-81-14 [GRE-81 report, if available]
	This item was discussed under agenda item 5.0	
6.1	Demonstration of halogen headlamps equipped with LED prototypes	TFSR-05-10
	The headlamp demonstration at the last meeting was briefly reviewed.	
6.2	R.E.5 H11/LED	(TFSR-05-06, H7/LED) TFSR-06-02
	Mr. Schlager introduced document TFSR-06-02 and it was viewed on the screen and discussed in detail, page by page. In was confirmed that, for the LED substitutes, there was no need to have different photometric values for the 24V light sources, and that the photometric values from the 12V light sources should be used. It was confirmed that tighter geometric tolerances for the Etalon (standard) filament light sources should be translated to tighter tolerances for the light emitting area of the LED substitutes, where applicable. Both the near field and far-field (including definition of C-γ system) specifications were discussed in detail. It was agreed to submit the document to GRE82 and it was confirmed that the square brackets could be deleted before submission to GRE. Feedback was requested on the “volume behind the reference plane” from the application side.	
6.3	Mechanical keying, Interlock IEC 60061 H11/LED	(TFSR-05-05 H7/LED) TFSR-06-03
	Mr. Schlager introduced document TFSR-06-03. The idea of realising the interlock in the electrical connector was confirmed. There was a question if the interlock-feature could be placed in a different location within the electrical connector and there was a further question about the polarity in case of the proposed position of the interlock feature. It was agreed to collect answers from the IEC experts and to present them during the next meeting.	
6.4	Equivalence Criteria	TFSR-05-04 TFSR-06-04
	Mr. Schlager introduced document TFSR-06-04 and it was viewed on the screen and discussed in detail, page by page.	

	The structure of the new document, as well as the technical content, was confirmed. Mr. Schlager offered to finalise the document for the next meeting.	
6.5	Changes to Device Regulations – R-RID	TFSR-05-03
	Document TFSR-05-03 was briefly reviewed, because a question was raised if it was clearly stated that a "standard" light source is used for the measurements with LED substitutes as well as with the measurement with filament light sources. It was noted that the text in 4.6.9. could be amended accordingly (discussed addition in bold): "4.6.9. In the case where the lamp, at the discretion of the applicant, also has to be approved with LED substitute light source(s), all measurements, photometric and colorimetric, shall be repeated using the **standard** LED substitute light source(s) prescribed." Mr. De Visser offered to check that this addition was consistent in the context of the complete R-RID text.	
	The following next steps were agreed: Submission as formal documents to GRE82: - H11/LED sheet for RE5 on the basis of TFSR-06-02 - Changes to R-RID [R149] for LED substitutes on the basis of TFSR-05-03 ➔ To do: Mr. Plathner Submission as informal documents to GRE82: - Updated equivalence criteria (publishes early) - presentation to support the equivalence criteria document - Interlock visualisation ➔ To do: Mr. Plathner	
	The conclusion from the previous meeting was re-confirmed: no change to the installation regulations and no change to R128 necessary, since here LED substitutes were already addressed in a general way.	
7	LED Retrofits	
7.0	Review the discussion	
	GRE-80	GRE-80-33 GRE-80-34 GRE-80 report, section 21
	GRE-81	GRE-81-14rev1 [GRE-81 report, if available]
	The discussions during GRE81 were reviewed on the basis of document GRE81-14rev1 page 7.	
7.1	To note the former discussions in the TF	TFSR-05-08

	No discussion.	
7.2	R37 approach – legal and technical equivalence	TFSR-06-05
	Mr De Visser introduced document TFSR-06-05. There followed a general discussion about the proposed approach. There was a general consensus to include into R37 "filament-style LED light sources" for replacement of incandescent, filament light sources. Mr. Manz proposed that it should be made clear that this activity was guided by the general GRE strategy to have lighting regulations "technology neutral" and "performance based". Mr. Rovers suggested that this could be clarified on page 2. TFSR-06-05 was edited on the screen accordingly and distributed after the meeting with document number TFSR-06-05rev1.	
	It was agreed to use, for the time being, the wording "Filament-style LED" for the discussion.	
	Mr. De Visser presented some further slides with his first study on necessary changes to R37. These slides were included in TFSR-06-05rev1.	
	There followed a longer discussion if reference should be made to R128 test methods or if the relevant text should be copied over from R128 to R37. Some experts had the opinion that everything should be contained within R37.	
	It was also questioned if all light source regulations could be merged into one, but it was generally considered that this step would be too big, and could be a future-target in a next "simplification" step (similar to the SLR discussions, were a multi-step and multi-phase approach was taken).	
	There was a first exchange of views on the technical details shown on page 4 and the light source makers were asked to provide further details on: • Electrical interface • High temperature operation • PWM dimming	
8	Next meeting(s)	
	A next meeting was scheduled for 18 July in Karlsruhe, in combination with GTB WG LS meeting, starting at 14:00 (after the WGLS meeting)	
9	Closure	
	The chairman thanked the participants and closed the meeting.	

P. Plathner

Annex 1: List of participants

Attendance Sheet

6th meeting of GRE Task Force Substitutes / Retrofits

Paris, France, 15 May 2019

Name	CP / NGO	Signature
Mr. Manz	DE	
Mr. Krautscheid	DE	
Mr. Plathner	IEC	
Mr. Schlager	IEC	
Mr. Rovers	NL	
Mr. De Visser	IEC	by telephone
Mr. Versluijs	IEC	
Mr. Terburg	GTB	by telephone
Mr. Böttcher	ADAC / FIA	
Mr. Zimmermann	ADAC / FIA	
Mr. Vandervreken	CLEPA	
Mr. Bartelsen	DE	
Mr. Bailey	UK	by telephone
Mr. Goldbach	OICA	by telephone
Mr. Blusseau	CLEPA	
Mr. Prigent	OICA	
Mr. Pamart	FR	
W. van Laarhoven	NL	
Mr. Torma	GTB	by telephone
Mr. Tiesler-Wittig	GTB	