

**GRE Task Force on Substitutes / Retrofits (TF S/R)****15<sup>th</sup> meeting**

11 January 2021, 13:00 – 16:00 CET

[link to MS-Teams here](#)

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Conference-ID: 939 472 040#

[Other local numbers here](#)**DRAFT REPORT**

		<b>Documents</b>
1	Welcome and opening remarks	
	Mr. Bailey, as vice-chairman of the group, opened the meeting and welcomed the participants.	
2	Organisational issues	
	A screen-sharing facility with MS TEAMS was set-up.	
2.1	Introduction of participants	
	The participants were noted by the secretary, see Annex 1. All participants briefly introduced themselves.	
	Apologies were noted from the chair, Mr. Manz.	
3	Adoption of the agenda	<b>TFSR-15-01rev1</b>
	The agenda was adopted.	
4	Approval of the report of the previous meeting	<b>TFSR-14-05</b>
	The report was approved.	
5	Introducing LED technology into R37 (LEDr)	TFSR-14-06 <b>TFSR-15-02</b>
	Mr. De Visser introduced document TFSR-15-02, which was a summary of the regulatory approach for LED replacement light sources. Mr. Pamart had a question on slide 6 and asked why there was no type-approval-testing required inside the device or of the installation in the vehicle. Mr. De Visser made reference to the “equivalence list” given in the table on slide 8. He explained that the LEDr-proposal had a full-set of equivalence requirements, with many additional requirements compared to the LED substitutes. In addition, Mr. De Visser explain the concept of a “default” LEDr light source, and the concept of a “non-	

default” LEDr light source; for the “non-default” type, there were deviations allowed regarding:

- Maximum outline of the cap
- Power consumption
- Specific polarity requirements (for those categories only that have a symmetric cap that can also be inserted by 180° rotation).

He confirmed that only for these parameters additional installation instructions needed to be given to the consumer.

But for the “default” type no instructions were necessary, because here no relevant deviations compared to the filament light source were allowed.

It was discussed that these “allowed deviations” were not related to any safety-relevant performance of the light source, i.e. not related to the optical performance.

With regards to these installation instructions, Mr. Pamart asked about the responsibility of the content of the list.

Mr. De Visser replied that these instructions were prepared by the light source manufacturer, i.e. the applicant for the light source approval. And that the light source manufacturer was responsible for the correctness of these instructions.

Mr. Pamart noted that the content of the installation instructions cannot be checked by the type approval authority. He commented that during the type approval for other spare parts, also the installation was checked.

It was noted that the installation instructions were not related to the photometric performance of the light source, and therefore not directly related to traffic safety. For this reason, it could be accepted that the compatibility check was not part of the type approval process.

Mr. Kooss commented that solely the availability of such instruction should be checked during the approval process.

Mr. Van Laarhoven reminded that the list of “photometric equivalence criteria” was so comprehensive, that the correct photometric performance in the luminaire was “automatically” given and additional photometric testing inside luminaires would be unnecessary.

There was consensus that the current situation, where non-approved, unsafe LED retrofits were widely offered in the market, could not be accepted, and that consumers should have access to approved, safe LED replacement light sources.

There was furthermore consensus that for the cars already on the road today, the “LED substitute approach” could not be used and a new approach was needed.

Mr. Pamart suggested that in the R37 text it should be made clearer, that the installation instructions are not verified by the approval authority.

In document TFSR-15-03, Clause 5.3.7. and also 4.2.2.1 was edited together on the screen, to implement the suggestion from Mr. Pamart.

See TFSR-15-03rev1.

Mr. Pamart then asked for feedback from set-makers and car-makers on the equivalence criteria.

Mr. Blusseau commented that his remaining concerns were:

- Behaviour in hot thermal conditions
- Weight of the light source

Another of his concern had been the failure detection system, but he confirmed that this is solved by the AE device.

Mr. Schlager answered that these technical topics had been deeply discussed in the previous meetings:

- the maximum weight will be covered in IEC 60810 (as for other UN regulated light sources e.g. HID and LED light sources)
- the requirements regarding the thermal behaviour had been defined based on statistical considerations, for different installation conditions (front, rear). Per category (i.e. depending on potential application conditions), this temperature testing is defined.

Mr. Blusseau further asked how it could be ensured that the LEDr is not installed on a car that is not suitable (convenient) for it.

Mr. De Visser replied, based on slide 11, where it is needed to follow the instructions, i.e. only for the “non-default” types. He added that it would only result in electrical incompatibility, which is inconsequential to road safety.

Mdme. Chauderge asked if it was expected that more of the “default” or more of the “non-default” type light sources would be offered.

Mr. De Visser responded that half of the vehicles have no failure detection and those vehicles could accept the non-default light sources with lower power.

Mr. Schlager replied that this probably would be different for the different categories and would also change over time as the LED technology evolves. For the low wattage

	<p>types, it would be easier to have a power-level in the LED close to the incandescent-level.</p> <p>Mr. Böttcher remarked that even today with filament light sources, it is not always easy to exchange the light source, especially on certain vehicles; detailed instructions are needed already today, and even with instruction it is necessary for many car owners to go to a repair shop / garage.</p> <p>This observation was confirmed by Mr. Bailey.</p>	
5.0	Review of the discussion at GRE	
	GRE82	GRE-82-17rev2 GRE82 report: item 21, 22
	GRE83	GRE-83-48 GRE-83-53 <b>GRE83 report: item 16, 17, 18</b>
	The report of GRE83 was noted.	
5.1	Changes to R37	TFSR-06-05rev1 TFSR-08-02, TFSR-10-02 TFSR-11-03, TFSR-12-02rev3 GRE/2020/15 GRE-83-05 TFSR-13-02rev1, TFSR-13-03rev1 GRE-83-11, GRE-83-12 GRE-83-38 TFSR-14-02rev1 TFSR-14-04 <b>TFSR-15-03rev1</b>
	<p>Mr. De Visser introduced TFSR-15-03 (with additional revisions in green colour). He explained the changes for the definition of category and type.</p> <p>Some paragraphs were editing together on the screen, see the discussion under agenda item 5, above.</p> <p>The results of the editing are shown in TFSR-15-03rev1.</p> <p>Mr. Goldbach asked about the definition of type and category, and a long discussion followed.</p> <p>All participants confirmed the same understanding, that filament H11 (incandescent technology) and LED H11 (marked LEDr) have to be approved separately and must get different approval numbers, even if they are both from the same manufacturer / applicant.</p> <p>But the correct wording in the proposal, to make this clear for all, could not be finalized during the meeting, even after a long discussion.</p>	

	<p>It was concluded to finalize the wording in a smaller editing group in an online meeting on 15 January.</p> <p>The following experts agreed to contribute to this activity: De Visser, Goldbach, Kooss, Van Laarhoven, Bailey, Terburg, Schlager, Plathner</p> <p>The outcome of the small editing group should be sent to the larger group and posted on the TFSR website, with a comment period until 22 January with the target to submit to GRE84.</p> <p>The justification was also reviewed, and it was agreed keep the extended explanations, to give a complete overview.</p>	
5.1.1	Overview of technical items (for reference)	TFSR-08-03rev4 TFSR-11-02rev1 TFSR-13-08
	noted	
5.1.2	Discussion on type-definition and approval number in case of additional (external) electronics	TFSR-13-07rev1 GRE-83-14 <b>TFSR-15-02</b>
	Discussed under agenda item 5.1.	
5.2	Changes to R128	TFSR-10-03 TFSR-11-04 TFSR-12-03rev1 GRE/2020/17
	noted	
5.3	Changes to RE5	TFSR-10-04 TFSR-11-05
5.3.1	First category proposal(s) – H11 LEDr	TFSR-12-04rev2 GRE/2020/16 TFSR-13-04rev1 GRE-83-13 TFSR-14-03 <b>TFSR-15-04rev1</b>
	TFSR-15-04 was reviewed on the screen and Mr. De Visser introduced a few additional, editorial changes. These are shown in document TFSR-15-04rev1. It was agreed to submit the document to GRE84.	
5.3.1.1	H11 LEDr equivalence report	TFSR-13-06 GRE-83-16
	noted	
5.3.2	Next category proposal(s) – <b>C5W LEDr</b>	<b>TFSR-15-05</b>
5.3.2.1	Equivalence report(s) - <b>C5W LEDr</b>	<b>TFSR-15-06</b>
	Mr. Plathner briefly introduced documents TFSR-15-05 and TFSR-15-06: a proposal for a LEDr category C5W, and the related equivalence report.	

	Experts were asked to submit comments to Mr. Plathner by 22 January. In the case of technical comments, a meeting would be scheduled to resolve them, otherwise the two documents will be submitted to GRE84.	
5.4	Demonstration with LEDr prototypes	
	none	
5.5	Equivalence Criteria document (for reference)	TFSR-13-05 GRE-83-15
	noted	
6	Next meeting(s)	
	No next meeting scheduled for the moment; agreed to await the outcome of GRE84.	
7	Closure	
	Chairman thanks the participants and closed the meeting.	

*P. Plathner*

**Annex 1: Participants (noted by the secretary)**

<b>Name</b>	<b>CP / NGO</b>
Ph. Bailey (chair)	UK
P. Plathner (secretary)	IEC
C. Versluijs	IEC
A. De Visser	IEC
D. Kooss	GTB WG P chair
B. Terburg	GTB WGLS chair
B. Böttcher	FIA
T. Torma	GTB
W. van Laarhoven	NL
L. Schwenkschuster	GTB
R. Krautscheid	DE
Th. Goldbach	OICA
W. Schlager	IEC
S. Chauderge	FR
A. Berthel	OICA
D. Rovers	NL
A. Pamart	FR
E. Blusseau, partly	GTB