

DRAFT REPORT

10th meeting of the GRSG informal group on the introduction of plastic glazing for windscreens and laminated plastic panes other than windscreens in UN Regulation N°43

Venue: Volkswagen AG
Forschung und Entwicklung
Gate "LKW Wache", Research Building (Forschungsgebäude)
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Chairman: Dr. Klaus Preußner (D) (dr.klaus.preusser@schwerte.de)
Secretariat: Mr. Olivier Fontaine (OICA) (ofontaine@oica.net)

Duration of the sessions: starting at 2:00 pm on 17 June and finishing at 4:30 pm on 18 June

Note: Any comments or documents relating to this meeting should be sent to the OICA Secretariat (ofontaine@oica.net) in e-format well in advance of the meeting, so that documents can be made available to the UNECE secretariat for publication on the WP29 website.

1. Welcome and Introduction

2. Approval of the agenda

Document: IGPG-10-01 (Chair)

The agenda was adopted with the correction of the errors.

3. Revision and approval of the draft minutes of the 9th meeting

Document: IGPG-09-05 (Chair)

The report was adopted with no change.

4. Definition of the pass/fail values

Document: GRSG-106-16 (IGPG informal group)

The Chair recalled that the informal group will have to provide a final document before 4 July 2014. At GRSG, some delegations requested to get more justifications for the amendments. In addition, the question of the behaviour of the material in case of freeze was raised, but the Chair recalled that this issue was already addressed by the informal group and the expert interested in that point agreed, at GRSG-106, with the explanations received.

The group agreed to clarify that the Taber test is an alternative to the set of three tests as it was considered that a simple reference to a footnote was not sufficiently legally binding. The text was amended accordingly.

Dr Dümmler informed that he discovered some errors in the table and the group corrected them. Concerning the cross-cut test, Dr. Dümmler indicated that the reference to footnote 2 is wrong as the necessity to perform the test is not related to the driving visibility. Dr Dümmler suggested that a new footnote 4 be added, to read “Applies only for coated plastic material”. The group agreed that this should be proposed at GRSG, but not as a part of the informal group work. D committed to present this to GRSG.

The experts had a debate about the choice given to the applicant for the wiper blade (Annex 3, paragraph 4.9.2.). The issue is related not only to road safety, but also to the normal design-free quality of any regulatory text. It was clarified that such choice is usual practice in other regulations (e.g. UN R130 – LDWS).

On the one hand, defining the wiper blade in detail would orient the design of the windscreen. The group remembered that no experience to date indicates which kind of wiping system would best suit plastic windscreens, and hence IGPG-09 decided that some freedom in the technology was necessary in the requirements. It could indeed happen that the vehicle manufacturer takes the option of a wiping technology completely different to that of the conventional wiper blade for wiping a plastic windscreen, and the Type Approval test should reflect that freedom for such new technology.

On the other hand, testing wiping capacities implies assessing the compatibility of a pair of materials and having no description of both of them makes the testing nonsense.

The group then agreed to improve the text such that the characteristics of the specific plastic windscreen wiper system be detailed in the test report (Annex 3, paragraph 4.9.2.), and that the approval of the windscreen be granted in accordance with the specific wiping technology (new Annex 24, paragraphs 4.1.2. and 4.1.3.).

Wiper laboratory test:

A. Location of the measurement points across the sample (reference in Annex 3 paragraph 4.9.5.3.2., Figure 16)

The experts had no comments to this item.

Note of the Secretariat: the Secretariat subsequently recovered that this item was included in the draft agenda in order to address all the square brackets remaining in the draft text. As IGPG-10 had no comment to this item, it is assumed that the references in the proposed text are correct.

B. Number of test cycles (Annex 3, paragraphs 4.9.5.3.6.1., 4.9.5.4.1., 4.9.6. and Annex 17, paragraph 6.1.4.1., Annex 19, paragraph 6.1.4.1.)

Dr. Matthai presented further test results per document IGPG-10-04. She stressed that the group lacks a test method that can show the real optical problems faced with plastic material. She said that a new technology as that which is discussed would need more discussions for defining new criteria and new test methods, better addressing optical discomfort and danger than the current delta haze measurement. She informed that some internal tests showed that the haze measurement is not the correct criterion. In addition, she said that some manufacturers arrived to the conclusion that there is a need for 55000 cycles with 0,5% delta haze.

The plastic glazing material manufacturers challenged this result.

The OEMs questioned why these poor results (i.e. those achieved by current plastic and coating technology) would motivate amendments to the regulation, whilst the criterion for a regulation is safety. They were of the opinion that no vehicles fulfilling the proposed values would be put in the market by the OEMs because of safety concerns.

The suppliers recalled the conclusions of the last meeting that the delta haze obtained after 20.000 cycles is already above what occurs in the tested cars (subgroup2 of the task force).

The OEMs proposed that a proposed decision be given to GRSG.

The Chair recalled that the results obtained by the OEMs were never discussed in the informal group because of the lack of time.

The group agreed that the haze measurement does not represent the lack of convenience of a material. Yet the Straylizer was not providing clarity in what is really measured in there. Dr Dümmler proposed to investigate other tests than haze measurement, i.e. evaluating the visual effect that the driver faces when looking through a transparent part.

The question was raised about the process in the different configurations.

A debate took place on whether the haze measurement is the proper criterion for measurement.

The Chair recalled that the project of the plastic windscreens was originated by the OEMs complaining to the D ministry for having the possibility to approve plastic windscreens. He recalled some experience with the Straylizer factor, asking to medicine doctors some limiting values. They showed 20 glass windshields, on which only 3 were measured below the limit of $1.5 \text{ cd m}^{-2} \text{ lx}^{-1}$ decided by the doctors.

OICA recalled about their concerns with regard to the level of safety of the existing products. However, OICA was keen that the door be open for the introduction of plastic windscreens in the regulation, such that progress in technology is possible with the experience that can be gained in the market. OICA was ready to discuss an acceptable compromise to be presented at GRSG. Concerning the Taber test, it was considered a possible acceptable test, as improved by ISO. However, Dr. Dümmler was of the opinion that the Taber test could never reach the level of repeatability necessary for testing a 2% delta haze. He recalled that the ISO standard only provides a test method, with no limit.

Dr. Buckel feared that allowing the Taber test only would provoke that the researches would be oriented to that test method only, rather than the set of three tests (including wiper test). Dr. Buckel demonstrated to the experts that the proposed values for the quantity of sand in the proposed wiper test are relevant and representative of the reality. The amount of cycles and sand during the test represent very severe conditions of use. He confirmed that the suppliers could not invest money in a test which is not present in the regulation; on the contrary they would invest in the Taber test, permitted by the regulation.

Dr. Dümmler was keen to see and get experience with the windscreens that were claimed to be unsafe by the OEMs (Audi/VW).

Samples were circulated among the experts:

- Golf 6, 9 months, ca 8200 km, 3021 cycles
- BMW 3Series, 2 months, ca 20000 km, ??? cycles
- Golf6, ca 3 months, ca 10000km, ??? cycles
- BMW 3Series, ca 2 months, ca 20000 km

Mr. Schmitz did not find the samples as bad as shown in the PPT presentation. He clarified this was a subjective impression. Dr. Dümmler informed that he experienced similar scratches on his private car windscreen. Yet the mileage should be taken into account.

The experts were keen to get more time to conduct field testing. KRD was ready to conduct those on-road experiences if there is more time provided by GRSG.

The group then investigated the possible processes for producing constructive outcomes in view of the forthcoming GRSG session (GRSG-107, 30 September to 3 October 2014)

Possible ways out:

1. Presenting the document to GRSG with the set of three tests, and values in [20,000]/2%, and informal group commitment to revise the figures within the next XX year.
 - Supported by: European Commission, Bayer, Teijin, Webasto, KRD, MPA, Evonik, Polyplastic, Freeglass, Momentive, JohnDeere.
 - Challenged by: VW group, Vinçotte, AGC, PSA because see necessity for more severe requirements.
 - The group decided to conduct specific investigation on the proper number of cycles.
2. Presenting the document to GRSG with the set of three tests, and values recommended in a footnote, and informal group commitment to establish figures within the next year.
 Example of a footnote inspired from UN R13:

*Recommended values are 20,000, 2%. Until uniform relevant pass/fail values have been agreed (**commitment of the informal group to provide them within one year**), the manufacturer shall provide the Technical Service with an analysis of potential unsafe situations, and their effects. This information shall be subject to discussion and agreement between the Technical Service and the vehicle manufacturer, and indicated in the test report.*

 - Supported by: no one.
 - Acceptable as a compromise to: no one
3. Presenting the document to GRSG without the set of three tests (Taber test only), and informal group commitment to establish the set of three tests with figures within the next year.
 - Supported by: Sabic, PSA.
 - Acceptable as a compromise by: no one.
4. Kill the project and voice our failure at GRSG.
 - Supported by: no one.
 - Acceptable as a compromise to: no one
5. Presenting the document to GRSG with the set of three tests, and values of 50,000/2%,
 - Supported by VW group, Vinçotte, AGC, PSA.

The group found a majority in favour of proposal Nr.1, with no unanimity. This proposal was linked to the commitment from the informal group to further investigate the correlation between on-road tests and laboratory results. It was agreed that the Wiper task force will undertake this campaign and propose a roadmap by end of August, such that the informal group chair could present a reasonable commitment to GRSG at its 107th session.

Conclusion:

- Proposal Nr1 adopted, with 20,000 cycles in [], informal group Chair to inform GRSG about the different positions at IGPG and clear commitment from the informal group for the next steps. Need for further time to get evidence of the relevancy of the proposed figures.
- IGPG wiper task force to draft commitment of the informal group with the time necessary for achievement (including the time when the wiper machine will be available): to be done before end of August and communicated to the Chair.

C. Pass/fail criterion (Annex 17, paragraph 6.1.4.3., Annex 19, paragraph 6.1.4.3.)

See discussions above.

5. Final review the draft regulatory text (Regulation No.43)

Document: GRSG-106-16 (IGPG informal group)
IGPG-10-02 (Secretary)

The experts may wish to have a final revision of the amendments to UN R43. In addition, the Secretary aims at producing a document providing the justifications to all the amendments and decisions made in the group for tracing the background of the decisions (document IGPG-10-02 – soon available).

The changes to the document that were proposed (wiper blade description, annex 24) were adopted. OICA reserved their position, and informed that they may have a proposal for improvement at GRSG-107.

The group requested the Secretary to produce a draft document (document IGPG-10-02 was not finished), with all the relevant justifications, to be improved via email exchange during the summer, for finalization by end of august.

Some further changes were adopted in the text.

Annex 14: amendments to be added to Annexes 14 and 16, document to be produced by Germany for presentation at a future GRSG session.

6. Review of ISO group progress (Taber test)

Dr Dümmler informed that the J ISO delegation asked whether the reference values can be reproduced over the years. As an answer, the D delegation undertook a round robin with 3 companies. J was keen that an alternative supplier (alternative to Eurogard) could be available and their products be used.

Intermediate results of the D round robin campaign:

- Depends on the size of the equipment
- Similar coating machines commercially available can produce reproducible results.

7. Further discussion of the draft regulatory text

Document: GRSG-106-16 (IGPG informal group)

See above

8. Schedule for further IG meetings

Email exchanges	Net	Summer 2014
GRSG-107	Geneva	30 Sept – 3 Oct 2014

9. Any other business