

NOTES ON THE 15TH MEETING OF THE GRPE INFORMAL GROUP ON RETROFIT EMISSIONS CONTROL DEVICES (REC)

3 June 2013, 09:30 – 12:30; Palais des Nations, Geneva

1. Welcome and introduction

The chairman welcomed participants.

2. Approval of the meeting agenda (document REC-15-01)

The agenda was approved without change.

3. Approval of draft minutes of 14th REC meeting (document REC-14-18)

The minutes of the 14th REC meeting held in Bern, CH on 19-20 February 2013 were approved without change.

4. Review of the REC Roadmap (document REC-15-02)

The chairman noted that the first version of the Regulation is submitted to this week's GRPE for approval and that the draft 01 amendment will be submitted at the same time, as an informal document.

He commented that the draft does not currently prohibit reversal of DPF elements, and proposed that this should be discussed for inclusion in the 01 amendment.

He also noted that at the last meeting, paragraph 8.2.3. had been added to the 00 draft, giving a requirement for situations where no further stage exists. This had been questioned (on the basis that the original proposal had been to base any standards on the next emissions level) and should be discussed today, together with the informal documents submitted.

5. REC Chairman's report:

a) Remaining Open Issue for REC (informal document GRPE-66-08)

The chairman had circulated a memo giving background information on the NO₂ requirement and on the need for a decision on the permissible level of NO₂ for Class II systems. He summarised the air quality and legislative issues. The NO₂ limit of 20% proposed by Germany had been supported by Sweden and the Netherlands.

Galey said that the level 00 requirements of a 50% min. PM reduction with a 30% max. NO₂ increase would permit the use of partial filters which many considered to be ineffective. A 20% NO₂ limit at stage 01, as had been proposed, would then make it difficult to approve the very effective full-flow CRT-type filters. He viewed these two extremes as inequitable. He said that there is limited data available on the proportion of NO₂ on the WHTC, partly because there is limited test-bed availability due to the introduction of Euro Vi and suggested that there should initially be a less stringent NO₂ limit at the 01 stage which could then be amended in the light of experience.

Eberhardt felt that the 50% reduction in level 00 is no longer state-of-the-art. Germany could agree to a 30% NO₂ increase for the 00 series providing it was reduced to 20% for level 01, which would be the important stage for Europe.

The lack of data to support the proposed 20% level was discussed, with concerns from some participants that this level would exclude the most effective systems. The possibility of too lenient a level forcing additional actions in EU Member States was noted and the possibility of moving from 30% to 20% over a period of time was considered. It was also suggested that there are promising systems for meeting the 20% max NO₂ increase.

After further discussion, the chairman said that he would propose to GRPE a 30% cap on the NO₂ increase for level 00 and a 20% cap for level 01. Berger supported this proposal. He suggested that stakeholders could use the time before presentation of the formal 01 proposal to provide results on the WHTC.

Galey then suggested increasing the level 00 requirements from 50 to 70% to exclude partial filters whilst still permitting CRT-type systems. Following a break for informal discussion, it was concluded that it would not be feasible to change such an already-agreed parameter at this late stage, when the formal submission had already been made to GRPE.

Galey then suggested that there should be 3 levels of the Regulation, with the 01 level staying at a 30% cap with the 90% PM reduction and a 3rd stage with 20% NO_x cap and 90% PM reduction. The chairman considered that this could be discussed but would not be a solution he favoured. He asked for the views of other contracting parties on the issue of NO₂. India said that they would look at how to adopt the REC in India, because they do not have 10 ppm sulfur fuel which would be needed for continuously-regenerating filters and they need to consider the training of retrofitters. Korea said that NO₂ is also an important issue in Korea, particularly in metropolitan areas. They do not currently have NO₂ regulations, but will be reviewing the UNECE-REC Regulation for the Korean situation.

6. Formal document for 66th GRPE **Draft REC Regulation - version 00 (document ECE-TRANS-WP29-GRPE-2013-06)**

The chairman said that during the REC-14 meeting the document had been thoroughly reviewed, making a number of editorial changes. Euromot had drawn his attention to the addition of requirements for vehicles/equipment where there is no further stage (paragraph 8.2.3), which would add % efficiency requirements only for such cases.

8.2.3. In the case of an engine where no more stringent category is defined in Regulation No. 49 or No. 96 (as appropriate) the requirements of paragraph 8.3. shall be applied.

Williams (Euromot) stated that the original proposal had been to only take vehicles/equipment only to the next applicable stage, whereas this latest proposal would take it beyond any current stage. During subsequent discussion it was noted that Annex 12 covers retrofit to Euro VI (meeting all requirements of Euro VI), but something similar may need to be defined after the definition of an NRMM Stage V. It was also felt by some participants that the paragraph would be useful for those categories of NRMM where the most recent emissions stage(s) do not apply. The Netherlands and Switzerland supported retaining the paragraph. Belgium, Hungary, Korea and South Africa had no opinion. India supported the paragraph and considered that if there is data available to show the possibility of further reductions then GRPE should also decide a further stage for NRMM. Nevertheless, Williams noted that the appropriate emission level for each stage and power class is set in Regulation R96. He stated that it was well known that discussions on further stages were already underway in Europe and that the appropriate sequence of events was for the further stages for new engines to be defined first, then a further revision made to the REC regulation to include those stages. He considered that it would be a bad precedent to seek further stages of reduction through retrofit rather than OE requirements. It was noted that the paragraph was not included in the informal document submitted in January nor in the list of open issues. Following further discussions it was agreed that, whilst many participants recognised the benefit of the proposed paragraph for NRMM, it was agreed that OICA should be additionally consulted on whether they opposed the paragraph and the industry's concerns should be made clear to GRPE.

The chairman said following this consultation he would propose an informal document to GRPE including the new flow charts (see following item), the 30% NO₂ proposal for the 00 stage, and a proposal on the deletion or retention of paragraph 8.2.3.

7. Informal documents for 66th GRPE

a) Flow charts for REC- version 00 (informal document GRPE-66-06)

There were no comments on the flow charts; these will be included in the informal document.

b) Draft Amendment 01 to the draft REC Regulation (Informal document GRPE-66-07)

In addition to the proposal for [20%] NO₂ increase, *the chairman* proposed that there should be a paragraph prohibiting the 'turning' of DPF elements (so as to blow ash out) by ensuring that the design is such as to prohibit turning.

Williams commented that the Regulation does not currently specify documents to be provided to the operator by the installer, such as an installation certificate or even the contact details of the installer for traceability, and asked whether this would be of benefit. The chairman said that this had been discussed in Berne. As the Regulation comprises approval of the systems, there can be a requirement to provide installation instructions, but requirements cannot be set for third parties (i.e. the installers). *Williams* suggested that could be a pro-forma that installers could use, rather than a direct requirement on the retrofit supplier. The chairman concluded that Europe could provide a guidance document but this should not be part of the UN regulation.

There were no further comments on the document.

8. Report to 66th GRPE meeting

The chairman will prepare his report based on the items above [it was made available as informal document GRPE-66-28]. The proposed changes to the REC-00 draft will be presented to GRPE in an informal document (made available as GRPE-66-28).

9. Conclusions & Any Other Business

Eberhardt, on behalf of the German Federal Government, thanked all those involved in the preparation of the document.

It was agreed that there was a need for a further meeting before the next GRPE. The formal document for the 01 amendment to the REC Regulation has to be sent to GRPE by the start of October so a meeting in mid-September would be appropriate. The secretariat will circulate a doodle poll to arrange a date. Germany (*Eberhardt*) and the Netherlands (*Baarbé*) will check whether they can host such a meeting. The chairman will also check whether the EU Commission could host it in Brussels.

The chairman thanked all participants for their involvement in the development of the regulation and their willingness to find acceptable solutions.