



GRPE/WHDC/20
July 2007

**TWENTIETH MEETING OF THE GRPE WORKING GROUP ON THE
WORLDWIDE HEAVY DUTY CERTIFICATION PROCEDURE (WHDC)**

Geneva, 06 June 2007

MINUTES OF THE MEETING

Venue: Palais des Nations, Geneva

Chairman: J.P. LAGUNA-GOMEZ (European Commission)

1.- ADOPTION OF THE AGENDA

The provisional agenda GRPE/WHDC/A20 was adopted as circulated.

2.- GENERAL INFORMATION BY THE CHAIRMAN (Mr. LAGUNA)

The Chairman informed on the status of work since the last meeting of the GRPE/WHDC working group:

- Following the 19th meeting in June 2006, GRPE had adopted the draft gtr with the remaining options, which the working group had not been able to resolve.
- WHDC was consequently adopted as gtr n° 4 by WP.29 at the 140th session in November 2006.
- Since several representatives expressed concerns for the presence of these options, the GRPE chairman suggested the WHDC working group to resume its work in order to eliminate the options.
- GRPE agreed at its 53rd session in January 2007 on the need to re-establish the WHDC working group.

3.- STATUS OF GTR N° 4 (Mr. STEIN)

Documents: ECE/TRANS/180/Add.4
ECE/TRANS/WP.29/2007/42

- Following WP.29 adoption, gtr n° 4 was established in the Global Registry on 15 November 2006.
- India and China had submitted additional comments that could not be discussed at the 140th WP.29 session due to the short notice.
- GRPE agreed at its 53rd session in January 2007 that these comments should be dealt with by the WHDC working group together with the options.
- The European Commission, as technical sponsor of the WHDC gtr, asked WP.29 for the formal mandate to continue the WHDC work program. To this purpose, document ECE/TRANS/WP.29/2007/42 had been submitted for consideration at the 142nd WP.29 session.

4.- ROADMAP FOR WHDC AMENDMENT

Document: GRPE-54-03

Mr Stein introduced informal document GRPE-54-03, which includes the proposed timetable and the basic analysis of the options and of the additional comments submitted by India, China and the USA. The timetable was principally accepted, but a provisional date between January 2009 and June 2009 was considered useful. China will check the possibility of hosting the 25th WHDC meeting. The revised timetable is shown below:

Action	Date	Duration	Location	Purpose
20 th meeting	06.06.07	0.5 days	Geneva	Agreement of principles
21 st meeting	18./19.10.07	2 days	San Francisco	Definition of work program
22 nd meeting	January 2008	0.5 days	Geneva	Agreement of work program
Test programs	2007/08			
23 rd meeting	April 2008	2 days	Japan	Review of work progress
24 th meeting	June 2008	0.5 days	Geneva	Review of work progress
25 th meeting	October 2008	2 days	China - to be confirmed	Drafting of gtr amendment
26 th meeting	January 2009	0.5 days	Geneva	Submission of draft gtr amendment
(27 th meeting)	(April 2009)	(2 days)	(India)	(drafting – provisional)
28 th meeting	June 2009	0.5 days	Geneva	GRPE approval
-	Nov. 2009	-	Geneva	Adoption by WP.29

The meeting was continued with the discussion on the five options elaborated in document GRPE-54-03:

- Power determination
- Reference fuel
- Soak time
- Cold start weighting
- PM filter specification

The following results were achieved:

- In general, the difference between gross and net power is small, usually between 2% and 5%. It has been agreed that a list of auxiliaries will be considered at the next meeting to better account for the difference between gross and net power. EPA and TÜV Nord were asked to assist with putting together such a list.
- As regards the reference fuel, USA, OICA, EMA and Canada expressed some sympathy for a single reference fuel, which would be beneficial for global harmonization. The Commission asked to include a 5% FAME content to the reference fuel specifications, as an outcome of the latest Euro 5 and 6 LD amendments. The parties agreed that a test program should be conducted to evaluate the influence of the various reference fuels on emissions.
- As regards the soak time between cold start and hot start cycle, OICA requested that the final decision should be based on sound science and offered to provide emission test results. EMA also offered to help with test results, but asked WHDC members for funding such program. Germany asked to take the EU situation into account, where there is a change from a pure hot cycle (ETC) to a combined cold/hot cycle, and supported a shorter soak period. All parties agreed that also for this option a test program is needed.
- As regards the cold start weighting factor, there is a lack of statistical information on the portion of cold start in relation to the total operating hours of commercial vehicles. Such investigation was not part of the original WHDC cycle study. Germany was asked to check if useful information can be found in the WHDC database. The USA offered to look for data included in their in use database. Japan indicated that they have 5 years old data available that will be presented at the next WHDC meeting.
- As regards filter material and size, the proposal to go for PTFE membrane/47 mm filters was not opposed. However, possible interference with the outcome of the PMP program must be taken into account. The Commission was asked to indicate their position at the next WHDC meeting. All parties agreed that conduction of a test program would be very helpful for the final decision.

Since resolution of some of the options requires to conduct test programs, WHDC members are asked to check the possibility of funding such programs by providing either budget, engines or testing capacity.

Beyond discussion of the five options, additional comments from India, China and the USA were considered at the meeting.

- The Indian proposal of re-defining n_{hi} (see document GRPE-53-08) was accepted.
- The Chinese proposal to tighten the 30 % cylinder displacement margin within the engine family concept will be further discussed upon availability of an informal document to GRPE to be submitted by China. Germany indicated that this specification only applies to small engines (< 0.5 l unit cylinder displacement), whereas for the bigger engines a 15 % margin applies.
- The Chinese proposal for extension of the scope to gasoline engines was discussed. The basic question is whether the WHDC cycles are appropriate for gasoline engines, since it will not be possible to develop a specific gasoline engine test cycle within the mandate given to the WHDC group. WHDC members are asked to submit data on typical heavy duty gasoline engine in use operation, if available. EPA will comment at the next WHDC meeting on their experience with the two different test cycles for diesel and gasoline engines currently in place in the USA.
- The US proposal of alignment with the future nonroad gtr was discussed. The group agreed that alignment should be based on applicable technical requirements. Conformance of the structure of the two gtr's was not considered appropriate at this stage.

5.- SUMMARY AND CONCLUSIONS

The secretary summarized the results of the meeting as follows:

- The WHDC group will conduct the work program according to the revised timetable on page 2.
- WHDC members are asked to offer funding for the necessary engine tests.
- The USA will submit comments on cold start weighting and on gasoline engine testing at the next meeting.
- Japan will present results on the frequency of cold start operation at the next meeting.
- EU Commission will indicate their position on PM filter specifications at the next meeting.
- China is asked to submit to GRPE informal documents on extension of scope to gasoline engines and on tightening of the 30 % cylinder displacement margin.
- EPA and TÜV Nord will supply a list of engine auxiliaries needed for emissions testing in USA and Europe, respectively.

The next meeting has been confirmed to take place on 18th and 19th October 2007 at EPA offices, San Francisco, USA.

6.- OTHER BUSINESS

None.
