

Minutes of the NRMM WG Meeting

In Genève, in conjunction with the 52<sup>nd</sup> GRPE meeting,  
6<sup>th</sup> of June, 2006

The chairman of the NRMM working group, Giovanni De Santi, welcomed the participants.

The minutes of the previous meeting and the draft agenda were reviewed. No remarks were noted, so both documents are approved.

Point 5 of agenda: R. Hummel reported on the progress and work done since the January 51<sup>st</sup> GRPE Meeting, including a summary from Ispra NRMM informal WG meeting, Apr 2006.

Point 6 of agenda: The modus operandi for the development of the gtr draft text, as developed during the April WG meeting in Ispra was presented:

An editorial committee has been set-up. A limited number of contributing experts from different organisations had declared their availability and commitment to participate in the editorial committee in order to swiftly achieve an agreed draft GTR.

G. De Santi EC, Chairman WG NRMM

M. Shikata, Lema Japan

C. Jackson, US EPA

S. Shimpi, Cummins, EMA

J. Stein DC, ISO

H.-W. Knuth, Deutz, EUROMOT

A. Stark IVECO, EUROMOT

G. Cornetti, EC

R. Hummel, EC

G. Billi, Secretary NRMM WG

M.K. Chaudhari from the Automotive Research Association (ARAI) of India declared his availability to participate in the editorial committee, which was welcomed by the chairman.

These experts will receive the draft sections for elaboration:

- using the defined colour scheme
- any modification to the text should explicitly result in a word by word evolution of the text (no generic comments can be taken into account) marked by the initials of the proposing expert
- for any deletion or addition of text a rationale will be indicated as a footnote

This procedure will allow an easy final elaboration of the text and a comparison of each contribution paragraph by paragraph.

As a general timeframe of work for each section it can be considered:

- 4 weeks from circulation by DG-JRC for the experts to send all comments to Rudolf Hummel
- 2 weeks for further elaboration by DG JRC and further circulation to the members

- A possible conference call at the end of these operations to find a synthesis among the suggestions

This procedure is repeated section by section. The final objective will be to have prepared a good number of sections for the September 2006 Ottawa meeting.

No critical comments were received.

G. Cornetti presented an overview on the preparation of gtr drafting:

- Scope of the gtr is the type approval of engines intended to be installed in vehicles of category T and non-road mobile machinery.
- The gtr foresees a method for the determination of the levels of pollutant emissions from engines which is representative of real world vehicle operation. The result can be the basis for the regulation of pollutant emissions indicated by the manufacturer within regional type-approval and certification procedures.
- The drafting will be performed in line with TRANS/WP.29/883 of 03/09/2002 “Format of global technical regulation (gtr)” and TRANS/WP.29/1042 of 29/07/2005 “Guidelines for the preparation and submission of documents to WP.29 and to its subsidiary bodies”.
- The drafting is based on US EPA Part 1065 and WHDC draft gtr. Both include to different degrees and with deviations ISO standards. WHDC includes only the minimum necessary instructions as it is written for type approval. Part 1065, referring to self certification, uses a more general approach defining basic principles of the test procedure which may be useful to perform the emissions measurement. The drafting effort has been aimed at turning this apparent difference into an advantage for the resulting gtr
- The total information has been split into
  - a legally binding text necessary for type approval in line with WHDC draft gtr. The legal text of the gtr describes the essential mandatory actions to be carried out in the type approval procedure.
  - guidelines giving complete but not binding information in line with Part 1065. The guidelines allow the interested parties to understand in detail the test procedure via flow charts, qualitative description of emission systems, suggested instruments, numerical examples.
- Both sources have been used in a complementary manner so that deficiency in one is supplemented by information from the other.
- The following two bullets show an example for this approach. The first text is limited to the legal requirements and will form the gtr. The second text presents the guidelines. It is a complete text for reasonable reading with all the guidance text included. This is not part of the gtr, but a separate support document. This approach as explained by the technical sponsor DG ENTR H5 is the one used by DG ENTR for the directives of the new ‘generation’. An example is the noise directive .../... .
- Example of legal text:
  - 7.2.5.2 Intake-air flow meter
  - (a) Component requirements. The intake-air flow meter shall meet the specifications in Table 1 of §7.2.3. Note: overall system for measuring intake-air flow must meet the linearity verification in §7.3.4. and the calibration in §7.3.8.2.
- Example of guidelines:

- Intake-air flow meter
- (a) Component requirements. The intake-air flow meter shall meet the specifications in Table 1 of §7.2.3. *This may include a laminar flow element, an ultrasonic flow meter, a subsonic venturi, a thermal-mass meter, an averaging Pitot tube, or a hot-wire anemometer.* Note: overall system for measuring intake-air flow must meet the linearity verification in §7.3.4. and the calibration in §7.3.8.2.

To clarify the concept of legal text and guidelines further the full text of chapter 7.2 'Measurement Instruments', both as legal and guideline approach, has been shown. These two texts will be circulated in the next three weeks to inform those experts, who have not attended the Geneva meeting. The concept of legal text and guidelines will also be on the agenda for next meeting in Ottawa.

The content of the NRMM gtr is strictly based on the guidelines by WP.29 for the development of a gtr.

- Part A. Technical rationale and justification
  1. Technical and economic feasibility
  2. Anticipated benefits
  3. Potential cost effectiveness
- Part B. Text of regulation
  1. Purpose
  2. Scope
  3. Definitions, symbols, abbreviations & references
  4. General requirements
  5. Performance requirements
  6. Test conditions
  7. Test procedures
  8. Annexes

Point 9 of agenda: Having finished all specific items on the agenda the chairman opened the floor for questions and for related discussions. M.K. Chaudhari from India asked to include gen-set and gasoline engines in the scope of the non-road gtr. H. Ishii from Japan asked further explanation about the planned scope of the non-road gtr. B. Charmley US EPA stated that the decision on the scope lies with AC.3. He continued that the diesel protocol was the starting point of the NRMM work and that it played also an important role in the official proposal for the development of the NRMM gtr. The secretary of the NRMM WG pointed out that the proposal adopted by AC.3 does not exclude other engine technologies, even though it strongly refers to the transient diesel test protocol. He continued to update the experts on the history of Regulation 120 ('58 agreement) especially in view of the scope, which includes category T vehicles and machinery intended and suited to move, or to be moved on the ground, with or without road, operated under intermittent or constant speed.

#### Next meetings

- NRMM WG informal meeting 27<sup>th</sup> -29<sup>th</sup> September, 2006, in Ottawa, Canada. The representative of Environment Canada confirmed the venue and he kindly invited the experts to Ottawa. The WG appreciates this invitation very much.
- Geneva NRMM WG half day meeting during 53<sup>rd</sup> GRPE, 9<sup>th</sup> of January 2007, 14:30 – 17:30

Having completed the agenda, the chairman thanked all the WG members for their participation and closed the meeting.

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WG NRMM informal meeting, 6<sup>th</sup> of June, 2006, 9:30-12:30  
52<sup>nd</sup> GRPE, Geneva  
(Chairman: Giovanni De Santi. Secretary: Giorgio Billi)

### Proposed Agenda<sup>1</sup>

1. Welcome of participants
2. Presentation of proposed agenda and adoption of agenda
3. Introductory remarks by chairman
4. General information on new developments regarding NRMM testing and legislation
5. Summary of progress and work done since January 51<sup>st</sup> GRPE Meeting, including summary from Ispra NRMM informal WG meeting, Apr 2006
6. Presentation of draft segment for NRMM GTR (work approach developed at Ispra meeting, resulting draft segment)
7. Symbols
8. Definition of work for 2006 and upcoming meetings  
- Ottawa meeting 27-29 September 2006 (3 days)<sup>2</sup>
9. Other issues

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<sup>1</sup> Please see GRPE Agenda at <http://www.unece.org/trans/doc/2006/wp29grpe/ECE-TRANS-WP29-GRPE-2006-10e.doc> ; “Delegates are kindly requested to bring their copies of documents to the meeting”.

<sup>2</sup> Date confirmed, Place waiting for final confirmation