

GRPE working group on
the emissions from Non-
Road Mobile Machinery

Informal document No. GRPE-55-22-Rev.1
(55th GRPE, 14-18 January 2008,
agenda item 5.)

NRMM GTR Draft

Technical procedure (chapters 7-9)

As informal document to GRPE

Objectives of NRMM work

- Good alignment had already been achieved with almost identical permissible levels and implementation dates among existing non-road national regulations
- The main contribution of the NRMM GTR to global harmonisation will be the alignment of test protocols
- It will further serve as basis for countries developing new legislation

Formal steps

- 2002 NRMM in priority list of WP.29
- 2003 start of NRMM WG in GRPE
- 2005 start of editorial committee
- 2006 proposal for NRMM GTR adopted by AC.3 WP.29
- 2007 adoption of progress report
- 2008 Presentation of part of draft GTR

NRMM GTR work

- 2000 – 2003 Development of real-world transient cycle in international taskforce
- 2003 – 2005 identification of major topics and open issues
- References: 97/68/EC as amended; 40 CFR parts 1039,1065; ISO 8178
- 2005 Definition of draft structure
- 2005 - 2007 preparation of draft text

Part A. TECHNICAL RATIONALE AND JUSTIFICATION

0. SUMMARY

- 1. TECHNICAL AND ECONOMIC FEASIBILITY**
- 2. ANTICIPATED BENEFITS**
- 3. POTENTIAL COST EFFECTIVENESS**

Part B. TEXT OF REGULATION

1. SCOPE AND PURPOSE

2. APPLICATION

3. DEFINITIONS, SYMBOLS, ABBREVIATIONS, REFERENCES

4. GENERAL REQUIREMENTS

5. PERFORMANCE REQUIREMENTS

6. TEST CONDITIONS

7. TEST PROCEDURES

7.1. Introduction

7.2. Principle of emission measurement

7.3. Verification and calibration

7.4. Duty cycles

7.5. General test sequence

7.6. Specific duty cycle running procedure

8. MEASUREMENT PROCEDURES

8.1. Calibration and performance checks

8.2. Instrument validation for test

9. MEASUREMENT EQUIPMENTS

9.1. Engine dynamometer specification

9.2. Dilution procedures, if applicable

9.3. Sampling procedures

9.4. Measurement instruments

9.5. Analytical gases and mass standards

10. ANNEXES

Guidance document

- WG NRMM decided to accompany the GTR with a guidance document, in order to give support to less experienced users and to accommodate the differences between ECE/EU legal format and US plain language
- Approved by GRPE and AC.3
- “Side-by-side with legal text on WP.29 GTR website as appendix 1 or 2”
- The guidance document offers advice for facility set-up and running of tests; guidance text does not introduce any legal requirements

Contributions

- Many stakeholders from industrial organisations and contracting parties have worked to develop this GTR draft
- Discussions were always open and transparent underlining the common interest to achieve harmonisation
- Where and when possible, common solutions of open issues were adopted in NRMM and WHDC in order to maintain a strong alignment between GTRs
- WHDC based on WP.29 formatting guidance has been selected as reference for formatting and numbering

Simplification of legislation

- Harmonised non-road transient cycle adopted into EU and USA legislation, Japan plans adoption of this transient cycle
- Harmonised testing requirements (and facilities) reduce the economic burden of legislation without affecting the legislative relevance
- Considering important state-of-the art elements (of applied technical procedures), as the
 - Introduction of partial flow dilution in parallel to full flow dilution system
 - Transient cycle which is feasible on eddy-current brakes

Planning

- January 2008 Presentation of part of technical procedure (inf. Doc)
- June 2008 Presentation of technical procedure (inf. Doc.)
- January 2009 Presentation of NRMM GTR

Thank you

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