ECE R41 revision

Outline of main modules with crossreference to draft amending text

Presentation by Data Expert Group to R41WG

19 February 2008
Actions since 9/R41WG

• DEG continued discussions; still some ASEP issues to check

• DEG documents have been sent to UN for uploading on ECE website; origin of motorcycles added to noise level database

• 01-R41WG-08 (draft amendment) has been updated (see Informal Document No)

• This presentation shows how the amendment is linked to past decisions of R41WG
Modular structure – “the package”

ECE R41.03 – 97/24/EC Chapter 9

TA test

Stationary test for roadside enforcement

New TA test

Stationary + drive-by test for roadside enforcement

ASEP

Anti-tampering / contructional requirements
TA test

- Problem
  - No required acceleration and potential perverse consequences (longer gearing in test = lower rpm = lower noise but also lower gears used in real life = higher rpm = higher noise)
  - No relationship between test conditions and actual use conditions, meaning reduced effectiveness of noise reduction measures in real life
TA test

• Proposed solution / benefits
  – Essentially same method as for cars but with higher target accelerations and without acceleration limit
    • Prescribed target acceleration rate related to vehicle acceleration capability – level playing field
    • Accurate simulation of noise source distribution (intake, exhaust, engine/gearbox, …) in relation to most relevant motorcycle operation – effective noise reduction measures
    • Independent of vehicle design to allow future propulsion technologies to be tested – vehicle speed and acceleration instead of engine speed

• Remaining tasks
  – Limits

• Where in 01-R41WG-08
  – Annex 3 section 1 (test method) + Annex 6 (limits)
• **Problem**
  – Base TA test provides only “snapshot” of noise emission behaviour
  – Noise levels below and above TA test conditions may increase inappropriately
ASEP

• **Proposed solution / benefits**
  – Definition of operating range below and above TA test conditions within which noise emission should not deviate significantly from what one would expect from the base TA test results – control beyond TA “snapshot”
  – Manufacturer declaration of conformity with possibility for TA authority to perform checks – limited testing burden at time of TA

• **Remaining tasks**
  – Limits (slopes and tolerance)

• **Where in 01-R41WG-08**
  – Paragraph 6 and Annex 7
Roadside enforcement

- **Problem**
  - Stationary noise test with reference noise level by itself is only able to capture crude illegal systems and rough manipulations

- **Proposed solution / benefits**
  - Maximum WOT drive-by test result for lowest gear from TA test made available as additional reference data for roadside enforcement – better enforcement capability with drive-by noise test as additional tool next to stationary noise test

- **Remaining tasks**
  - Alignment with ISO 5130 (stationary noise test)

- **Where in 01-R41WG-08**
  - Annex 3 section 3
Anti-tampering

• **Problem**
  – No prescriptions related to easily modifiable and manually adjustable multi-mode mufflers

• **Proposed solution**
  – Legal language to prevent approval of mufflers designed for tampering
  – Performance requirements for multi-mode mufflers (test all modes)

• **Remaining tasks**
  – /

• **Where in 01-R41WG-08**
  – Paragraph 6
01-R41WG-08 structure

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ANNEXES
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Annex 2 - Arrangements of approval marks
Annex 3 - Methods and instruments for measuring the noise made by motor cycles Pass-by enforcement test
Annex 4 - Test track specifications
Annex 5 - Exhaust system (silencer)
Annex 6 - Maximum limits of sound level (new motor cycles) TA test
Annex 7 - Additional sound emission provisions (new motor cycles and new exhaust or silencing systems) ASEP
Proposed next steps

- Initial discussion at 10/R41WG
- Reporting to 47/GRB
- R41WG/GRB member comments to Italy by 31 May
- Consideration of comments by 11/R41WG on [2/3] July
- 12/R41WG on 1 September (PM)
- Discussion at 48/GRB (amended text and limit values)