GRBIG-ASEP-01-003
1st meeting of GRBIG ASEP, 7-8 November 2005

Measurement methods available for GRB IG working on R51 annex 10

Transmitted by the Netherlands

1. Introduction

With respect to the foreseen amendment of R51, GRB has agreed in its 42nd session to establish a new informal working group in order to further develop the additional sound emission provisions for M1 and N1 vehicles (Annex 10). The Terms of Reference read:

"The informal group shall develop a complementary test method and evaluation criteria for Annex 10. The complementary test method shall cover the noise emission under higher engine speeds and loads than the proposed procedure in TRANS/WP29/GRB/2005/5"

In order to facilitate the work of this informal group a "long-list" has been made of the available candidate measurement methods for annex 10 as far as they are known and thought to be relevant by the Netherlands.

2. Available measurement methods (known to NL)

1. R51.02: the current measurement method; WOT acceleration in 2nd and 3rd gear from 50 km/h.
2. Fixed acceleration concept; All vehicles should reach the same acceleration. Throttle position depends on the actual acceleration potential of the vehicle. (Ref: TRANS-WP29-GRB-2001-04).
3. Steven Off Cycle concept I; From the Annex 3 results and some additional noise measurements, the propulsion noise curve as function of engine speed is calculated. Demands are set to the linearity of the non-load propulsion noise curve as well as to the load influence(Ref: GRB/IG CRP6).
4. ISO 362 part 2 proposal NL status Feb 2004; similar approach as annex 3 of the new proposal for amendment of R51, but the target acceleration is higher, leading to higher engine speeds; (Ref: ISO WG42 D196; update was introduced in march 2004 meeting, but has not received a separate document number).
5. Not to exceed concept; No fixed measurement method. Within boundary conditions (e.g. speed < 120 km/h) the noise level shall never exceed a certain level. (Ref: GRB/IG CRP50).
6. Steven Off cycle concept II; no fixed measurement method either; but boundary conditions and not to exceed levels are defined more precise and dependent on several parameters. (Ref: GRB/IG CRP53 and GRB-42-inf05).

3. Proposal Netherlands

The Netherlands proposes GRBIG to take these six candidate measurement method as basis (long-list) for the work of the GRBIG and to mirror them against the requirements to Annex 10.