

Proposal for amendments to document TRANS/WP.29/GRB/2002/4

Submitted by the expert from The Netherlands

Annex 3, paragraph 2.2.2. first sentence, amend to read:

“.....shall be selected by the vehicle manufacturer in agreement with the technical service.

Rationale:

To formalise the authority of the technical service in the decision process.
To ensure the selection of the tyre showing the highest sound level from the tyres the vehicle manufacturer has designated as original equipment.

Adding of a part 2 test dealing with low speed operation:

Annex 3, insert a new paragraph 3.2. “Measurement of vehicles at low speed operation” and renumber paragraph 3.2. into par. 3.3.

Rationale:

This method will be developed following

- the report of the 36th GRB, paragraph 11 and 22 (TRANS/WP.29/GRB/34)
- the replies to the GRB questionnaire (TRANS/WP.29/GRB/2001/5; GRB Sep 2001 inf. 2 and 9)
- the request of ISO TC22 (vehicles) in the May 2002 meeting of ISO/TC43/SC1 (noise)
- the open issues raised in the annex of NWIP ISO 362 part 1
- the various national requirements on low speed vehicle noise
- the future increase of 30 km/h zones

For the scope of the test of part 2 see the annex to this informal document.

A new vehicle noise measurement method

Introduction

In its May 2002 meeting ISO/TC43/SC1 (noise) has taken notice of the progress of WG42 and the NWIP for ISO 362, which was put forward in March 2002, and which was also used as base for the German proposal TRANS/WP.29/GRB/2002/4. As a result of the subsequent discussion a request has been launched to develop another, complementary, new vehicle noise measurement method, which will be formulated as a New Work Item Proposal ISO 362 part 2.

Scope

Part 2 aims to measure the noise of vehicles which is representative for low speed operation (urban city centres, residential streets, 30 km/h zones) and single events (pulling away from traffic light, acceleration from intersections). Under these circumstances propulsion noise is normally dominant. This scope is complementary to Part 1, which focuses on main streets, 50 km/h and moderate acceleration.

Time frame and planning

- Framework (long list, scope, requirements, short list) has been discussed in ISO WG42
- First draft available in Feb 2003
- NWIP available in Sep 2003 meeting of GRB

Background information

1. 83 % of the total NL urban road network consists of residential streets (source RIVM, May 2000)
2. 35 km/h is the most common speed for residential streets at very low acceleration. At high acceleration the most common speed is 5-30 km/h (Source: Sandberg & Steven, ISO/TC43/SC1/WG42/D172, also presented in GRB Feb 2002)
3. A significant proportion of urban driving is in 1st and 2nd gear
 - (e.g. JAMA: 38%, ISO/TC43/SC1/WG42/D134B also presented in GRB Sep 2000 inf.doc. 2)
 - (e.g. ACEA: 44%, Le Salver, internoise 2001)
4. The exterior noise depends on:
 - the engine speed (main influence to powertrain noise),
 - the vehicle speed (main influence on tire/ road noise)
 - the load condition (low to medium influence on both kind of noise)(source: Bruno, ACEA noise event Nardo, June 2002)
5. In the hectic driving style, engine speeds are more than twice as high as in the economic driving style. This produces differences in engine/transmission noise of the order of 10 dB(A) (Source: Steven, GRB Sep 1999 inf. 5)
6. 23% of car drivers can be considered as “sportive or aggressive” (TNO-PG; GRB Feb 2001 inf 8)
7. Traffic accelerating from standstill is more annoying than free flowing traffic at the same Leq (TNO-PG; GRB Feb 2001 inf 8)
8. New relevant insight will become available from EU 5th frame work projects (SVEN, ROTRANOMO, HARMONOISE).