GRBIG-ASEP-14-004

Guide for the evaluation of stringency

As filled in by the ASEP Expert group meeting 4/5 dec 2008
Issued by the chairman

In order to guide the discussion the experts are asked to fill in these tables in advance.
The two tables are preliminary. Please come forward with additional criteria you think are useful.
The list will be completed and input will be discussed in the meeting.

*Please Note:
Improving Annex 3 is not part of our Terms of Reference. If the stringency of annex 10 might be also dependent on the Annex 3 method, it will only be reported to GRB. No proposal for improvement will be made.

Table 1: Methods to analyze the stringency

Methods to analyze the stringency	Relative importance (very, moderate, low))	If available outcome of analysis
Vehicles rejected by R51.02 compared to vehicles rejected by R51.03 (ann3 and ann10)	Not really important. Difficult to compare, because there are no limit values yet.	
1. number of vehicles	Not important. We should analyze why every individual vehicle fails or passes.	
2. False positives and false negatives	It can happen that vehicles would pass R5102 but will not pass R5103; other way round is politically not acceptable. If this happens we might have to modify annex 3. remember the informal group on R51 annex 3. there was a table with limit values in three phases. The 3rd phase would reject 50% of the vehicles in the dBase.	
3. correlation	There is no good correlation so not	

	usable.	
Potential to increase noise emission compared to R51.02		
4. maximum theoretically possible	Is important at least for politicians.	
5. maximum practically possible		
Range of control (engine speed, point, area)		
Possibilities for cycle beating		
Setting boundaries to the allowable range of acoustic technologies		
Can be used to differentiate certain vehicle classes (e.g. high emphasis on mass production vehicles)		
Other	Look to vehicles in the dBase; which ones are vehicles of concern	

Tabel 2 Factors influencing the ASEP stringency

Factor influencing the ASEP stringency	Relative importance (very, moderate, low))	estimate in dB(A)	Potential solutions
Annex 10 method			
1. choice of anchor point	Very important		
2. Boundary conditions ann 10	Moderate; if the control range is bigger, the stringency is bigger		
a. A,max	GTI's may have to skip 2nd gear if Amax is too low. Concern on spinning tyres.		
b. V,max			
c. N,max	Discussion on use in traffic. Analysis in time or event domain?. Curve Steven represents 95% of time. This is still many events. 90%S would cover most events.		
Annex 10 limit curve	Both very important		
3. slope			
4. margin		Some margin is necessary for resonances and uncertainty	
*Annex 3 method**			
5. A,target depends on PMR	Should not be rediscussed		
6. A,max 2 m/s2	Moderate important		
7. high Lwot can be compensated by low Lcruise	Low or even negative; there is a risk of increasing Lurban in other (weather) conditions.		
*Annex 3 limit**			
8. limit proposal	Extremely important; there is also the multiplier of Kp for Lwot		

9. limits depend on PMR	is in conjunction with point 8		
Other	Environmental conditions temperature, test track, air pressure; no need for compensation. This has negative effect, the manufacturer has to take into account that this may have a draw back on COP checking.	Make remark vehicle should be measured in normal range, not under extreme conditions Eg refer to ISO 362	