

Informations on ASEP

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Background

At the future work for GRB working group and at GRB 62 and 63th session, it was presented several concerns about ASEP :

- Update the text to improve clarity and simplification in short term
- Missing sound limit values for N1 and Offroad in Annex7 para. 5.3 to be added.
- Series hybrid vehicles are excluded from the ASEP until 30 June 2019; new test methods will be necessary in R51.
- ASEP as a part of type approval (not as a manufacturer declaration)
- More general technical review in cooperation with ISO (Improvement of methods)

IWG was suggested to start 2016 and to finish 2019.

Background

- Expert from France preliminarily volunteered to chair in relation to Regulation Nos. 51 for the ASEP provisions. The experts from China, Japan, Hungary, EC, IMMA and OICA expressed their support for the creation of these IWGs.
- As GRB decided to take a decision on their establishment at its next session, FRANCE request to GRB members to give me some feedback using a questionnaire to take into consideration concerns about ASEP provisions.

Background

Questions	Answers
Do you have experience on ASEP new test methods?	
Which do you consider are the main difficulties or concerns with ASEP?	
Do you need update of the text to improve clarity and simplification in short term? If yes, which part (control range, target conditions, anchor point, reference sound assessment, principle of L_{urban} , ...) ?	
Are you concerned about Missing sound limit values for N1 and Offroad ?	
Have you some experience and proposal about new test methods necessary in R51 for Series hybrid vehicles (which are excluded from the ASEP until 30 June 2019) ?	
Are you interest about ASEP as a part of type approval (not as a manufacturer declaration)	
Do you thing that more general technical review are necessary for ASEP? If yes, which element (general objective, methods, limits, ...) ? Would you like to make specific suggestions for improvement?	
Do you plane to participate to an IWG on ASEP?	

Questionnaire

16 answers : 12 for ECE51.03 and 5 for ECE41.04 and 2 general

- Contracting parties : China, Japan, UK, Spain, Italy, EC, Norway, Belgium, Germany, Belgium, NL, France
- NGO : OICA, IMMA, CLEPA
- Manufacturer : Daimler, FORD

1. Do you have experience on ASEP new test methods?

- 9 have experience on passengers
- 4 have experience on L3

2. Which do you consider are the main difficulties or concerns with ASEP?

- General difficulties : Complexity, subject to Interpretation, Uncertain, complicated for reading (UN-R41 could be a template), the concept of 3 different ways of evaluation/testing (ECE51.03), Definitions
- Time-consuming
- Multiple modes
- Automatic transmission
- Non lockable ATM and ATM with 9 or more gear ratios doesn't fit to the test scheme
- Self-declaration
- Replacement-silencer
- Exemptions cases for ASEP, for CVT and non-lockable automatic transmission (ECE41.04)
- New technologies of vehicle, such as selectable power driving modes with and without different output power. (ECE41.04)
- Allowed tolerance for nbb (ECE41.04)
- Alignment of acronyms with R41.04, R51.03 and ISO.

3. Do you need update of the text to improve clarity and simplification in short term? If yes, which part ?

- Control range, target conditions
- Noise level is measured on the right and left and final result
- Anchor point
- Vehicle/engine speed and tolerance, gear selection, non lockable ATM, locked / non locked
- Use of 5 dBA/1000 rpm slope, plus edging
- Reference sound assessment
- principle of Lurban
- Choice of modes
- Pre-acceleration
- Define more clearly exemptions cases for ASEP, for CVT and non-lockable automatic transmission, electrical motorcycles
- Engine speed signal via CAN is acceptable?

4. Are you concerned about Missing sound limit values for N1 and Offroad ?

- Most are concerned
- Principle of reference sound assesment should be review.

5. Have you some experience and proposal about new test methods necessary in R51 for Series hybrid vehicles?

- Most have experience on such vehicle but some analysis will start.
- Need more special research on Hybrid and electric vehicles' behaviors during the ECE R51 tests.
- QRTVs should not be covered by ASEP.
- We may discuss on a first version of simplified tests for such vehicles.

6. Are you interest about ASEP as a part of type approval (not as a manufacturer declaration)

- Most are in favour.
- Including ASEP in TA process would lower the risk for misinterpretation.
- To be include to TA, It must be ensured that TA process does not become over-complex. More, be simplified and faster.

7. Do you think that more general technical reviews are necessary for ASEP? If yes, which element?

Would you like to make specific suggestions for improvement?

- Most are in favour
- General principles of revision :
 - The scope and test target : Method more representative to urban driving behavior, effectiveness of the method regarding off-cycle tests, which failure to be checked
 - Testing method need to be simplified (e.g. simple single test). ASEP should be restricted to one simple test method,
 - The text has to comply with a text for a technical standards
 - Reduction of time expensive
 - The field of application should be narrowed , for instance focusing on high performance vehicles plus aftermarket components and possibly exclude xEV

7. Do you think that more general technical reviews are necessary for ASEP? If yes, which element?

Would you like to make specific suggestions for improvement?

Some specific proposals :

- Limits
- Margin of 2 dB(A) is too small, with the actual situation (Limit- act. Type appr. Value) as additional margin, works . But in future many vehicles can fulfill 68 dB, so have no additional margin
- Alternative indoor
- Field of application narrowed, e.g. focus on high performance vehicles plus aftermarket components
- Control range should be bigger (e.g. until 90 or 100 km/h). Results should be mentioned inside test report and certification.
- New technologies of vehicle, such as selectable power driving modes with and without different output power.

8. Do you plan to participate to an IWG on ASEP?

- From questionnaire : China, Japan, Germany, Spain, France, OICA, IMMA, CLEPA
- From Expert group : Hungary

General conclusion

- Lot of comments on on ASEP for ECE51.03. Further work are needed.
- Only few comment and questions on ASEP for ECE41.04. It seems that no need further work

ISO contribution

- The expert from ISO informed GRB about the activities of his organization to contribute to the GRB work on revising the ASEP provisions

→ Informal document for GRB 64th session

Work load of an IWG

The IWG for ASEP on ECE51.03 could :

- continue work done by ISO to update the text to improve clarity and simplification.
- re-structure the text to comply with a technical standards
- review and improve test procedure for automatic transmission in non-locked gear.
- propose test procedures for hybrid vehicles and new technologies of vehicle.
- propose limits for N1 in reference sound assesment
- propose simplified test procedure and/or alternative test (such as in-door testing) to reduce time expensive

Work load of an IWG

The IWG for ASEP on ECE51.03 could also propose a general principle for revision of ASEP regarding :

- Scope and target which failure to be check)
- Effectiveness of the method regarding off-cycle tests, ...)
- Field of application
- Control range (method more representative to urban driving behavior)
- Alignment with ASEP ECE41.