Informal document No. **GRB-50-14**

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NL ASEP proposal

Presentation to GRB
version 01-09

issued by the Netherlands
GRB 50; September 2009

ASEP Working Group

A method in discussion in the ASEP Working Group
(developed and proposed by OICA)

Germany and Netherlands raised the issue of stringency of this method: weakening present limit up to 10 dB

Netherlands decided to bring in an alternative ASEP method
(ref: ECE/TRANS/WP.29/GRB/2009/5)

NL proposal: summary

It is based on the following elements:

1. an anchor point (determined from measurements of Annex 3)
2. a not to exceed point (Annex 3 limit value plus a ‘value’)
3. above the anchor point: a straight line between the anchor point and the not to exceed point
4. below the anchor point: a line with a fixed slope
5. a bonus for silent vehicles
6. a margin (to allow for uncertainty of single measurements)

Essential:

Right end of limit line based on a Not To Exceed Level

Comparison between NL and ADBO ASEP methods

Note ADBO = ASEP method “As Developed By OICA” in the ad hoc WG

Same in both methods:

- Area of control (marginal difference) both based on 99% of all urban driving
- Anchor point (same place and value)
- A margin
- Bonus silent vehicles
- Difference in slope below and above anchor point

Difference:

- **Limitation line above anchor point**

Potential differences:

- Value of slope below anchor point
- The value of the margin

Difference in limitation line above anchor point

The NL proposal is based on a NTE level (= limit Annex3 + [8] dB)

The ADBO proposal is based on a slope

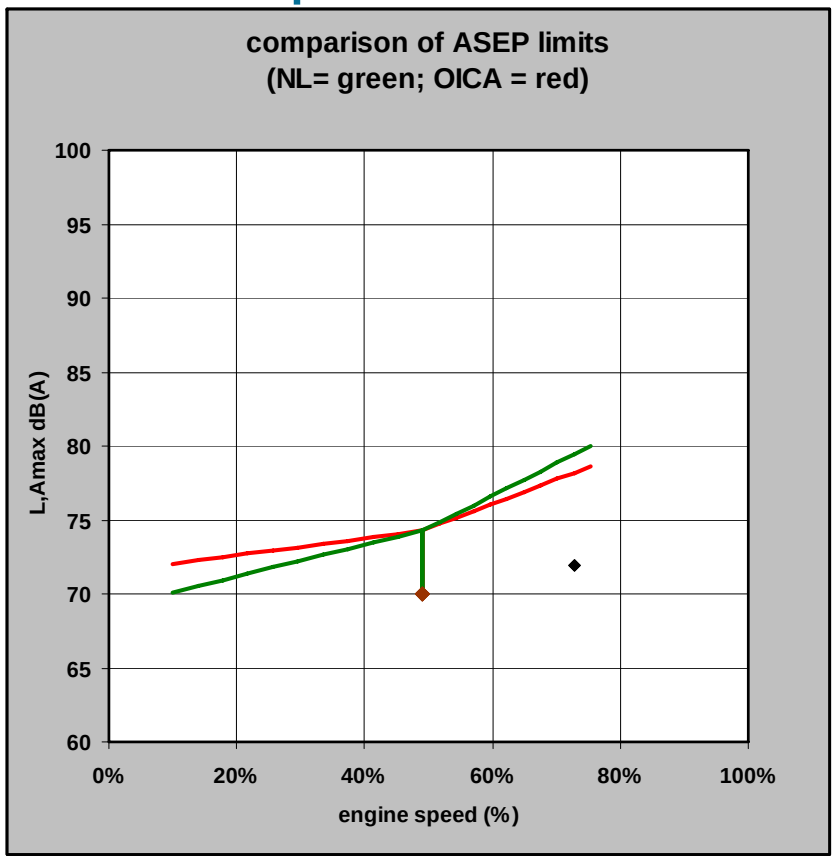
- slope ADBO is based on regression
- with a maximum of X+Y dB/1000 rpm)

The maximum allowable noise:

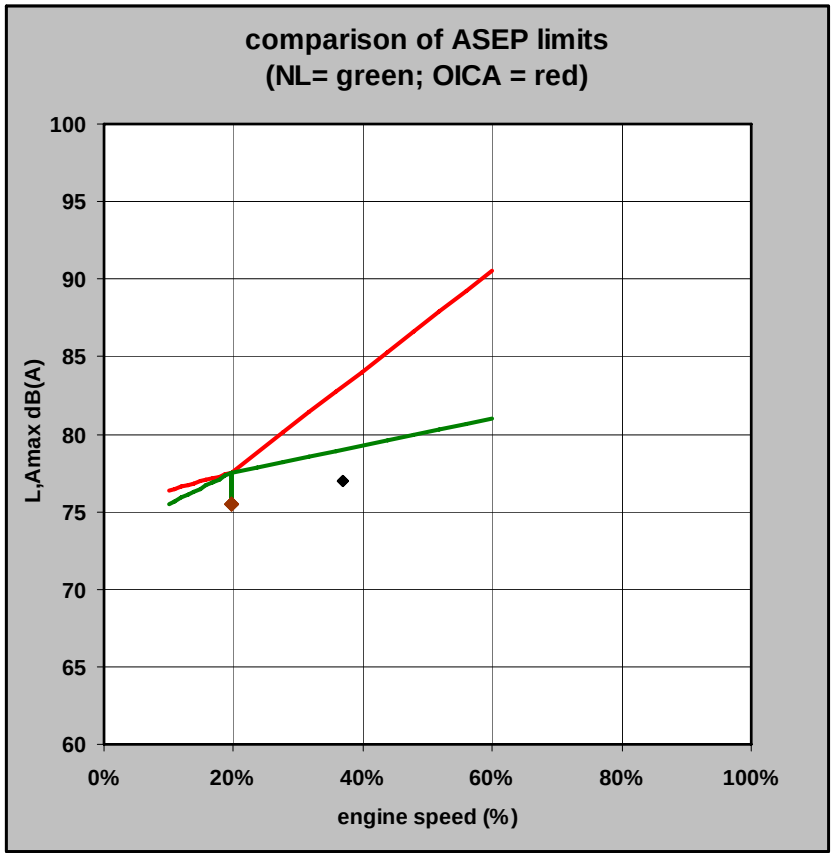
-NL = fixed (NTE level)

-ADBO = depending on engine speed range and allowable slope

examples



Vehicle 99-09
Pmr 65 kW/t



Vehicle 200-14
Pmr 166 kW/t

Confrontation of NL method with ASEP dBase

method	number of vehicles in dBase failing the limit
R51.02	22%
ASEP NL	26%

Vehicles that pass R51.02 but fail NL ASEP are:

- Vehicles with non linear sound behavior, tuned to R51.02
- Vehicles with extremely steep sound slope, tuned to R51.02
- Border line vehicle (one)

Vehicles that fail R51.02 but pass NL ASEP are:

- Border line vehicles (all)

Comparison of NL method and ADBO method

method	number of vehicles in dBase failing the limit
R51.02	22%
R51.03 Annex 3 (+ German limit proposal)	13%
ASEP ADBO (+ OICA limit proposal for ASEP)	2%
ASEP NL	26%

The NL ASEP proposal is able to distinguish noisy from silent vehicles and adds a certain requirement in addition to Annex 3. Especially vehicles from which the sound behavior is tuned to the current method are detected.

Normal vehicles pass the NL ASEP proposal fairly easy.

(super) sport cars

In the dBase we found no justification for an extra allowance compared to normal vehicles.

If there is a justification, we could discuss it

NL Proposal: relation with EU monitoring

After the monitoring phase there will be an analyses, discussion and a decision about the Annex 3 limits.

The NL ASEP proposal can be fine tuned on the outcome

Our Concern

Certainly not the (super)sportcars

Every new technology drops down: (Airco, ABS, ESP, Launch C. etc.)
So: also ‘Sound Design’

Sporty cars
GTI’s
Convertibles
The ‘SEAT Leons’

Every car can be sold in a silent ánd a noisy version (LEGALY)
And they will be sold:
Outside you can hear there is a customer demand

THANK YOU