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

comparison of ASEP limits
(NL= green; OICA = red)

Vehicle 200-14
Pmr 166 kW/t
# Confrontation of NL method with ASEP dBase

<table>
<thead>
<tr>
<th>method</th>
<th>number of vehicles in dBase failing the limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>R51.02</td>
<td>22%</td>
</tr>
<tr>
<td>ASEP NL</td>
<td>26%</td>
</tr>
</tbody>
</table>

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

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<th>number of vehicles in dBa failing the limit</th>
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</thead>
<tbody>
<tr>
<td>R51.02</td>
<td>22%</td>
</tr>
<tr>
<td>R51.03 Annex 3 (+ German limit proposal)</td>
<td>13%</td>
</tr>
<tr>
<td>ASEP ADBO (+ OICA limit proposal for ASEP)</td>
<td>2%</td>
</tr>
<tr>
<td>ASEP NL</td>
<td>26%</td>
</tr>
</tbody>
</table>

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