

An option for a
limit derived anchor point
in the D/F ASEP proposal

Issued by your chairman

May 2007

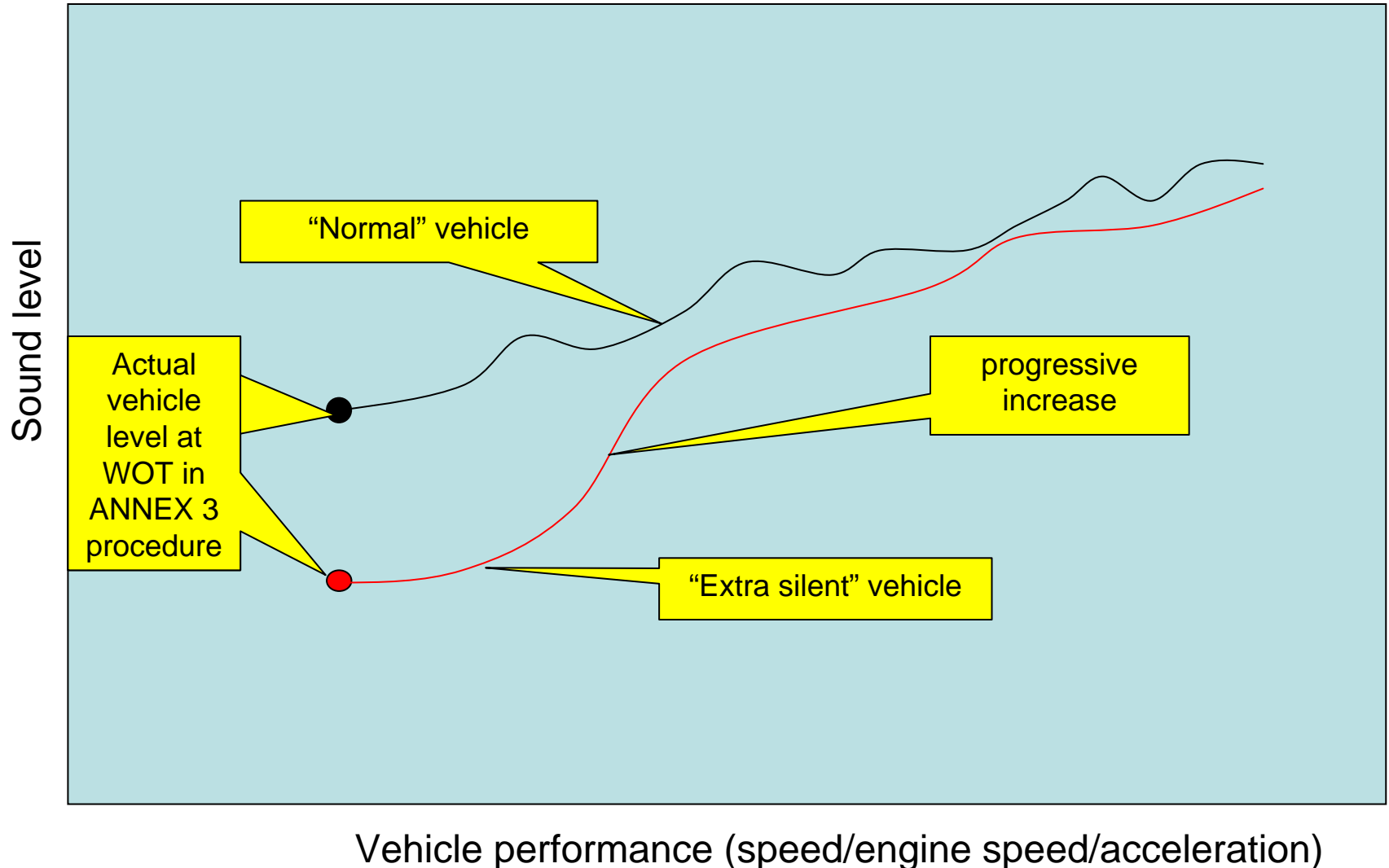
Open issues after the 6th meeting

1. How to deal with vehicles which are extra silent under circumstances of annex 3, but have a progressive increase to normal noise behavior under higher engine speeds? (Daimler Chrysler issue from 4th meeting)
2. How to deal with the separation of tyre noise and engine noise? (D/F proposal)
3. How to deal with the proposed 6 dB/1000 rpm limit curve compared to the spread in measured vehicles? (OICA presentation GRBIG-ASEP-05-003)

Ref: Paper “The remaining open issues of ASEP data processing after the 6th meeting” April 2007 by the chairman.

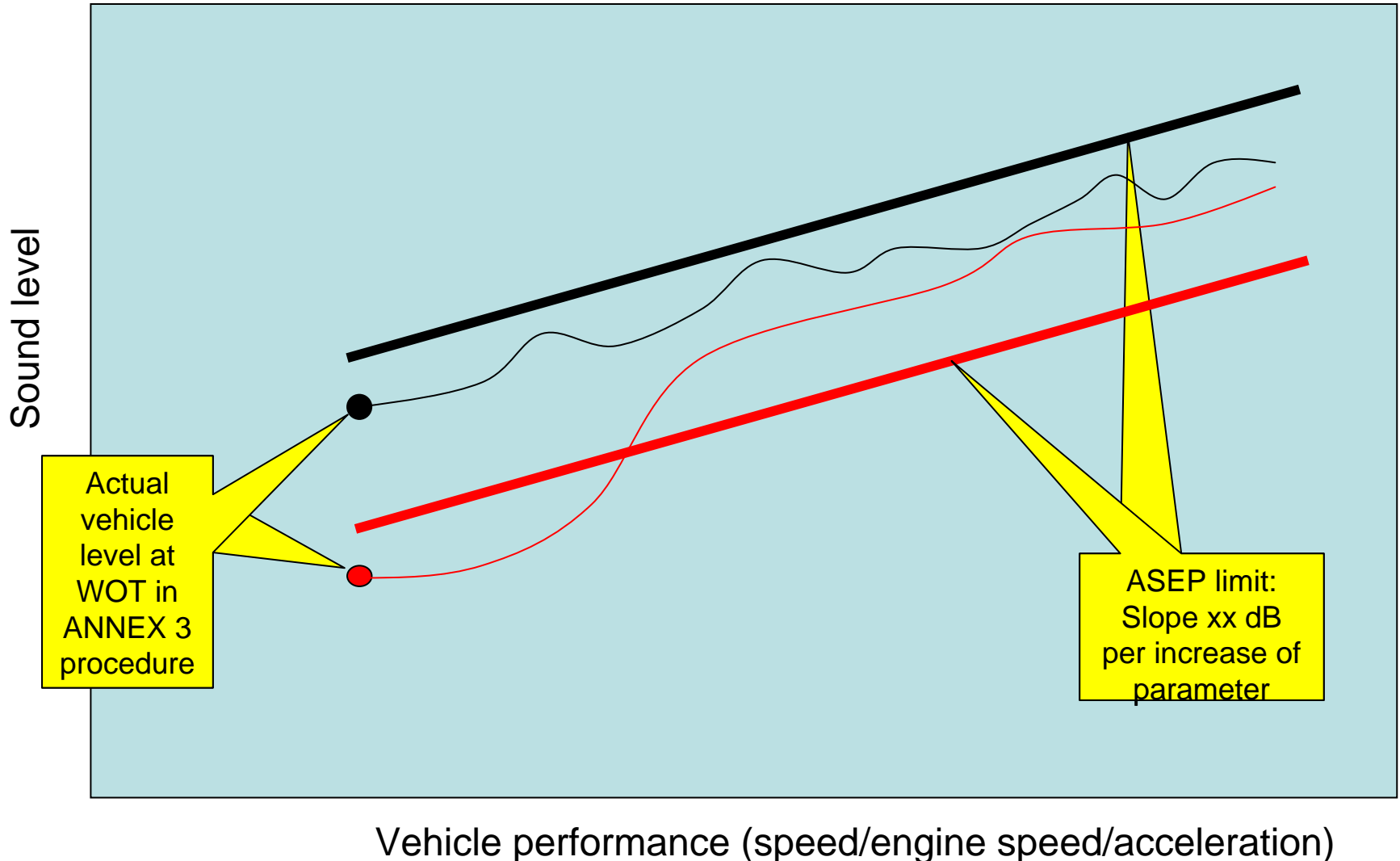
Issue 1: extra silent vehicles

with progressive increase to normal noise behavior



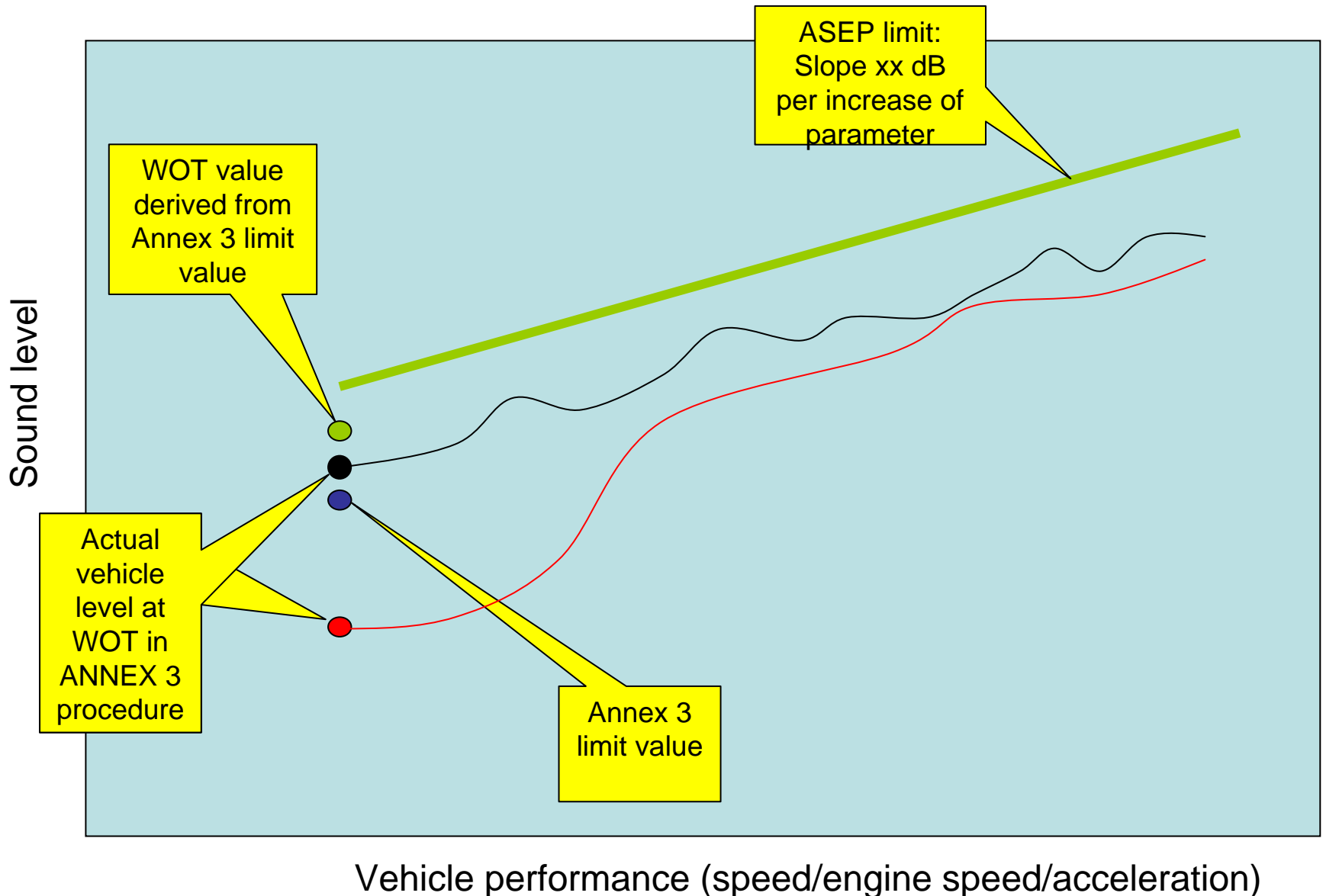
System 1: ASEP based on measured Annex 3 value:

- Black vehicle passes ASEP;
- Red vehicle fails ASEP due to the progressive increase
- This system would reject the red vehicle, although it is more silent than the black vehicle



System 2: ASEP based on Annex 3 limit value

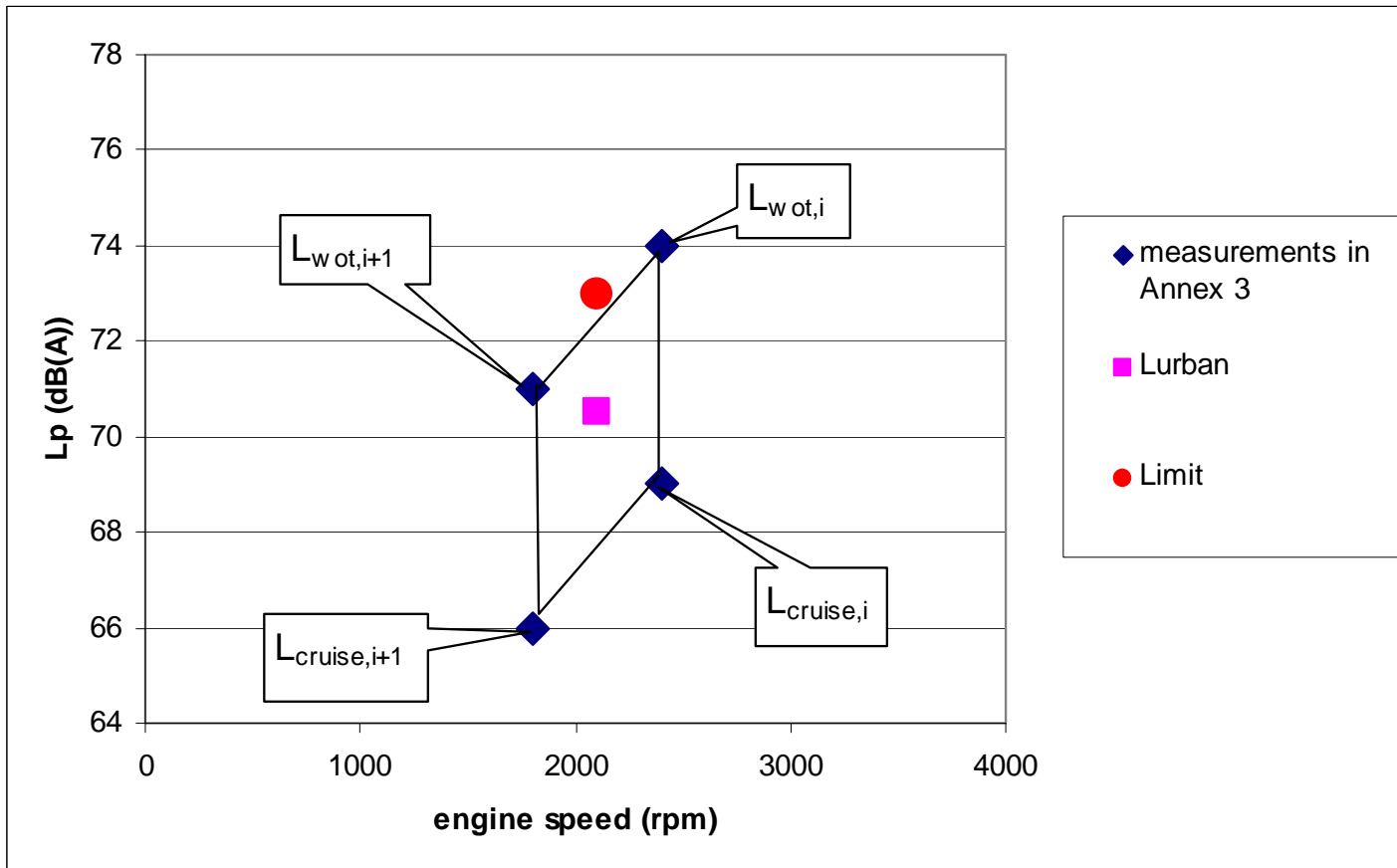
- Both vehicles pass ASEP



New challenge:

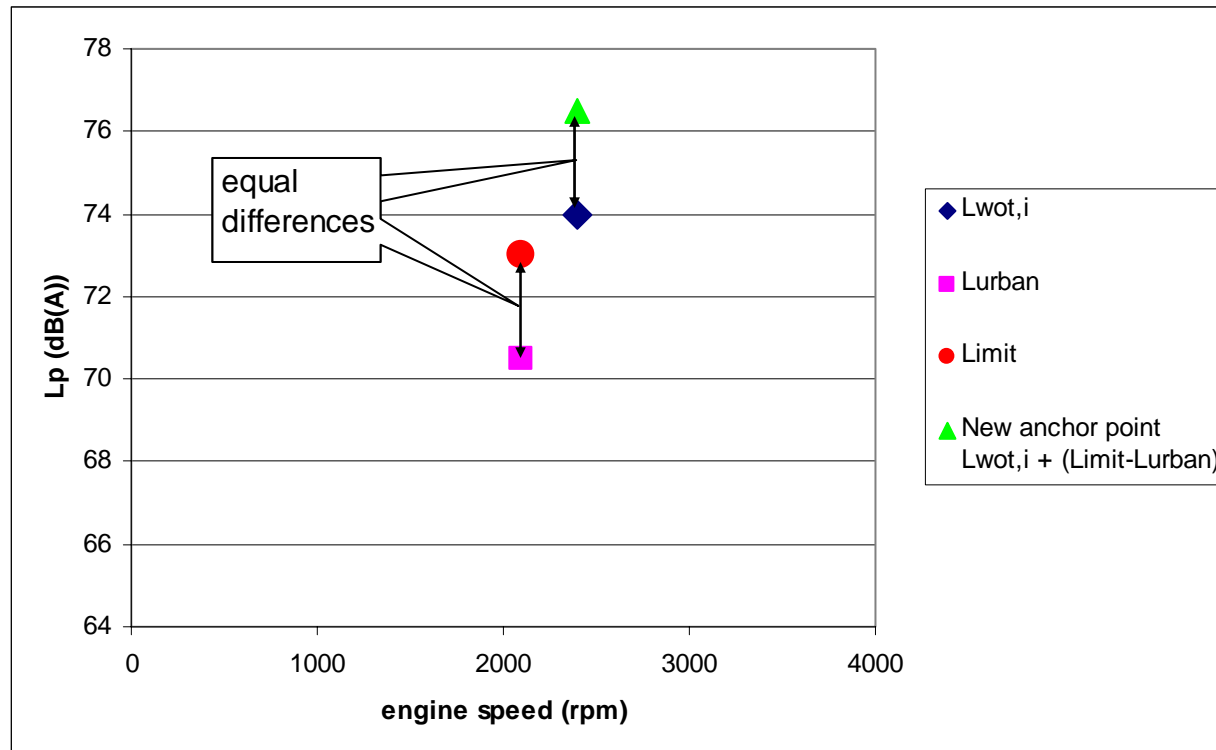
derive a WOT value from the limit value of annex 3

- The current ASEP anchor point is $L_{wot,i}$
- There is no direct relation between $L_{wot,i}$ and the limit value of annex 3
- An indirect relation can be made via the final test result (L_{urban})



Potential solution

- It is assumed that the difference between the Limit and the final measurement result ($\text{Limit} - L_{\text{urban}}$) is the quantity that determines how much “extra silent” the vehicle under investigation is.
- It is also assumed that this difference is equally build up from all intermediate measurement results ($L_{\text{wot},i}$ etceteras) that where necessary to calculate the L_{urban} . Or in other words, that all annex 3 intermediate measurement results are all as much “extra silent” compared to a “normal” vehicle.
- With these two assumptions a new limit derived anchor point for ASEP can be determined out of the current anchor point $L_{\text{wot},i}$:
 - New anchor point = $L_{\text{wot},i} + (\text{Limit} - L_{\text{urban}})$



Question

- Could all ASEP members (especially Daimler Chrysler) check on the base of their existing data, if this option could solve the outstanding issue number 1