ETRTO considerations on the proposed R51 amendment

November 15th 2021
ETRTO considerations to proposed amendment to R51

Regarding the technical implementation ETRTO would like to raise awareness and ask for clarification to the following points:

› With the proposed implementation of case 2 the influence of using different vehicles on different tracks has a negative impact on the measurement uncertainty of $L_{urban}$ since $L_{crs\_tr}$ is determined with the measurement uncertainty of an R117 test.

› ETRTO asks OICA to present data to show that the proposed case 2 would be equivalent to the current implementation of the vehicle homologation.

› Maximum power train noise and maximum tyre rolling noise usually do not occur at the same position on the test track. Case 2 energetically adds the two maximum values which could lead to a general overestimation of vehicle noise. Would a peak position correction be an option for the evaluation?

› Does subtracting the maximum value of tyre noise from the overall vehicle noise without considering the position on the track, minimizes the measured powertrain noise?
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Potential major impact on tyre industry testing effort:

› As it is written in the R51 proposal today, any entity (incl. tyre manufacturer) would be able to perform the tyre rolling nose tests in Annex 3 – Appendix 3

› The \( L_{\text{urban}} \) result and a potential market surveillance result are primarily defined by the result of this tyre rolling noise test.

› ETRTO understood that this test can not be performed without being witnessed by a technical service or type approval authority

› In case a tyre manufacturer is requested to perform this test on its own proving ground the tyre manufacturer would need to coordinate tests with all technical services and type approval authorities used by all vehicle manufacturers world wide
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ETRTO asks for clarification and a further impact assessment regarding:

› The technical points presented, concerning the application of the proposed Case 1 and 2

› The question on if the tyre rolling noise test within R51 needs to be witnessed by a technical service or a type approval authority considering the strong impact on the $L_{urban}$ and market surveillance results

› ETRTO asks to postpone the submission of the proposed Annex 3 – Appendix 2 for R51 until the above points are clarified.
Thank you