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## PROPOSAL FOR FURTHER DEVELOPMENT OF THE NEW MEASUREMENT TEST METHOD FOR SOUND EMISSIONS OF MOTOR VEHICLES

### A. BACKGROUND

The works on revision of the Regulation No. 51 began about three years ago. The objective of revision was to approach test conditions to modes of movement of vehicles in urban conditions, considering equivalence of such sources of noise as power plant and tires. The Regulation No. 51 mostly simulates power plant, while the new test method is based on the assumption of the equivalent contribution of the power plant and tires in formation of vehicle external noise.

By the present time no correlation has been found between the test results, which were carried out pursuant to the “old” (Regulation No. 51-02) and the newly developed method of noise measurement. The results of the tests, carried out by the present time, in particular, show, that at the tests performed according to the “new” method the noise levels are lower, than those reached at the tests using a working method. It can be happened that in accordance with the “new” method the types, which do not correspond with the requirements of the working Regulations No. 51-02, could be officially approved.

The results obtained cause a concern that the introduction of the “new” method will demand change of the approach for designing of the low-noise vehicle. Thus, the long-term efforts directed on reduction of vehicle noise could be crossed out. As there is no equivalence between the results obtained with use of working and proposed methods, it is necessary to develop the new allowable noise levels not connected with the levels in effect. For the manufacturers in a consequence, it will become necessary to develop a new approach to designing of a low-noise vehicle not corresponding with the present approach.

Besides that there is a lack of feasibility study that could confirm the necessity of revision of the Regulation No. 51.

## B. PROPOSAL

The decision on the further development of test methods and requirements concerning noise of vehicles can be made, if it will be justified that with the new approach the protection of environment will be more efficient than with strengthening of allowable noise levels set in the ECE Regulations Nos. 51 and 117 in effect.

Thus, it is necessary to carry out the feasibility study of introduction of the new method of noise measurement.

It is possible, that in view of the carried out substantiation including correlation analysis of the test results have been carried out pursuant to the “new” and present methods, the modified test method can become a basis for the future global technical regulation concerning noise of vehicles.

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