

CLARIFICATIONS BY THE EXPERT FROM RUSSIAN FEDERATION  
RELATED TO DOCUMENT TRANS/WP.29/GRRF/2005/4  
DISTRIBUTED AT THE 57th GRRF SESSION

**A. BACKGROUND**

Document TRANS/WP.29/GRRF/2005/4 was prepared in accordance with the decision of the GRRF at its 56<sup>th</sup> session (TRANS/WP.29/GRRF/56, para. 28) basing on the proposals of Russian Federation for amendments of the draft Supplement 3 to the 01 Series of Amendments to the Regulation No. 79 (TRANS/WP.29/GRRF/2004/42). The said proposals were justified by the expert from Russian Federation at the 56<sup>th</sup> GRRF session in the document No. GRRF-56-22 and have been formulated in the document TRANS/WP.29/GRRF/2005/4. By that time the draft Supplement 3 to the 01 Series of Amendments to the Regulation No. 79 had been approved by WP.29 (TRANS/WP.29/1024).

While working on the amendments to the Regulations No. 79, the experts mostly paid attention to development of new provisions concerning vehicles equipped with auxiliary steering equipment. Such provisions were incorporated in the new Annex 4.

The concerned proposals of Russian Federation specified several other technical provisions.

In particular, it was said about necessity in more clear specification of several provisions, such as p. 5.1.1. (“The steering system shall ensure easy and safe handling of the vehicle...”), p. 5.1.2. (no “unusual steering correction by the driver” and no “unusual vibration in the steering system” when driving straight), p. 5.1.4. (the steering equipment shall be “capable of withstanding the stresses arising during normal operation of the vehicle”). The lack of the particular requirements leads to subjective interpretation of the provisions.

The experts of Russian Federation have made the assumption of a possibility of subjective evaluation of fulfillment of the said provisions. In this connection it was proposed to evaluate durability of the steering system basing on the test reports performed by using a technique of a vehicle manufacturer submitted to a Technical Service. Obviously, it is allowable also to submit to a Technical Service the appropriate calculations. It was proposed to assign an estimation of simplicity and reliability of steering, absence of unusual corrections, excessive deviations and unusual vibrations in the steering system to the test driver of a Technical Service. The expert from Russian Federation has proposed to include the appropriate specifying provisions into the Regulation No. 79.

After having had an exchange of views on the document TRANS/WP.29/GRRF/2005/4, GRRF at its 57<sup>th</sup> session (TRANS/WP.29/GRRF/57, para. 21) decided not to amend the recently modified text of the Regulation No. 79 (document TRANS/WP.29/1024).

**B. PROPOSAL**

The experts from Russian Federation express the consent with GRRF opinion on absence of necessity of modifying at the current stage the approved by WP.29 text of Supplement 3 to the 01 Series of Amendments to the Regulation No. 79 (document TRANS/WP.29/1024).

Nevertheless, the experts from Russian Federation would like to draw up the attention to necessity of the further development of the requirements, both to performance of steering control, and to the characteristics of vehicle handling.

The urgency of this problem proves to be true by active introduction of electronic auxiliary steering systems and systems of vehicle stability control.

By the present time the experts from Russian Federation have the data on negative influence of electronic systems of vehicle stability control in certain road conditions. In particular, on roads with low adhesion coefficient, the higher test results (the speed of test runs) have been observed for the vehicles with switched-off stability control systems than for the same vehicles with switched-on systems. It is connected to the fact that operation of such systems is directed on prevention of the tendency to over-steer. Thus the time of vehicle response on the driver's steering input is increased and the tendency to under-steer is demonstrated, which is followed by vehicle drift outside the limits of the line.

In Russian Federation the research directed on development of a technique of evaluation of vehicles equipped by electronic systems of auxiliary steering and stability control. However, the data available to the present time are not enough for preparation of proposals on test methods and technical provisions.

The experts from Russian Federation consider that at the present time there is no enough technical provisions for evaluation of safety of vehicles equipped with such systems. In particular, at the official approval of such vehicles the clear evidence should be submitted that the failure of such systems essentially would not worsen performance of steering control, and the characteristics of vehicle handling under all possible conditions of driving.

Subjective approach to evaluation of vehicle handling should be substituted by interpretation of results of instrumented measurements. For example, in regards to provisions of the Regulation No. 79, the test method applied in Russian Federation allows quantitative estimation of absence of unusual steering corrections by the driver when driving straight.

The techniques directed on increase of objectivity of results of closed-loop tests (such as "Line Change"), in particular recording of the driver's steering inputs in relation to the position of vehicle on the trajectory, have been developed and put into practice.

Taking into account the above-mentioned, the experts from Russian Federation propose to GRRF:

- to keep in the session agenda the item related to further development of provisions for performance of steering control, and the characteristics of vehicle handling and stability;
- to invite the interested parties to collecting the statistic data on the test results, and also considering the obtained experience, to offering for discussion at GRRF the test methods, including those carried out on the roads with low adhesion coefficient and those designated for evaluation of systems of auxiliary steering and stability control.

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