

GRBP-81-30,
Replacing GRBP/2025/6

**Proposal for a Supplement to the 04 series of amendments to
UN Regulation No. 41**

**Submitted by the experts from the International Motorcycle
Manufacturer Association***

The text reproduced below was prepared by the experts from the International Motorcycle manufacturer Association (IMMA) in order to strengthen provisions against test defeating and to facilitate the Conformity of Production testing. The modifications to the UN Regulation are marked in bold for new or strikethrough for deleted characters.

* In accordance with the programme of work of the Inland Transport Committee for 2025 as outlined in proposed programme budget for 2025 (A/79/6 (Sect. 20), table 20.6), the World Forum will develop, harmonize and update UN Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

I. Proposal

Paragraph 6.3.1., amend to read:

- “6.3.1. ~~The motor cycle motorcycle~~ manufacturer shall not intentionally alter, adjust, or introduce use any device, or procedure solely for the purpose of fulfilling the noise emission requirements of this Regulation, which will not be operational during typical on-road operation or software which would modify any noise related functional parameters of the vehicle for the purpose of passing the tests within this Regulation and which would result in increased noise emissions during typical on-road operation in the RD-ASEP control range of Annex 7 paragraph 2.5, compared to during testing according to the provisions of this regulation.

Insert a new paragraph 8.4., to read:

- “8.4. If due to substantially different barometric pressure, humidity, temperature or rider mass, the reference acceleration $a_{wot,ref}$ defined in paragraph 1.3.3.3.1.2. of Annex 3 cannot be reached with the same gear in conformity of production as in type approval tests, the gear selection requirement of paragraph 1.3.3.3.1.3.1. of Annex 3 shall prevail and the conformity of production tests can be performed using an acceleration different from $a_{wot,ref}$.”

II. Justification

1. Paragraph 6.3.1. is about ensuring that whatever is tested during the approval is representing how the vehicle will behave in real-world traffic. The proposed text adding ‘software’ as one of the potential applications of concern. The text allows devices, procedures and software to be present, if they are operational during typical on-road operation. This is important because the prescribed test conditions (in Annex 3 and Annex 7) are part of the wide range of “typical on-road operations”. This means that a detection of these test conditions may not be considered as being prohibited as such, as long as related adjustments of vehicle parameters with effect of lowering the sound emissions are not strictly limited to these “test conditions”.

2. The new paragraph 8.4. is addressing the Conformity of Production (CoP) tests. Paragraph 8.2 asks for the CoP sound levels (L_{urban} and L_{wot}) to be measured and processed according to the method described in Annex 3, with the same gear(s) and pre-acceleration distance(s) as used in the original type approval test. The method in Annex 3 however also specifies the target acceleration ($a_{wot,ref}$). Meteorological variables such as humidity and barometric pressure can result in variations of vehicle performance and are not considered by UN Regulation No. 41. Under certain circumstances, changing the meteorological conditions and rider mass within the acceptable tolerances allowed by the Regulation, it may not be achievable to respect ± 10 percent of the reference acceleration $a_{wot,ref}$, if the same gear is used in TA and CoP tests. IMMA is of the opinion that for CoP tests, the provisions for $a_{wot,ref}$ do not apply. CoP requirements for the engine performance are regulated in other regulations, granting that the actual vehicle acceleration during CoP testing is not unreasonably deviating from $a_{wot,ref}$.
