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Item 3 of the provisional agenda

UN Regulation No. 41 (Noise emissions of motorcycles): Development

Proposal for a Supplement for the 04 series of amendments to UN Regulation No. 41 (Noise emissions of motorcycles)

Submitted by the expert from the International Motorcycle Manufacturers Association (IMMA)*

The text reproduced below was prepared by the expert from IMMA with a view to introducing a mandatory test of additional sound emission provisions (ASEP). The modifications to the current text of the 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 2018–2019 (ECE/TRANS/274, para. 123 and ECE/TRANS/2018/21/Add.1, Cluster 3), 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., amend to read:

- "6.3.1. The motor cycle manufacturer shall not intentionally alter, adjust, or introduce 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.
- 6.3.2. The vehicle type to be approved shall meet the requirements of Annex 7 to this Regulation. If the motor cycle has user selectable software programs or modes which affect the sound emission of the vehicle, all these modes shall be in compliance with the requirements in Annex 7. Testing shall be based on the worst-case scenario.
- 6.3.3. In the application for type approval or for modification or extension of a type approval the manufacturer shall provide a statement in accordance with Annex 8 that the vehicle type to be approved complies with the requirements of paragraphs 6.3.1. ~~and 6.3.2.~~ of this Regulation.
- ~~6.3.4. The competent authority may carry out any test prescribed in this Regulation.~~
- 6.3.4. The test results obtained in accordance with the provisions of paragraph 6.3.2. above shall be entered in the test report and on a form conforming to the model in Annex 1 to this Regulation."**

Paragraph 8.3., amend to read:

- "8.3. For conformity of production, the manufacturer shall make a renewed declaration that the type still fulfils the requirements of paragraphs 6.3.1. ~~and 6.3.2.~~ of this Regulation. ~~In case of testing according to Annex 7, the~~ **The measured sound levels according to Annex 7** shall not exceed by more than 1.0 dB(A) the limits given in paragraph 2.6. of Annex 7."

Annex 1, point 18, amend to read:

- "18. Additional sound emission provisions:

See manufacturer's statement of compliance (attached)

18.1.	ASEP operating conditions	Reference Point (i)	Reference Point (ii)	additional operating condition 1	additional operating condition 2
18.1.1.	Selected gear number				
18.1.2.	Vehicle speeds	-	-	-	-
18.1.2.1.	Vehicle speed at the beginning of the period of acceleration (average of 3 runs) (km/h)				
18.1.2.2.	Pre-acceleration length (m)				
18.1.2.3.	Vehicle speed vAA' (average of 3 runs) (km/h)				
18.1.2.4.	Vehicle speed vPP' (average of 3 runs) (km/h)				
18.1.2.5.	Vehicle speed vBB' (average of 3 runs) (km/h)				
18.1.3.	Engine speeds	-	-	-	-
18.1.3.1.	Engine speed nAA' (average of 3 runs) (min ⁻¹)				

18.1.3.2.	Engine speed nPP' (average of 3 runs) (min ⁻¹)				
18.1.3.3.	Engine speed nBB' (average of 3 runs) (min ⁻¹)				
18.1.4.	Wide open throttle test result Lwot (dB(A))				
18.1.5.	ASEP limit				

18.2. See manufacturer's statement of compliance with the requirements of paragraph 6.3.1. (attached).

Annex 7, footnote 1 to paragraph 2.6., amend to read:

“2.6. ASEP limits¹

...

¹ **If the tests according to Annex 3 of this UN Regulation and the ASEP tests are performed with the same vehicle in immediate sequence, the values for $L_{wot(i)}$ and $n_{wot(i)}$ from the Annex 3 test may be used, if agreed by the type approval authority. Otherwise,** when compliance with these limits is checked, values for $L_{wot(i)}$ and $n_{wot(i)}$ shall be newly determined by measurements as defined in paragraph 1. of Annex 3, however using the same gear (i) and the same pre-acceleration distance as during type approval.”

Annex 7, paragraph 3.1., amend to read:

“3.1. General

The Type Approval Authority as well as the technical service ~~may~~ **shall** request tests to check the compliance of the motorcycle with the requirements of paragraph 2 above. To avoid undue work load, testing is restricted to the reference points defined in paragraph 3.2. below and ~~up to~~ two additional operating conditions other than the reference points but inside the ASEP control range.”

Annex 8, amend to read:

“Annex 8

Statement of compliance with point **6.3.1. of the Additional Sound Emission Provisions (ASEP)**

(Maximum format: A4 (210 x 297 mm))

..... (Name of manufacturer) attests that vehicles of this type (type

with regard to its noise emission pursuant to Regulation No. 41) comply with the requirements of paragraph 6.3.1. of UN Regulation No. 41

..... (Name of manufacturer) makes this statement in good faith, after having performed an appropriate evaluation of the sound emission performance of the vehicles.

Date:.....

Name of authorized representative:.....

Signature of authorized representative:.....”

II. Justification

1. In informal document GRB-66-12, the expert from Germany suggested making the ASEP testing mandatory. IMMA supports this suggestion and has prepared the present proposal.
 2. To strengthen the effectiveness of the ASEP provisions, the tests described in Annex 7 should become mandatory for type approval, including not only the two reference points (with clearly prescribed vehicle operating conditions) but also two additional measurement points with non-predictable operating conditions.
 3. With the amendment of footnote 1, related to paragraph 2.6. of Annex 7, an unnecessary repetition of a test according to Annex 3 will be avoided, provided that the ASEP tests are performed immediately after the initial test runs according to Annex 3 and with the same vehicle. It can be assumed that the (meteorological) conditions will be equal, if these tests are performed in an immediate sequence.
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