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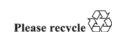
Proposal for amendments to Mutual Resolution No. 2 (M.R.2)

Submitted by the expert from the European Commission*

The text reproduced below was prepared by the expert from the European Commission to update Mutual Resolution No. 2 (M.R.2) with respect to 'peripheral devices'. It is based on informal document GRPE-77-12 discussed during the June 2018 session of GRPE.

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^{*} 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 and Add.1, Cluster 3), the World Forum will develop, harmonize and update Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

I. Proposal

Section A, paragraph 37., amend to read:

37. Peripheral devices are part of the powertrain. They can be energy storing, converting, supplying or consuming devices or other parts, systems and control units, which are essential to the operation of the powertrain. They are not understood as propulsion energy storage systems or propulsion energy converters of the powertrain. These devices are not providing different forms of energy directly or indirectly for the purpose of propulsion. Examples of peripheral devices are electrical capacitor, 12 V battery, starter motor, intake system, fuel delivery system, electric power conditioning device, sensor, actuator, capacitor, electronic control unit, turbo charger, exhaust after-treatment system.

Section B, paragraph 1.4., amend to read:

"1.4. "Peripheral devices" means **any** energy consuming, converting, storing or supplying devices, where the energy is not primarily **directly or indirectly** used for the purpose of vehicle propulsion, or other parts, systems and control units, **but** which are essential to the operation of the powertrain and are therefore considered to be part of the powertrain."

II. Justification

The amendment to the definition of 'peripheral devices' in paragraph 1.4. of Section B of M.R.2. reflects the principles laid down in the descriptive text in paragraphs 37 and 38 of Section A - which could be misinterpreted by the definition text in paragraph 1.4.

In particular, the use of the word "primarily" (in paragraph 1.4.) meant that it was not clear whether a system which contributes to propulsion but is not its original function (e.g belt driven stater/generator) might be consider incorrectly as a peripheral device rather than a propulsion energy convertor and therefore as a hybrid system.

The amendments to paragraph 37 of Section A reflect the principle behind the amendment to the paragraph 1.4. definition and also remove the repeat reference to 'capacitor'.

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