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Working Party on Pollution and Energy (GRPE)
(Forty-eighth session, 1-4 June 2004,
agenda item 6.)

PROPOSAL FOR DRAFT AMENDMENTS TO REGULATION No. 85

(Measurement of net power)

Transmitted by the expert from France
on behalf of the informal group on hybrid vehicles

Note: The document reproduced below has been prepared by the experts of the GRPE informal group on hybrid vehicles in order to include into the Regulation new provisions for the type approval of hybrid vehicles. The text is based on a document distributed without a symbol (informal document No. GRPE-47-16) during the forty-seventh session of GRPE (TRANS/WP.29/GRPE/47, para. 28). The modifications to the current requirements are marked in **bold** characters.

Note: This document is distributed to the Experts on Pollution and Energy only.

Insert new paragraphs 2.5. to 2.5.3., to read:

"2.5. "Hybrid vehicles (HV)":

2.5.1. "Hybrid vehicle (HV)" means a vehicle with at least two different energy converters and two different energy storage systems (on vehicle) for the purpose of vehicle propulsion.

2.5.2. "Hybrid electric vehicle (HEV)" means a vehicle that, for the purpose of mechanical propulsion, draws energy from both of the following on-vehicle sources of stored energy/power:

- a consumable fuel
- an electrical energy/power storage device (e.g.: battery, capacitor, flywheel/generator ...)

2.5.3. For a hybrid electric vehicle the "power train" comprises a combination of two different drive train types:

- an internal combustion engine, and
- one (or several) electric drive train(s)."

Paragraph 3.2., amend to read:

"3.2. It shall be accompanied by the description, in triplicate, of the drive train comprising all the relevant particulars referred to:

- in annex 1 for vehicles powered by an internal combustion engine only, or
- annex 2 for pure electric vehicles, or
- in annexes 1 and 2 for hybrid electric vehicles."

Insert a new paragraph 3.3., to read:

"3.3. For hybrid electric vehicles (HEV), the tests shall be carried out separately on the internal combustion engine (according to annex 5) and on the electric drive train(s) (according to annex 6)."

Paragraph 3.3. (former), renumber as paragraph 3.4. and amend to read:

"3.4. A drive train (or set of drive trains), representative of the (set of) drive train type(s) to be approved, shall, with the equipment prescribed in annexes 5 and 6 to this Regulation, be submitted to the technical service conducting the approval tests."

Annex 3, (COMMUNICATION)

Items 1. to 5., amend to read:

- "1. Trade name or mark of drive train **or set of drive trains**:.....
2. **Internal combustion engine:**
- 2.1. **Make:**
- 2.2. **Type:**
- 2.3. **Manufacturer's name and address:**
3. **Electric drive train(s):**
- 3.1. **Make:**
- 3.2. **Type:**
- 3.3. **Manufacturer's name and address:**
5. Drive train **or set of drive trains** submitted for approval on:....."

Item 12., amend to read:

- "12. Electric drive train(s):....."
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