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(Forty-ninth session, 11-14 January 2005,
agenda item 5.3.)

PROPOSAL FOR DRAFT AMENDMENTS TO REGULATION No. 110

(Specific components for CNG)

Transmitted by the expert from Italy

Note: The document reproduced below has been prepared by the expert from Italy in order to include into the Regulation new requirements for valves to be installed on cylinder assembly and for periodic qualification of tanks to be installed on vehicles. The modifications to the current requirements are marked in **bold** characters.

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

A. PROPOSAL

Insert a new paragraph 2.27., to read:

"2.27. **"Cylinder assembly" means a system in which two or more cylinders are installed with the same support straps and are connected to each other by integral interconnecting fuel lines.**"

Paragraph. 17.5.1.1., amend to read:

"17.5.1.1. An automatic cylinder valve shall be installed directly on each cylinder. **In case of cylinder assembly installation, a single automatic valve can be installed.**"

Annex 3, paragraph 4.1.4., amend to read:

"4.1.4. Periodic requalification

Recommendations for periodic conditions specified herein. Each cylinder shall be visually inspected at least every **48 months after the date of its entry into service on the vehicle (vehicle registration)**, and at the time of any re-installation, for external damage and deterioration, including under the support straps. The visual inspection shall be performed to remain in service."

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B. JUSTIFICATION

Re: paras. 2.27. and 17.5.1.1:

In case of multiple cylinder installation, made of many cylinders, the failure of an automatic valve might be undetected for long periods of time, leading to dangerous situations. Each additional valve installed is a potential leak source. The electric coil of the valve is constantly loaded with electric power while in operation. This might lead, in the case of multiple automatic valves, to excessive power adsorption, and excessive increase of temperature at local level. For the reasons mentioned above, one automatic valve on each cylinder means in principle less safety, compared to the case of one automatic valve for the whole set of cylinders, or one automatic valve for each fraction group of the whole cylinder set.

Re: Annex 3, para. 4.1.4.:

In the majority of Contracting Parties a vehicle (car) must undergo its first roadworthiness test four years after the first registration; further inspections are carried out every two years. Doing the cylinder requalification test once every 4 years, would allow simultaneous inspection of car and cylinder, thus reducing the inconvenience for the vehicle owner. This modification would not affect the safety margin compared to the case of 3-year requalification intervals. In Italy, the cylinder requalification interval is, at the present time, five years.
