

Distr.  
GENERAL

TRANS/WP.29/GRPE/2002/6  
22 November 2001

ENGLISH ONLY

ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

World Forum for Harmonization of Vehicle Regulations (WP.29)

Working Party on Pollution and Energy (GRPE)  
(Forty-third session, 15-18 January 2002,  
agenda item 4.5.)

PROPOSAL FOR DRAFT AMENDMENTS (SUPPLEMENT 1) TO REGULATION No. 110  
(Specific components for CNG)

Transmitted by the Expert from the  
European Natural Gas Vehicle Association (ENGVA)

Note: The document reproduced below was transmitted by the expert from ENGVA  
in order to introduce in the Regulation provisions concerning dual-fuel  
vehicles.

---

Note: This text is distributed to the experts of the Working Party on  
Pollution and Energy only.

GE.01-

**A. PROPOSAL**

Paragraph 17.10.2., amend to read:

"17.10.2. Vehicles with more than one fuel system shall have a fuel selection system to ensure that no more than one fuel at the same time is supplied to the engine during more than 5 seconds.  
"Dual-fuel" vehicles, using the introduction of diesel as a 'pilot' fuel to ignite the air/gas mixture, are allowed."

\* \* \*

**B. JUSTIFICATION**

It is essential that the accepted ISO 15500 standard and Regulation No. 110 are consistent. ISO 15500 is applicable to vehicles using natural gas in accordance with ISO 15403 (mono-fuel, bi-fuel or dual-fuel applications).

The present text of Regulation No. 110 excludes vehicles using dual-fuel systems. Dual-fuel technology uses diesel and natural gas mixed in varying amounts and is an established and proven technology, supported with continuous development over the past two decades.

Typically, the replacement of diesel fuel by natural gas is in the order of 60 to 80 per cent or more, reducing the levels of pollution associated with diesel fuelled vehicles. The engine's original compression-ignition cycle and compression ratio are retained (as opposed to being converted to spark-ignition cycle engine) making the conversion relatively easy and economical, but using less expensive, cleaner burning natural gas. Because dual-fuel engines operate interchangeably on natural gas and diesel, they provide fuel flexibility in the event a natural gas fuelling supply is unavailable.

=====