



**Economic and Social  
Council**

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**ECONOMIC COMMISSION FOR EUROPE**

**INLAND TRANSPORT COMMITTEE**

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

Working Party on General Safety Provisions (GRSG)

(Eighty-seventh session, 12-15 October 2004,  
agenda item 10.1.)

**AMENDMENT PROPOSAL TO DRAFT GLOBAL TECHNICAL REGULATION ON  
HAND CONTROLS, TELL-TALES AND INDICATORS  
PRESENT ON CATEGORY 1 AND 2 VEHICLES  
(TRANS/WP.29/2000/8/Rev.3)**

Transmitted by the expert from the India

Note: The text reproduced below is based on the text of informal document No. GRSG-86-27  
(TRANS/WP.29/GRSG/65, para. 30.).

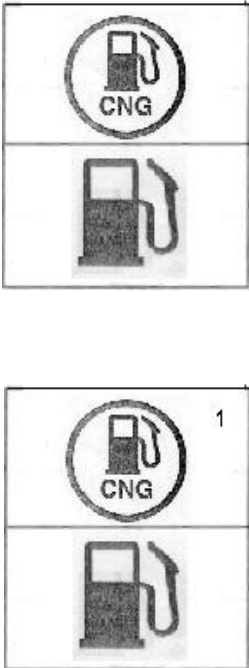
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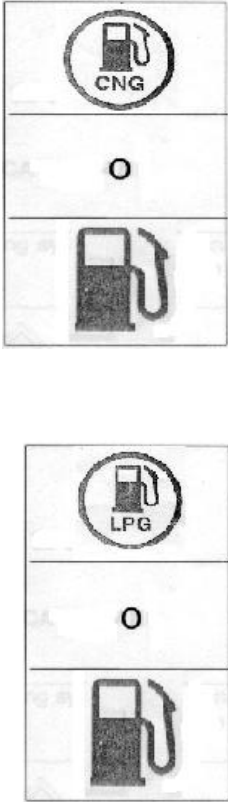

Note: This document is distributed to the Experts on General Safety Provisions only.


**A. PROPOSAL**

Table 1, the following symbols should be included:

"

No	Column 1 ITEM	Column 2 SYMBOL	Column 3 FUNCTION	Column 4 ILLUMINATION	Column 5 COLOUR
41.	<p>Fuel selector switch In case of Bi-fuel <sup>12/</sup> vehicles:</p> <p>a) For vehicles fitted with electronic fuel injection (Two position switch)</p> <p>a1.) Vehicles running on CNG</p> <p>a2.) Vehicles running on LPG</p>		Control	Yes	

	<p>b) For all other vehicles</p> <p>(Three position switch)</p> <p>b1.) Vehicles running on CNG</p> <p>b2.) Vehicles running on LPG</p>				
42	CNG Fuel level		<p>Tell-tale</p> <p>Indicator */(Example of indicator is given below)</p>	<p>Yes</p> <p>Yes</p>	<p>Yellow</p>

	LPG Fuel level		Tell-tale	Yes	Yellow
			Indicator */(Example of indicator is given below)	Yes	

"

Add the following footnote 12/:

"12/ Bi-fuel system is defined as a system equipped to operate either on CNG / LPG or some other fuel e.g. petrol."

Table 2,

Symbols for controls, tell-tales and indicators required in electric or hybrid electric road vehicles should be included in other symbols.

\* \* \*

## B. JUSTIFICATION

India is one of the largest operators of automotive vehicles running on Bi-fuel i.e. on CNG / LPG or petrol.

Re. Table 1

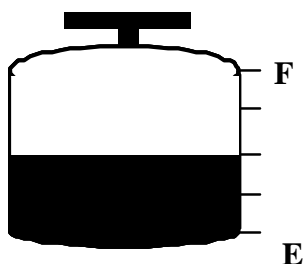
In Bi-fuel vehicles, a fuel selector switch (control) is required for the selection of fuel to be used from the available fuels (e.g. CNG / LPG and petrol). Identification of this switch (control) is necessary hence a symbol is suggested.

In case of Bi-fuel vehicles fitted with electronic fuel injection systems, a two-position switch (control) is required for selection of fuel.




In the case of other Bi-fuel vehicles (e.g. carburettor fitted), a three-position switch (control) is required, particularly when switching over from petrol to CNG mode to empty the petrol from the carburettor bowl.

Symbols No. 7 of Table 1 used for fuel level tell-tale and indicator are normally used for fuel petrol/diesel. A separate symbol as given above is available in ISO:2575:2000 for CNG / LPG fuel and suggested to be used in the case of CNG / LPG fuel level tell-tale and indicators.

\*/ Example of indicator for fuel level.



Reference for symbols:

1.		ISO 2575:2000 ( E) Road Vehicles- Symbols for controls, indicators and tell-tales Annex G- Fuel System G-01
2.		ISO 2575:2000 ( E) /Amd. 1:2001(E) Annex Z-Special Signs Z-4
3.		ISO 2575:2000 ( E) /Amd. 1:2001(E) Annex Z-Special Signs Z-5

Re. Table 2

There is a need for the symbols to identify the controls, tell-tales and indicators, such as state of propulsion battery, electric motor, etc. to be used in electric or hybrid electric road vehicles.