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.).

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

Table 1, the following symbols should be included:

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

![Symbol for CNG](image1.png)

![Symbol for LPG](image2.png)
<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>b)</strong> For all other vehicles</td>
<td>(Three position switch)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>b1.) Vehicles running on CNG</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>b2.) Vehicles running on LPG</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>CNG Fuel level</td>
<td>Tell-tale</td>
<td>Yes</td>
<td>Yellow</td>
</tr>
<tr>
<td></td>
<td>CNG Fuel level</td>
<td>Indicator */(Example of indicator is given below)</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>
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.