Proposal for corrigendum to global technical regulation (gtr) No. 2

(ECE/TRANS/180/Add.2/Amend.1)

I.   Proposal

Paragraph 8.1.1.4.2. , replace the Equation 8-2 as below:

"8.1.1.4.2. Hydrocarbons

… by means of the following formula:

$$HC_m = \frac{HC_c \times V \times dHC}{dist \times 10^{\cancel{6}\,-3}}$$

Equation 8-2

…"

Paragraph 8.1.1.4.3., replace the Equation 8-4 as below:

"8.1.1.4.3.   Carbon monoxide

…by means of the following formula:

$$CO_m = \frac{CO_c \times V \times dCO}{dist \times 10^{\cancel{6}\,-3}}$$

Equation 8-4

…"

Paragraph 8.1.1.4.4., replace the Equation 8-6 as below:

"8.1.1.4.4.   Nitrogen oxides

…by means of the following formula:

$$NO_{x\,m} = \frac{NO_{x_c} \times K_h \times V \times dNO_2}{dist \times 10^{\cancel{6}\,-3}}$$

Equation 8-6

…"

Paragraph 8.1.1.4.5., replace the Equation 8-10 as below:

"8.1.1.4.5.   Carbon dioxide

… by means of the following formula:

$$CO_{2m} = \frac{CO_{2_c} \times V \times dCO_2}{dist \times \cancel{10^2}} \times \mathbf{10}$$

Equation 8-10

…"

Annex 13, paragraph 1 Figure A13-1, correct the line for "acc.gear 1" in the upper figure for "gear use during acceleration phases" as shown below.
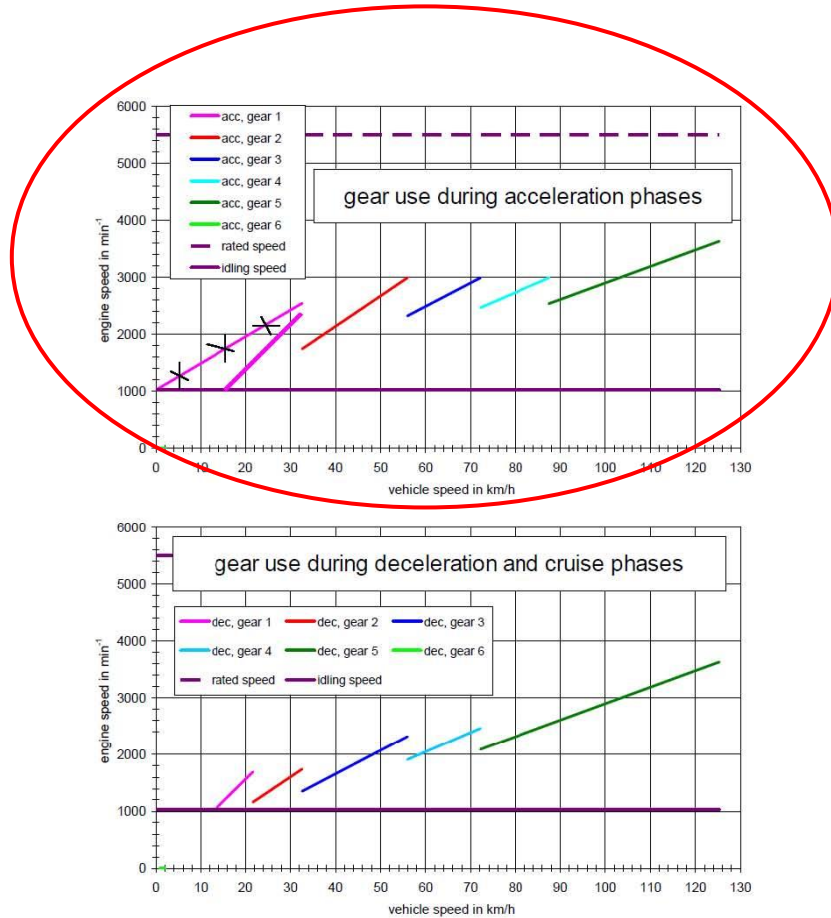

Figure A13-1: Example of a gearshift sketch

II.   Justification

1.   Paragraph 8

The equations 8-2, 8-4, 8-6, and 8-10 need to be corrected in accordance with the unit of each factor in the equation. The calculated pollutants are shown in kg/km, while the V is in m^3 and dHC in kg/m^3, which means the value needs to be multiplied by 10^{-3} (by 10 for CO_2) and the denominator needs to be corrected accordingly.

2.   Annex 13, paragraph 1 Figure A13-1

In the upper figure for "gear use during acceleration phases", the acceleration gear 1 starts from zero, which is not correct.