AGREEMENT CONCERNING THE ADOPTION OF UNIFORM TECHNICAL PRESCRIPTIONS FOR WHEELED VEHICLES, EQUIPMENT AND PARTS WHICH CAN BE FITTED AND/OR BE USED ON WHEELED VEHICLES AND THE CONDITIONS FOR RECIPROCAL RECOGNITION OF APPROVALS GRANTED ON THE BASIS OF THESE PRESCRIPTIONS. GENEVA, 20 MARCH 1958

MODIFICATIONS TO REGULATION NO. 49. UNIFORM PROVISIONS CONCERNING THE APPROVAL OF COMPRESSION IGNITION (C.I.) AND VEHICLES EQUIPPED WITH C.I. ENGINES WITH REGARD TO THE EMISSIONS OF POLLUTANTS BY THE ENGINE

14 APRIL 1999

The Secretary-General of the United Nations, acting in his capacity as depositary, communicates the following:

At its tenth session, the Administrative Committee of the above Agreement adopted certain drafting modifications to the authentic English and French texts of Regulation No. 49.

Attached is a copy of the corresponding procès-verbal, together with the text of the modifications concerned.

12 April 1999
AGREEMENT CONCERNING THE ADOPTION OF
UNIFORM TECHNICAL PRESCRIPTIONS FOR
WHEELED VEHICLES, EQUIPMENT AND PARTS
WHICH CAN BE FITTED AND/OR BE USED ON
WHEELED VEHICLES AND THE CONDITIONS FOR
RECIPROCAL RECOGNITION OF APPROVALS
GRANTED ON THE BASIS OF THESE
PRESCRIPTIONS
DONE AT GENEVA ON 20 MARCH 1958

PROCES-VERBAL CONCERNING CERTAIN
MODIFICATIONS TO REGULATION NO. 49
ANNEE TO THE AGREEMENT

THE SECRETARY-GENERAL OF THE UNITED
NATIONS, acting in his capacity as
depository of the Agreement concerning
the Adoption of Uniform Technical
Prescriptions for Wheeled Vehicles,
Equipment and Parts which can be Fitted
and/or used on Wheeled Vehicles and the
Conditions for Reciprocal Recognition of
Approvals Granted on the Basis of these
Prescriptions, done at Geneva on
20 March 1958,

WHEREAS the Administrative Committee
of the above Agreement at its tenth
session, adopted certain drafting
modifications to Regulation No. 49
("Uniform provisions concerning the
approval of compression ignition (C.I.)
and natural gas (N.G.) engines as well
as positive-ignition (P.I.) engines
fuelled with liquefied petroleum gas
(LPG) and vehicles equipped with C.I.
and N.G. engines and P.I. engines
fuelled with LPG, with regard to the
emissions of pollutants by the engine")
(TRANS/WP.29/652),

HAS CAUSED the said modifications,
listed in the annex to this Procès-
verbal, to be effected in the English
and French texts of Regulation No. 49.

IN WITNESS WHEREOF, I, Hans Corell,
Under-Secretary-General, the Legal
Counsel, have signed this Procès-verbal.

Done at the Headquarters of the United
Nations, New York, on 12 May 1999

[Signature]

Hans Corell
Annex 4, paragraph 2.2.2., amend to read:

"2.2.2. Spark ignition engines

\[ F = \left( \frac{P}{P_0} \right)^{1.2} \times \left( \frac{T}{298} \right)^{0.6} \]

Annex 4, Appendix 1.

Paragraph 2.2., amend to read:

"... For determination of exhaust flow either of the following methods may be used. The volumetric flow rates \( V'_{\text{ex}} \) and \( V''_{\text{ex}} \) are defined at \( T = 273 \text{ K} \) and \( p = 101.315 \text{ kPa} \)."

Annex 4, Appendix 3.

Paragraph 1.1.2.1.2., amend to read:

"1.1.2.1.2. In the case of N.G. engine:

ppm (wet basis) = ppm (dry basis) \times (1 - 3.15 \frac{G_{\text{fuel}}}{G_{\text{air}}})

where:

\( G_{\text{fuel}} \) is the fuel flow (kg/s) (kg/h)
\( G_{\text{air}} \) is the air flow (kg/s) (kg/h)."

Paragraph 1.1.3.2., amend to read:

"1.1.3.2. N.G. and LPG engines NOx correction factor:

The values of the oxides of nitrogen shall be multiplied by the following humidity correction factor (KNOx):

\[ \text{KNOx} = 0.6272 + 0.4403 H - 0.0008625 H^2 \]

where:

\( H \) = humidity of the inlet air in g of H\(_2\)O per kg dry air
(see paragraph 1.1.3.1.)"