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OICA PROPOSAL FOR WORLDWIDE HARMONISATION OF FUEL QUALITY

Background:

Following the first discussion in the GRPE fuels group on 16th January 2008, a proposal for terms of reference was distributed by the secretariat that referred to informal document GRPE/55-14 (FQ-01-01) by OICA on a proposal for worldwide harmonisation of fuel quality. Importantly, the terms of reference state that:

1. The informal group shall develop new requirements and/or recommendations on market fuel quality to ensure that vehicles, which were type approved according to the UNECE Regulations and using specific reference fuels for the tests, use in their daily service fuels with specific characteristics relating to the vehicle emission levels and technology type.

2. These requirements and/or recommendations should ensure that vehicles in use fulfil during its lifetime the same performance level as during their type approval procedure with regard to the emission of gaseous pollutants and particles.

OICA's position is that the recommendation to WP29 for the harmonisation of fuel quality should be based on the World Wide Fuel Charter (WWFC) which sets 4 categories of petrol and 4 categories of diesel fuel characteristics that are appropriate for various emission control technology mixes. However, international fuel standards (e.g. CEN) have been developed from the emission technology-fuel specifications driven by EU legislation. These CEN standards developed on a technical basis between the various stakeholders provide for European market fuels that are fit for purpose.

For information, the historical development of emission standards and fuel quality (based on CEN standards) is shown in Annex A. In addition, Annex B details the fuel parameters that have been changed in alignment with the progression of the Euro emission standards that require the use of more advanced exhaust aftertreatment control technology that are affected by market fuel quality.

The parallel application of appropriate market fuel standards must be an important part of an integrated approach by Contracting Parties to enable improved and long-lasting emission reductions during the lifetime of all motor vehicles.

Recommendation:

OICA therefore recommends that:

– the clearly demonstrated link between emission standards and market fuel quality that the EU, Japan and the USA have followed is respected in those world areas that are now adopting more stringent emission standards for motor vehicles.

ANNEX A - Evolution of the European emission standards:

Emission standards have been linked with a revision of the respective European market fuel standards (EN228 and EN590):

	Petrol			Diesel				
	CO (g/km)	**HC + NOx (g/km)**	**Fuel Standard**	**CO (g/km)**	**HC + NOx (g/km)**	**PM (g/km)**	**Fuel standard**	**Date of application**
R83.03	2.2	0.5	EN228:1993	1.0	0.7	0.08	EN590:1993	1996
R83.05 (row A)	2.3	0.2	0.15	EN228:1999	0.64	0.06	0.50	0.05	EN590:1999	2000
R83.05 (row B)	1.0	0.1	0.08	EN228:2004	0.5	0.05	0.25	0.025	EN590:2004	2005

ANNEX B - Evolution of stringency of market fuel quality standards:

Gasoline parameters	**R83.03**	**R83.05 (row A)**	**R83.05 (row B)**
RON	95	95	95
MON	85	85	85
Lead	0,013	0,005	0,005
Sulphur	500	150	50 & 10
Benzene	5	1	1
Aromatics	-	42	35
Olefins	-	21 & 18	18
Oxygen	-	2,7	2,7
RVP	35 - 100	45 - 100	45 - 100
VLI	-	1050 - 1250	1050 - 1250
Density	725 - 780	720 - 775	720 - 775
FBP	215	210	210
E70	15 - 47	20 - 50	20 - 50
E100	40 - 70	46 - 71	46 - 71
E180	85	-	-
Residue	2	2	2

Diesel parameters	**R83.03**	**R83.05 (row A)**	**R83.05 (row B)**
Cetane Number	49	51	51
Cetane Index	46	46	46
Sulphur	500	350	50 & 10
Density	820 - 860	820 - 845	820 - 845
Viscosity	2,0 - 4,5	2,0 - 4,5	2,0 – 4,5

T50	Report	T65 = 250 min	T65 = 250 min
T85	350 max	350 max	350 max
T95	360 max	360 max	360 max
PAH	11	11	11
Flash Point	55	55	55
CCR	0,3	0,3	0,3
CFPP	-44 to +5	-44 to +5	-44 to +5
Cloud Point	-34 to -10	-34 to -10	-34 to -10
Water and sediment	-	0,0024	0,0024
Water	0,02	0,02	0,02
Ash	0,01	0,01	0,01
Lubricity	-	460	460