



**Ministry of Industry and Trade
of the Russian Federation**

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(148th WP.29, 23-26 June 2009,
agenda item 6.)

**Technical Regulation
«Requirements to
Automobile and Aviation Gasoline,
Diesel and Ship Fuel, Jet Engine Fuel
and Furnace Boiler Oil»**

**(Approved by the Russian Federation Government Decree No.118,
27 February 2008)**

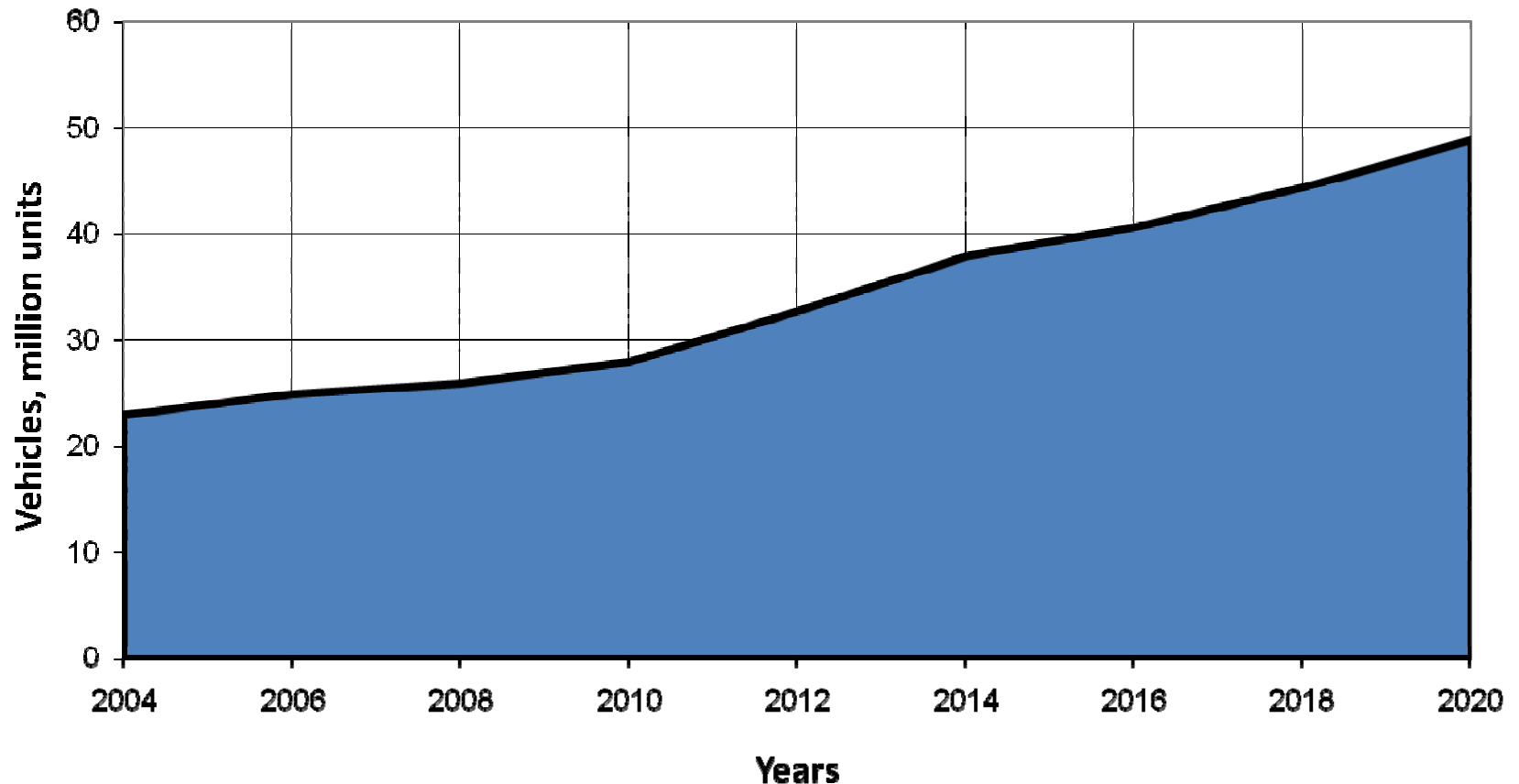
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148th WP.29
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**In the conditions of a permanently growing automobile fleet ,
ecological safety requirements have the special significance in the legislation.**

**In Russia, the growth of fleet is forecasted
from 24 million vehicles in 2004 to 49 million vehicles in 2020**

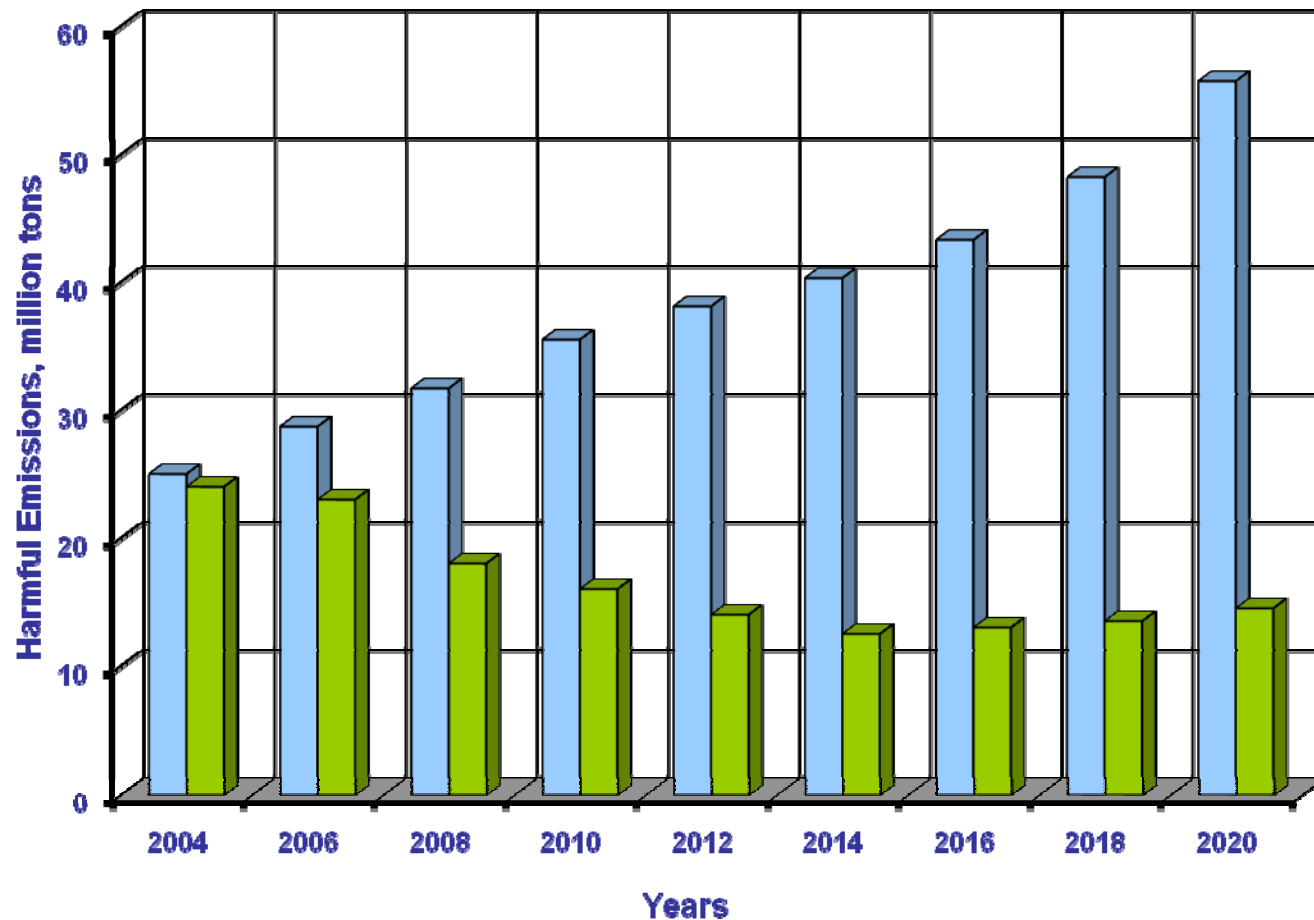
Vehicle Fleet Growth in Russia (Forecast)



Technical Regulation «Requirements to Harmful (Pollutant) Substance Emissions of the Automobiles Released for Circulation in the Territory of the Russian Federation» - the First in Russia

- Approved by the Russian Federation Government Decree of 12 October 2005 No.609
- Sets technical norms of the harmful substance emissions
- Sets specifications for the reference fuel, which is applicable for reaching technical norms of the harmful substance emissions and does not establish the requirements to automobile fuels released on the market
- Sets automobile ecological classification
- Sets terms of enactment of technical norms for all the ecological classes

The Forecast of Change of Total Emissions of Automotive Vehicles in Russia



Without the Technical Regulation When the Technical Regulation is Applied

Problems, Arising Due To Usage of Off-Standard Fuel

Off-Standard Fuel



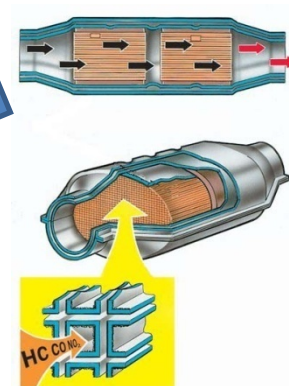
Increase of content
of harmful substances
In the exhaust gases



Engine Failures



Fast damage of the
catalytic converters



The Reasons for Adoption of a Separate Technical Regulation Setting Requirements for Fuels

- ✓ **The necessity of setting of the requirements for fuels for ships, railway locomotives, agricultural, off-road and military machinery, which consume up to 75% of manufactured Diesel fuel**
- ✓ **The necessity of setting of the requirements for low temperature properties of the Diesel fuel**
- ✓ **The necessity of setting of the requirements for anti-detonation properties of the Gasoline (RON)**
- ✓ **The necessity of setting the order of application of additives to fuels**

Technical Regulation «Requirements to Automobile and Aviation Gasoline, Diesel and Ship Fuel, Jet Engine Fuel and Furnace Boiler Oil»

- Approved by the Russian Federation Government Decree of 27 February 2008 No.118
- Sets technical specifications for different fuels including automotive Gasoline and Diesel fuel
- Harmonizes Russian requirements for the automotive fuels with the international standards EN 228 (Internal Combustion Engine Fuel. Unleaded Gasoline. Requirements and Test Methods) and EN 590 (Internal Combustion Engine Fuel. Diesel fuel. Requirements and Test Methods)
- Sets fuel classification
- Sets terms of enactment of technical specifications for all the fuel classes

Requirements to Gasoline

Gasoline Specifications	Unit	Value with Respect to Classes			
		Class 2	Class 3	Class 4	Class 5
Sulphur mass fraction, not more	mg/kg	500	150	50	10
Benzene volume fraction, not more	percent	5	1	1	1
Concentration of iron, manganese and lead, not more	mg/dm ³	Absence	Absence	Absence	Absence
Oxygen mass fraction, not more	percent	—	2,7	2,7	2,7
Volume fraction of hydrocarbons, not more	percent				
Aromatic		—	42	35	35
Olephyne		—	18	18	18
Octane number:	—				
By a research method, not less		92	95	95	95
By a motor method, not less		83	85	85	85
Pressure of steams, not more:	kPa				
In summer time		—	45 - 80	45 - 80	45 - 80
In winter time		—	50 - 100	50 - 100	50 - 100
Volume fraction of oxygenates, no more	percent				
Methanol		—	Absence	Absence	Absence
Ethanol		—	5	5	5
Isopropanol		—	10	10	10
Tretbutanol		—	7	7	7
Isobutanol		—	10	10	10
The aethers containing 5 or more atoms of carbon in a molecule		—	15	15	15
Other oxygenates (With temperature of the end of boiling not above 210 °C)		—	10	10	10

Requirements to Diesel Fuel

Diesel Fuel Specifications	Unit	Value with Respect to Classes			
		Class 2	Class 3	Class 4	Class 5
Sulphur mass fraction, not more	mg/kg	500	350	50	10
Flash temperature in a closed crucible, not lower:	°C				
Diesel fuel, except for Diesel fuel for the Arctic climate		40	40	40	40
Diesel fuel for the Arctic climate		30	30	30	30
The fractional structure - 95 percent volume is overtaken at the temperature not above	°C	360	360	360	360
Mass fraction of polycyclic aromatic hydrocarbons, not more	percent	—	11	11	11
Cetane number, not less	—	45	51	51	51
Cetane number for Diesel fuel for a cold and Arctic climate, not less	—	—	47	47	47
Limiting temperature of filterability, not above:	°C				
Diesel fuel for a cold climate		minus 20	minus 20	minus 20	minus 20
Diesel fuel for the Arctic climate		minus 38	minus 38	minus 38	minus 38
Greasing ability, not more	µm	460	460	460	460

Terms for Market Release for the Automobile Fuels

Fuel	Class 2	Class 3	Class 4	Class 5
Gasoline	Till 31 Dec. 2010	Till 31 Dec. 2011	Till 31 Dec. 2014	Term is not limited
Diesel Fuel	Till 31 Dec. 2011	Till 31 Dec. 2011	Till 31 Dec. 2014	Term is not limited