

Article 3: Gasoline and alternative clean fuel engine exhaust emissions standards for carbon monoxide (CO), hydrocarbons (HC), nitrogen oxides (NO<sub>x</sub>), particulate matter (PM), and particulate number (PN) derived from driving cycle testing and idle testing are stipulated in the following table:

Type of Mobile Source	Date of implementation	Application	Emission Standards							Remarks
			Driving Cycle Testing					Idle Testing		
			Classification	CO (g/km)	HC (g/km)	NOx (g/km)	HC+NOx (g/km)	CO (%)	HC (ppm)	
Motor vehicles with gasoline and alternative clean fuel engines	Date of promulgation	New vehicle model certification New vehicle testing	—	—	—	—	—	3.5	900	New vehicle model certification and new vehicle testing: Vehicle models in mass production before the date of promulgation shall comply with previous standards (CO: 4.5%, HC: 1200 ppm). Domestic vehicles entering mass production and imported vehicles on board after promulgation date shall comply with these Standards.
		In-use Vehicle Testing	—	—	—	—	—	4.5	1200	
	July 1, 1987	New vehicle model certification New vehicle testing (prototype)	Reference Mass (kilograms) ≤ 1,020 kg	14.31	—	—	4.69	—	—	(1) When performing the driving cycle test on trucks, non-sedans, and non-station wagon passenger vehicles, the HC+NOx standards shall be eased by 25%. (2) Domestic vehicle models in mass production before June 30, 1987 but leaving the plant after July 1, 1988 shall comply with these Standards. (3) Domestic vehicle models entering mass production and imported vehicles on board after July 1, 1987 shall comply with these standards. (4) Driving cycle testing methods shall comply with the Chinese National Standard (hereinafter referred to as CNS 7895).
			1021   1250	16.54	—	—	5.06	3.5	600	
			1251   1470	18.76	—	—	5.43	—	—	
			1471   1700	20.73	—	—	5.80	—	—	
			1701   1930	22.95	—	—	6.17	—	—	
			1931   2150	24.93	—	—	6.54	—	—	
			≥ 2151	27.15	—	—	6.91	—	—	
			New vehicle model certification New vehicle testing (mass production)	Reference Vehicle Mass (kilograms) ≤ 1,020 kg	17.28	—	—	5.87	—	
		1021   1250		19.74	—	—	6.32	—	—	
		1251   1470		22.46	—	—	6.79	3.5	900	
		1471   1700		24.93	—	—	7.26	—	—	
		1701   1930		27.64	—	—	7.72	—	—	
		1931   2150		29.86	—	—	8.17	—	—	
		≥2151		32.58	—	—	8.64	—	—	
		In-use Vehicle Testing	—	—	—	—	—	4.5	1200	
	July 1, 1990	New vehicle model certification New vehicle testing	Sedans and Station Wagons	2.11	0.255	0.62	—	3.5	600	I. New vehicle model certification and new vehicle testing: (1) New vehicle model certification shall include a durability test of 80,000 km and comply with these Standards. (2) Domestic vehicle models in mass production before June 30, 1989 but leaving the plant after July 1, 1993 shall comply with these Standards. (3) Domestic vehicle models in mass-production between July 1, 1989 and June 30, 1990, but leaving the plant after July 1, 1994 shall comply with these Standards. (4) Domestic vehicle models entering mass production and imported vehicles on board after July 1, 1990 shall comply with these standards. (5) Driving cycle testing methods shall comply with the FTP-75 testing procedures. II. In-use vehicle testing: Those vehicles leaving plant or imported after July 1, 1990 shall comply with these Standards.
			Trucks, Non-Sedans, and Non-Station Wagon Passenger Vehicles	11.18	1.06	1.43				
		In-use Vehicle Testing	—	—	—	—	—	3.5	900	
	August 1, 1992	New vehicle model certification New vehicle testing	Sedans and Station Wagons	2.11	0.255	0.62	—	1.0	200	I. New vehicle model certification and new vehicle testing: (1) New vehicle model certification shall include a durability test of 80,000 km
Trucks, Non-Sedans, and Non-Station Wagon			11.18	1.06	1.43	—				

		testing	Passenger Vehicles							<p>and comply with these Standards. The period of use of the emissions control systems and the warranty period shall be 5 years or 80,000 km whichever comes first.</p> <p>(2) New models complying with the emission standards on July 1, 1990 shall comply with these Standards.</p> <p>(3) The driving cycle testing methods shall comply with the "gasoline vehicle testing procedures and testing methods."</p> <p>II. In-use vehicle testing:</p> <p>(1) For new models that comply with the emission standards on July 1, 1990, the domestic vehicles leaving plant and imported vehicles on board after August 1, 1992 shall comply with these Standards.</p> <p>(2) The In-use vehicle testing shall follow the "Chassis dynamometer motor vehicle exhaust concentration testing method." (For vehicles without chassis dynamometer, the relevant testing equipment may use the original testing methods).</p>
		In-use Vehicle Testing	—	—	—	—	—	1.2	220	
	July 1, 1995	New vehicle model certification New vehicle testing	Sedans and Station Wagons	2.11	0.255	0.62	—	1.0	200	<p>I. New vehicle model certification and new vehicle testing:</p> <p>(1) New vehicle model certification shall include a durability test of 80,000 km and comply with these Standards. The period of use of the emissions control systems and the warranty period shall be 5 years or 80,000 km whichever comes first.</p> <p>(2) The driving cycle testing methods shall comply with the "gasoline vehicle testing procedures and testing methods."</p> <p>(3) Vehicles shall comply with these Standards starting from 1995 model year.</p> <p>(4) Trucks, non-sedans, and non-station wagon passenger vehicles less than 1,200 cc shall comply with the standards: CO: 6.20 g/km, HC: 0.5 g/km.</p> <p>II. In-use vehicle testing:</p> <p>(1) For new models that comply with the emission standards on July 1, 1990, the domestic vehicles leaving plant and imported vehicles on board after July 1, 1995 shall comply with these Standards.</p> <p>(2) The In-use vehicle testing shall follow the "Chassis dynamometer motor vehicle exhaust concentration testing method." (For vehicles without chassis dynamometer, the relevant testing equipment may use the original testing methods).</p>
			Trucks, Non-Sedans, and Non-Station Wagon Passenger Vehicles	Over 1,200 cc	6.20	0.50				
				1,200 cc and below	11.18	1.06				
		In-use Vehicle Testing	—	—	—	—	—	1.2	220	
	January 1, 1999	New vehicle model certification New vehicle testing	Sedans and Station Wagons	2.11	0.155	0.25	—	0.5	100	<p>I. New vehicle model certification and new vehicle testing:</p> <p>(1) New vehicle model certification shall include a durability test of 80,000 km and comply with these Standards. The period of use of the emissions control systems and the warranty period shall be 5 years or 80,000 km whichever comes first.</p> <p>(2) For trucks, non-sedans, and non-station wagon passenger vehicles with engine capacities less than 1,200 cc, the hydrocarbon (HC) emissions shall employ total hydrocarbon (Total HC), and for other vehicles, the hydrocarbon (HC) emissions shall employ non-methane hydrocarbon (NMHC).</p> <p>(3) The driving cycle testing methods shall comply with the "gasoline vehicle testing procedures and testing methods."</p> <p>(4) Domestic vehicle models leaving plant and imported vehicles on board after January 1, 1999, and 1999 model year vehicles, shall comply with these Standards.</p> <p>(5) Trucks, non-sedans, and non-station wagon passenger vehicles with engine capacities less than 1,200 cc and model years up to 2000 shall comply with the following standards: CO: 3.11 g/km, NMHC: 0.242 g/km, and NOx: 0.68 g/km.</p> <p>II. In-use vehicle testing:</p> <p>(1) Domestic vehicle models leaving plant and imported vehicles on board after January 1, 1999 shall comply with these Standards.</p> <p>(2) The In-use vehicle testing shall follow the "Chassis dynamometer motor vehicle exhaust concentration testing method." (For vehicles without chassis</p>
			Trucks, Non-Sedans, and Non-Station Wagon Passenger Vehicles	Over 1,200 cc	3.11	0.242				
				1,200 cc and below	6.20	0.50				
		In-use Vehicle Testing	—	—	—	—	—	1.2	220	

										dynamometer, the relevant testing equipment may use the original testing methods).
	January 1, 2008	New vehicle model certification New vehicle testing	Passenger Cars, Light-duty Trucks, Passenger-cargo Dual-purpose Station Wagons/Vans, Substitution Pickup Trucks, Special-constructed light-duty Vehicles	2.11	0.045	0.07	—	0.5	100	I. New vehicle model certification and new vehicle testing: (1) New vehicle model certification shall include a durability test of 80,000 km and comply with these Standards. The period of use of the emissions control systems and the warranty period shall be 5 years or 80,000 km whichever comes first.
		In-use Vehicle Testing	—	—	—	—	—	1.2	220	(2) Domestic vehicle models leaving plant and imported vehicles on board after January 1, 2008, and 2008 model year vehicles, shall comply with these Standards and shall also be equipped with the On Board Diagnostics (OBD). (3) The non-methane hydrocarbon (NMHC) standards shall be applied for the driving cycle test Hydrocarbons (HC). (4) The On Board Diagnostics (OBD) shall be governed by the "Gasoline and Clean Alternative Fuel Engine Motor Vehicle Exhaust Testing Compliance Verification Issuance and Cancellation Regulations." (5) The test methods under these Standards shall be governed by the "Gasoline Vehicle Exhaust Emissions Testing Methods and Procedures" and the "Gasoline Vehicle Durability Testing Methods and Procedures." (6) Vehicles that follow the testing requirements referred to in the European Union Directive 98/69/EC Types I, II, V and the Annex XI, and also comply with the emission standards referred to in Section 5.3.1.4 of Annex I B (2005) along with the useful life and warranty period requirements, shall be deemed complying with these Standards. II. In-use vehicle testing: (1) Domestic vehicle models leaving plant and imported vehicles on board after January 1, 2008 shall comply with these Standards, and also be equipped with the On Board Diagnostics (OBD). (2) Imported foreign in-use vehicles shall comply with the "driving cycle testing" and "idle testing" standards for new vehicle testing. However, if a vehicle leaving plant at least five years earlier and has passed effective operation tests of emissions control devices by a testing organization designated by the central competent authority, said vehicle needs to only perform the "idle testing." (3) The test methods under these Standards shall be governed by the "Gasoline Vehicle Exhaust Emissions Testing Methods and Procedures."

Type of Mobile Source	Date of implementation	Application	Emission Standards									Remarks																							
			Classification	Driving Cycle Testing					Idle Testing																										
				CO (g/km)	THC (g/km)	NMHC (g/km)	NOx (g/km)	PM (g/km)	CO (%)		HC (ppm)																								
									High Idle	Normal Idle																									
Motor vehicles with gasoline and alternative clean fuel engines	October 1, 2012	New vehicle model certification New vehicle testing	Passenger cars		1.000	0.100	0.068	0.060	0.0050	0.2	0.3	---	I. New vehicle model certification and new vehicle testing: (1) New vehicle model certification shall include a durability test of 160,000 km and comply with these Standards. The period of use of the emissions control systems and the warranty period shall be 5 years or 100,000 km, whichever comes first. (2) Domestic vehicle models leaving plant (subject to the exit-factory date) and imported vehicles on board (subject to the on board date) after October 1, 2012 shall comply with these Standards and shall also be equipped with the On Board Diagnostics (OBD). (3) The On Board Diagnostics (OBD) shall be governed by the “Gasoline and Clean Alternative Fuel Engine Motor Vehicle Exhaust Testing Compliance Verification Issuance and Cancellation Regulations.” (4) The unit being used in the driving cycle test results is g/km, and the NEDC test shall be conducted on chassis dynamometer. (5) The particulate matter (PM) standards are only applicable to the direct injection engine vehicles. The reference mass of tested vehicles for NEDC driving cycle test shall be defined as the curb weight of gasoline vehicle plus 100 kg. The curb weight of a gasoline vehicle means the weight of the motor vehicle prior to loading with persons or cargo. The engine shall contain the lubricating oil that complies with the relevant requirements; the radiator shall contain the coolant that complies with the relevant requirements; the fuel tank shall contain the fuel that complies with the relevant requirements; and the motor vehicle shall contain accessories (spare tire and tools) designated by the original manufacturer. (7) The limit values (in units of g/km) for passenger vehicles and light duty trucks when conducting the US FTP-75 driving cycle test on chassis dynamometers are shown in Table 1. For new vehicle model certification, a 192,000 kilometer durability test is required to comply with these standards in Table 1. The period of use and warranty period for exhaust emissions control systems relevant and main components are regulated as in Table 2.																						
			Light duty trucks	Reference Mass ≤ 1,305 kg		1.000	0.100	0.068						0.060																					
				Reference Mass > 1,305 kg and ≤ 1,760 kg		1.810	0.130	0.090						0.075																					
Reference Mass > 1,760 kg				2.270	0.160	0.108	0.082																												
Motor vehicles with gasoline and alternative clean fuel engines	October 1, 2012	In-use Vehicle Testing	---		---	---	---	---	---	---	1.2	220	Table 1. Limit values for FTP-75 driving cycle test: <table><tr><th>Classification</th><th>CO</th><th>NMHC</th><th>NOx</th><th colspan="2">Idle Testing</th></tr><tr><th></th><th>CO (%)</th><th>CO (%)</th><th>HC (ppm)</th><th></th><th></th></tr><tr><td>Passenger cars and light duty trucks</td><td>2.61</td><td>0.054</td><td>0.044</td><td>0.5</td><td>100</td></tr></table> Table 2. The useful life and warranty period for exhaust emissions control systems: <table><tr><th>Relevant components</th><th>Main components</th></tr><tr><td>5 years or 80,000 kilometers</td><td>8 years or 129,000 kilometers</td></tr></table> The main components of exhaust emissions control systems are defined as Catalytic Converter, OBD and Electronic Control Unit (ECU), which are governed by Article 2 of the “Regulations Governing the Air Pollution Control Equipment for Mobil Source of Air Pollution.” (8) The vehicles with certificate of compliance being issued before September 30, 2012 may be produced continuously (subject to the exit-factory date, in the case of domestic vehicles) or imported (subject to the on board date, in the case of foreign vehicles) till September 30, 2013. (9) The test methods under these Standards shall be governed by the “Gasoline Vehicle Exhaust Emissions Testing Methods and Procedures” and the “Gasoline Vehicle Durability Testing Methods and Procedures.” (10) The emission standards for passenger vehicles are applicable on the Passenger-cargo Dual-purpose Station Wagons. The emission standards for light-duty trucks are applicable on Passenger-cargo Dual-purpose Vans, Substitution Passenger Cars, and Special Constructed Light-duty Vehicles. II. In-use vehicle testing: (1) Domestic vehicle models leaving plant and imported vehicles on board after January 1, 2008 shall comply with these Standards, and also be equipped with the On Board Diagnostics (OBD). (2) Imported foreign in-use vehicles on board after May 1, 2017 shall comply with the “driving cycle testing” and “idle testing” standards for new vehicle testing. However, if imported foreign in-use vehicles on board prior to April 30, 2017 (inclusive) or vehicles leaving plant at least five years ago have passed effective operation tests of emissions control devices by a testing organization designated by the central competent authority, said vehicles need to perform the “idle testing” only. (3) The in-use vehicle idle testing and inspection methods shall be governed by the “Gasoline Vehicle Exhaust Emission Testing Methods and Procedures.”	Classification	CO	NMHC	NOx	Idle Testing			CO (%)	CO (%)	HC (ppm)			Passenger cars and light duty trucks	2.61	0.054	0.044	0.5	100	Relevant components	Main components	5 years or 80,000 kilometers	8 years or 129,000 kilometers
			Classification	CO	NMHC	NOx	Idle Testing																												
				CO (%)	CO (%)	HC (ppm)																													
Passenger cars and light duty trucks	2.61	0.054	0.044	0.5	100																														
Relevant components	Main components																																		
5 years or 80,000 kilometers	8 years or 129,000 kilometers																																		

Type of Mobile Source	Date of implementation	Application	Emission Standards										Remarks																								
			Classification		Driving Cycle Testing						Idle Testing																										
					CO (mg/km)	THC (mg/km)	NMHC (mg/km)	NOx (mg/km)	PM (mg/km)	PN (#/km)	CO (%)	HC (ppm)																									
											High Idle	Normal Idle																									
Motor vehicles with gasoline and alternative clean fuel engines	September 1, 2019	New vehicle model certification New vehicle testing	Passenger cars	1000	100	68	60									<p>I. New vehicle model certification and new vehicle testing:</p> <p>(1) New vehicle model certification shall include a durability test of 160,000 km and comply with these Standards. The period of use of the emissions control systems and the warranty period shall be 5 years or 100,000 km, whichever comes first.</p> <p>(2) Domestic vehicle models leaving plant (subject to the exit-factory date) and imported vehicles on board (subject to the on board date) after September 1, 2019 shall comply with these Standards and shall also be equipped with the On Board Diagnostics (OBD).</p> <p>(3) The On Board Diagnostics (OBD) shall be governed by the "Gasoline and Clean Alternative Fuel Engine Motor Vehicle Exhaust Testing Compliance Verification Issuance and Cancellation Regulations."</p> <p>(4) The units being used for the driving cycle test results shall be in mg/km, either under the New European Driving Cycle (NEDC) or the Worldwide Harmonized Light Vehicles Test Cycle (WLTC).</p> <p>(5) The particulate matter (PM) and particulate number (PN) standards are only applicable to the direct injection engine vehicles.</p> <p>(6) The reference mass of tested vehicles for NEDC or WLTC driving cycle tests shall be defined as the stipulations defined in Directive 692/2008/EC and its subsequent amendments.</p> <p>(7) The limit values (in units of mg/km) for passenger vehicles and light duty trucks when conducting the US FTP-75 driving cycle test are shown in Table 1. For new vehicle model certification, a 192,000 kilometer durability test is required to comply with these standards in Table 1. The period of use and warranty period for exhaust emissions control systems relevant and main components are regulated as in Table 2.</p> <table><caption>Table 1. Limit values for FTP-75 driving cycle test:</caption><thead><tr><th rowspan="2">Classification</th><th colspan="3">Driving Cycle Testing (mg/km)</th><th colspan="2">Idle Testing</th></tr><tr><th>CO</th><th>NMHC</th><th>NOx</th><th>CO (%)</th><th>HC (ppm)</th></tr></thead><tbody><tr><td>Passenger cars and light duty trucks</td><td>2610</td><td>54</td><td>44</td><td>0.5</td><td>100</td></tr></tbody></table> <p>Table 2. The useful life and warranty period for exhaust emissions control systems:</p> <table><thead><tr><th>Relevant components</th><th>Main components</th></tr></thead><tbody><tr><td>5 years or 80,000 kilometers</td><td>8 years or 129,000 kilometers</td></tr></tbody></table> <p>The main components of exhaust emissions control systems are defined as the Catalytic Converter, OBD and Electronic Control Unit (ECU), which are governed by Article 2 of the "Regulations Governing the Air Pollution Control Equipment for Motor Sources of Air Pollution."</p> <p>(8) The vehicles with a certificate of compliance being issued before August 31, 2019 may be produced continuously (subject to the exit-factory date, in the case of domestic vehicles) or imported (subject to the on board date, in the case of foreign vehicles) till February 28, 2021.</p> <p>(9) The test methods under these Standards shall be governed by the "Gasoline Vehicle Exhaust Emissions Testing Methods and Procedures" and the "Gasoline Vehicle Durability Testing Methods and Procedures."</p> <p>(10) The emission standards for passenger vehicles are applicable on the Passenger-cargo Dual-purpose Station Wagons. The emission standards for light-duty trucks are applicable on Passenger-cargo Dual-purpose Vans, Substitution Passenger Cars, and Special Constructed Light-duty Vehicles.</p> <p>II. In-use vehicle testing:</p> <p>(1) Domestic vehicle models leaving plant and imported vehicles on board after January 1, 2008 shall comply with these Standards, and also be equipped with the On Board Diagnostics (OBD).</p> <p>(2) Imported foreign in-use vehicles shall comply with the "driving cycle testing" and "idle testing" standards for new vehicle testing.</p> <p>(3) The in-use vehicle idle testing and inspection methods shall be governed by the "Gasoline Vehicle Exhaust Emission Testing Methods and Procedures."</p>	Classification	Driving Cycle Testing (mg/km)			Idle Testing		CO	NMHC	NOx	CO (%)	HC (ppm)	Passenger cars and light duty trucks	2610	54	44	0.5	100	Relevant components	Main components	5 years or 80,000 kilometers	8 years or 129,000 kilometers
		Classification	Driving Cycle Testing (mg/km)			Idle Testing																															
CO	NMHC		NOx	CO (%)	HC (ppm)																																
Passenger cars and light duty trucks	2610	54	44	0.5	100																																
Relevant components	Main components																																				
5 years or 80,000 kilometers	8 years or 129,000 kilometers																																				
In-use Vehicle Testing	---	---	---	---	---	---	---	---	---	---	1.2	220																									