

Gasoline and clean alternative fuel engine exhaust emissions standards for Carbon monoxide (CO),Hydrocarbons (HC), Nitrogen oxides (NOx), Particulate matter (PM), and Particulate number (PN) derived from driving cycle testing and idle testing stipulated as the following:

Type of Transportation Vehicle	Date of Implementation	Application	Emissions Standards						Remarks	
			Classification	Driving Cycle Testing				Idle Testing		
				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	-	-	-	-	-	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-ship after promulgation date shall comply with these Standards.
		In-use Vehicle Testing	-	-	-	-	-	4.5	1200	
	July 1, 1987	New vehicle model certification	Reference Vehicle Mass (kilograms) ≤1020	14.31	-	-	-	4.69	-	New vehicle model certification and new vehicle testing: 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-ship 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	
		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	Reference Vehicle Mass (kilograms) ≤1020	17.28	-	-	-	5.87	-	
			1021 - 1250	19.74	-	-	-	6.32	-	
		New vehicle testing (mass production)	1251 - 1470	22.46	-	-	-	6.79	3.5	
	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	Sedans and Station Wagons	2.11	0.255	0.62	-	-	-	1. New vehicle model certification and new vehicle testing: 1.1. New vehicle model certification shall include a durability test of 80,000 km and comply with these Standards. 1.2. Domestic vehicle models in mass production before June 30, 1989, but leaving the plant after July 1, 1993, shall comply with these Standards. 1.3. 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. 1.4. Domestic vehicle models entering mass production and imported vehicles on-ship after July 1, 1990 shall comply with these standards. 1.5. The driving cycle test method shall comply with the US FTP-75 testing methods.
			Trucks, Non-Sedans, and Non-Station Wagon Passenger Vehicles	11.18	1.06	1.43	-	-	3.5	
	August 1, 1992	New vehicle model certification	Sedans and Station Wagons	2.11	0.255	0.62	-	-	-	1. New vehicle model certification and new vehicle testing: 1.1. New vehicle model certification shall include a durability test of 80,000 km and comply with these Standards. The useful life of the emissions control systems and the warranty period shall be 5 years or 80,000 km whichever comes first. 1.2. New models complying with July 1, 1990, emission standards shall comply with these Standards. 1.3. The driving cycle test methods shall be in accordance with the "gasoline vehicle testing procedures and testing methods." 2. In-use vehicle testing: 2.1. For new models that comply with July 1, 1990, emission standards, the domestic vehicles leaving plant and imported vehicles on-ship after August 1, 1992, shall comply with these Standards. 2.2. The In-use vehicle testing shall be in accordance with the "Chassis dynamometer motor vehicle exhaust concentration testing method" (for vehicles without chassis dynamometer testing equipment may use the original testing methods).
Trucks, Non-Sedans, and Non-Station Wagon Passenger Vehicles			11.18	1.06	1.43	-	-	1.0	200	
July 1, 1995	New vehicle model certification	Sedans and Station Wagons	2.11	0.255	0.62	-	-	-	1. New vehicle model certification and new vehicle testing: 1.1. New vehicle model certification shall include a durability test of 80,000 km and comply with these Standards. The useful life of the emissions control systems and the warranty period shall be 5 years or 80,000 km whichever comes first. 1.2. The driving cycle test methods shall be in accordance with the "gasoline vehicle testing procedures and testing methods." 1.3. Vehicles shall comply with these Standards start from 1995 model year. 1.4. 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. 2. In-use vehicle testing: 2.1. For new models that comply with July 1, 1990, emission standards, the domestic vehicles leaving plant and imported vehicles on-ship after July 1, 1995, shall comply with these Standards. 2.2. The In-use vehicle testing methods shall be in accordance with the "Chassis dynamometer motor vehicle exhaust concentration testing method" (for vehicles without chassis dynamometer testing equipment may use the original testing methods).	
		Trucks, Non-Sedans, and Non-Station Wagon Passenger Vehicles	Over 1,200 cc	6.20	0.50	1.43	-	-		1.0
	1200 cc and below		11.18	1.06	1.43	-	-	-		-
	In-use Vehicle Testing	-	-	-	-	-	-	1.2		220
January 1, 1999	New vehicle model certification	Sedans and Station Wagons	2.11	0.155	0.25	-	-	-	1. New vehicle model certification and new vehicle testing: 1.1. New vehicle model certification shall include a durability test of 80,000 km and comply with these Standards. The useful life of the emissions control systems and the warranty period shall be 5 years or 80,000 km whichever comes first. 1.2. For trucks, non-sedans, and non-station wagon passenger vehicles with engine capacities less than 1,200 cc the total hydrocarbon (THC) emission standards shall be applied, for other vehicles the non-methane hydrocarbons (NMHC) standards shall be applied. 1.3. The driving cycle test methods shall be in accordance with the "gasoline vehicle testing procedures and testing methods." 1.4. For domestic vehicle models leaving plant and imported vehicles on-ship after January 1, 1999, and 1999 model year vehicles shall comply with these Standards. 1.5. 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. 2. In-use vehicle testing: 2.1. For domestic vehicle models leaving plant and imported vehicles on-ship after January 1, 1999 shall comply with these Standards. 2.2. The In-use vehicle testing methods shall be in accordance with the "Chassis dynamometer motor vehicle exhaust emissions concentration testing method" (for vehicles without chassis dynamometer testing equipment may use the original testing methods).	
		Trucks, Non-Sedans, and Non-Station Wagon Passenger Vehicles	Over 1,200 cc	3.11	0.242	0.68	-	-		0.5
	1200 cc and below		6.20	0.50	1.43	-	-	-		-
	In-use Vehicle Testing	-	-	-	-	-	-	1.2		220
January 1, 2008	New vehicle model certification	Passenger Cars, Light-duty Trucks, Passenger-cargo Dual-purpose Station Wagons, Passenger-cargo Dual-purpose Vans, Substitution Passenger cars, Special-constructed light-duty Vehicles	2.11	0.045	0.07	-	-	0.5	100	1. New vehicle model certification and new vehicle testing: 1.1. New vehicle model certification shall include a durability test of 80,000 km and comply with these Standards. The useful life of the emissions control systems and the warranty period shall be 5 years or 80,000 km whichever comes first. 1.2. For domestic vehicle models leaving plant and imported vehicles on-ship after January 1, 2008, and 2008 model year vehicles shall comply with these Standards and shall be equipped with on board diagnostics system (OBD). 1.3. The non-methane hydrocarbon (NMHC) standards shall be applied for the driving cycle test. 1.4. The On Board Diagnostics (OBD) and relevant regulations shall be in accordance with the "Gasoline and Clean Alternative Fuel Engine Motor Vehicle Exhaust Testing Compliance Verification Issuance and Cancellation Regulations". 1.5. The test methods of these standards shall be in accordance with the "Gasoline Vehicle Exhaust Emissions Testing Methods and Procedures" and the "Gasoline Vehicle Durability Testing Methods and Procedures". 1.6. For vehicles comply with the European Union Directive 98/69/EC Types I, II, V and the Annex XI stipulated testing regulations, and comply with the Section 5.3.1.4 of Annex I B (2005) stipulated emissions standards along with the useful life and warranty period requirements, shall be deemed as comply with these Standards. 2. In-use vehicle testing: 2.1. For domestic vehicle models leaving plant and imported vehicles on-ship after January 1, 2008 shall comply with these Standards, and equipped with the On Board Diagnostics System (OBD). 2.2. For 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 ago and has passed effective operation tests of emissions control devices by an EPA-designated testing organization, the said vehicle need to perform the "idle test". 2.3. The testing and inspection methods of these Standards shall be in accordance with the "Gasoline Vehicle Exhaust Emissions Testing Methods and Procedures".
		In-use Vehicle Testing	-	-	-	-	-	1.2	220	

Type of Transportation Vehicle	Date of Implementation	Application	Emissions Standards						Remarks	
			Classification	Driving Cycle Testing				Idle Testing		
				CO (g/km)	HC (g/km)	NMHC (g/km)	NOx (g/km)	PM (g/km)		CO (%)
Motor vehicles with gasoline and alternative clean fuel engines	October 1, 2012	New vehicle model certification	Sedans and Station Wagons	1.000	0.100	0.068	0.060	-	-	1. New vehicle model certification and new vehicle inspection: 1.1. For new vehicle model certification a 160,000 kilometers durability test are required and the test results shall comply with these standards. The useful life of the exhaust emissions control systems and warranty period shall be 5 years or 100,000 kilometers whichever comes first. 1.2. For domestic vehicle models leaving plant and imported vehicles on-ship after October 1, 2012 shall comply with these standards and equipped with the On Board Diagnostics System (OBD). 1.3. The relevant regulations of OBD system are in accordance with the "Regulations Governing Issuance, Revocation, and Cancellation of Compliance Certification for Gasoline and Alternative Clean Fuel Engine Vehicle Emissions Inspections". 1.4. The unit being used in the driving cycle test results is g/km, the New European Driving Cycle test shall be conducted on chassis dynamometer. 1.5. The Particulate matter standard only applicable on gasoline direct injection (GDI) engine vehicles. 1.6. The reference mass of tested vehicles for NEDC driving cycle test shall be defined as: The curb weight of gasoline vehicle plus 100 kilograms. The curb weight means the weight of gasoline vehicle without driver and loading, engine with lubricant, radiator with coolant, fuel tank with fuel, and necessary OEM equipment (spare tire and tools). 1.7. The limit values (in units of g/km) for passenger cars and light duty trucks when conducting the US FTP-75 driving cycle test on chassis dynamometer are shown in Table 1. For new vehicle model certification, a 192,000 kilometer durability test is required to comply with these standards. The useful life and warranty period for exhaust emissions control systems relevant and main components are regulated as in Table 2.
			Trucks, Non-Sedans, and Non-Station Wagon Passenger Vehicles	Reference Mass ≤ 1305 Kg	1.000	0.100	0.068	0.060	0.0050	
In-use Vehicle Testing	Reference Mass > 1305 kg and ≤ 1760 kg	1.810	0.130	0.090	0.075	-	-	-		
	Reference Mass > 1760 kg	2.270	0.160	0.108	0.082	-	-	-		

Classification	CO	NMHC	NOx	Idle Testing	
				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 192,000 kilometers

The main components of exhaust emissions control systems are defined as: Catalytic Converter, OBD system, Electronic Control Unit (ECU) in accordance with the stipulations in Article 2 of the "Regulations Governing the Air Pollution Control Equipment for Mobil Source of Air Pollution".

1.8 The vehicles with certificate of compliance being issued before September 30, 2012 may continue to be produced (plant leaving date for domestic vehicles) or imported (on-ship date for foreign vehicles) till September 30, 2013.

1.9 The testing and inspection methods shall be in accordance with the "Gasoline Vehicle Exhaust Emissions Testing Methods and Procedures" and "Gasoline Vehicle Durability Testing Methods and Procedures".

1.10 The emission standards for passenger cars 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.

2. In-use vehicle inspection:

2.1 For domestic vehicle models leaving plant and imported vehicles on-ship after January 1, 2008 shall comply with these standards and equipped with the On Board Diagnostics System (OBD).

2.2 For imported in-use vehicles on-ship after May 1, 2017, the "Driving Cycle Testing" and "Idle Testing" shall be conducted and the test results shall comply with the applicable standards as for the new vehicle testing. However, if the imported in-use vehicles on-ship before April 30, 2017 (include) and leaving plant for more than five years and the operation of the installed emission control components being examined by the central competent authority designated inspection laboratory and deemed effective, only the in-use vehicle idle testing emission standards in compliance may be required for these vehicles.

2.3 The in-use vehicle idle testing and inspection methods shall be in accordance with the "Gasoline Vehicle Exhaust Emission Testing Methods and Procedures".

Type of Transportation Vehicle	Date of Implementation	Application	Emissions 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)																												
Motor vehicles with gasoline and alternative clean fuel engines	September 1, 2019	New vehicle model certification New vehicle testing	Sedans and Station Wagons	1000	100	68	60	4.5	6.0x10 ¹¹	0.2	0.3	---	<p>1. New vehicle model certification and new vehicle inspection:</p> <p>1.1 For new vehicle model certification a 160,000 kilometers durability test is required and the test results shall comply with these standards. The useful life of exhaust emission control systems and warranty period shall be 5 years or 100,000 kilometers whichever comes first.</p> <p>1.2 For domestic vehicle models leaving plant and imported vehicles on-ship after September 1, 2019 shall comply with these standards and equipped with the On Board Diagnostics System (OBD).</p> <p>1.3 The relevant regulations of OBD system shall be in accordance with the "Regulations Governing Issuance, Revocation, and Cancellation of Compliance Certification for Gasoline and Alternative Clean Fuel Engine Vehicle Emissions Inspections".</p> <p>1.4 The units being used for the driving cycle test results shall be in mg/km, either under the New European Driving Cycle or the Worldwide Harmonized Light Vehicles Test Cycle (WLTC) and being conducted on chassis dynamometer.</p> <p>1.5 The Particulate matter and Particulate number standards only applicable on gasoline direct injection (GDI) engine vehicles.</p> <p>1.6 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>1.7 The limit values for passenger cars and light duty trucks when conducting the US FTP-75 driving cycle test on chassis dynamometer are shown in Table 1 and in units of mg/km. For new vehicle model certification, a 192,000 kilometer durability test is required to comply with these standards. The useful life and warranty period for the exhaust emission control relevant and main components are regulated as in Table 2.</p> <p>Table 1. Limit values for FTP-75 driving cycle test:</p> <table border="1"> <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 emission relevant and main components:</p> <table border="1"> <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 192,000 kilometers</td> </tr> </tbody> </table> <p>The main components include catalytic converter, OBD system, and Electronic Control Unit (ECU). The relevant components are in accordance with Article 2 of "Regulations Governing the Air Pollution Control Equipment for Mobil Source of Air Pollution".</p> <p>1.8 The vehicles with certificate of compliance being issued before August 31, 2019 may continue to be produced (plant leaving date for domestic vehicles) or imported (on-ship date for foreign vehicles) till February 28, 2021.</p> <p>1.9 The testing and inspection methods shall be in accordance with the "Gasoline Vehicle Exhaust Emissions Testing Methods and Procedures" and "Gasoline Vehicle Durability Testing Methods and Procedures".</p> <p>1.10 The emission standards for passenger cars 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 Vehicles.</p> <p>1.11 Requirements for the idle emission inspection of the new car application for license plate as in Table 3.</p> <p>Table 3. Idle inspection standards of new car application for license plate:</p> <table border="1"> <thead> <tr> <th>Idle Testing</th> <th>CO (%)</th> <th>HC (ppm)</th> </tr> </thead> <tbody> <tr> <td></td> <td>0.5</td> <td>100</td> </tr> </tbody> </table>	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 192,000 kilometers	Idle Testing	CO (%)	HC (ppm)		0.5	100
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