

Revisions to Articles 1 and Article 5 of Air Emission Standards of Mobile Source

Article 1 These Standards are determined pursuant to Article 36, Paragraph 2 of the Air Pollution Control Act.

Article 5 The exhaust emissions standards of carbon monoxide(CO), hydrocarbons(HC), non-methane hydrocarbon(NMHC), oxides of nitrogen(NO_x), formaldehyde (HCHO), particulate matter(PM), particulate number (PN) and smoke for diesel and alternative clean fuel engine motor vehicles measured by the driving cycle test, the visual determination and the instrumentation measurement are specified in the following table:

Type of Mobile sources	Date of Implementation	Application	Emissions Standards							Remarks	
			Driving cycle testing					Judgment by visual determination	Instrument testing		
			Type	CO	THC	NO _x	PM	Smoke (% opacity)	Smoke (m ⁻¹ opacity)		Smoke (% pollution)
Diesel and alternative clean fuel engine motor vehicles	Date of promulgation	New vehicle model certification, new vehicle testing	—					—	—	50	1. New vehicle model certification and new vehicle testing: 1.1 Testing implemented simultaneously for new models and models in continuous mass production. 1.2 When instrument testing, opacity and pollution index standards occur at the same time, one of the three may be chosen. 1.3 Instrument testing method for pollution percentage shall comply with CNS 11644 and CNS 11645. 2. In-use vehicle testing: 2.1 Visually determined opacity of 40%, equivalent to Ringelmann No. 2. 2.2 Domestic vehicles leaving the plant and imported vehicles on-ship before promulgation date shall comply with these Standards. 2.3 Instrument testing: 2.3.1 The test method for smoke pollution percentage (%) shall comply with the Diesel Motor Vehicles Exhaust Emissions Testing Methods and Procedures. 2.3.2 The test method for smoke opacity (m ⁻¹) shall comply with the Smoke Opacity Testing Methods and Procedures of Diesel Vehicles starting January 1, 2015.
		In-use Vehicle Testing	—					40	2.8	50	
	July 1, 1987	New vehicle model certification, new vehicle testing	—					—	—	50	
		In-use Vehicle Testing	—					40	2.8	50	
	July 1, 1988	New vehicle model certification, new vehicle testing	—					—	—	50	
		In-use Vehicle Testing	—					40	2.8	50	

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			Type	CO	THC	NO _x	PM	Smoke (% opacity)	Smoke (m ⁻¹ opacity)	Smoke (% pollution)																	
Diesel and alternative clean fuel engine motor vehicles	July 1, 1993	New vehicle model certification, new vehicle testing	Heavy-Duty Trucks and Buses	Trucks and Buses with gross weight more than 3500 kg. or Buses seated 10 or more passengers	10.0	1.3	6.0	0.7	—	—	40	<p>1. For heavy diesel and alternative clean fuel engine motors vehicles conducted US Transient Cycle driving on engine dynamometers. The emission standards are with g/bhp-hr as unit.</p> <p>2. For light diesel and alternative clean fuel engine motors vehicles conducted LA-4 driving on body dynamometers. The emission standards are with g/km as unit.</p> <p>3. Vehicle weight means gross vehicle weight (GVW) vehicles with a weight between 2,500 kg and 3,500 kg may comply with standards for heavy or light vehicles.</p> <p>4. Durability test employing cumulative driving time, mileage, engine operation hours shall be performed as part of new vehicle model certification, and vehicle shall still comply with these standards.</p> <p>Warranty period means the effective use period of the emission control system. Durability test and warranty period requirements are shown in the following table.</p> <table border="1"> <thead> <tr> <th>Gross vehicle weight</th> <th>Durability test</th> <th>Warranty period</th> </tr> </thead> <tbody> <tr> <td><3,859 kg (Trucks and multi-purpose vehicle)</td> <td>5 years / 80,000 km</td> <td>5 years / 80,000 km</td> </tr> <tr> <td><3,859 kg–8,852 kg</td> <td>8 years / 176,000 km</td> <td>5 years / 80,000 km</td> </tr> <tr> <td><8,853 kg–14,981 kg</td> <td>8 years / 296,000 km</td> <td>5 years / 160,000 km</td> </tr> <tr> <td>>14,982 kg</td> <td>8 years / 464,000 km</td> <td>5 years / 160,000 km</td> </tr> </tbody> </table> <p>5. Instrument testing methods for pollution percentage shall comply with CNS 11644 and CNS 11645 between July 1, 1993 and June 30, 1994; and shall comply with CNS 11644 and CNS 11645 after July 1, 1994.</p> <p>6. Starting from July 1, 1993, the vehicles produced (date of production for domestic vehicles) or imported (on board date for imported vehicles) must comply with the standards.</p> <p>7. Those heavy models that have been subjected to testing methods verified and used by the original manufacturer</p>	Gross vehicle weight	Durability test	Warranty period	<3,859 kg (Trucks and multi-purpose vehicle)	5 years / 80,000 km	5 years / 80,000 km	<3,859 kg–8,852 kg	8 years / 176,000 km	5 years / 80,000 km	<8,853 kg–14,981 kg	8 years / 296,000 km	5 years / 160,000 km	>14,982 kg	8 years / 464,000 km	5 years / 160,000 km
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Light-Duty Trucks	Trucks with gross weight less than 2,500 kg	6.2	0.5	1.4	0.38	—	—	40																			

												<p>(limited to ECE 13 mode and JIS 6 mode) and for which the US Transient Cycle testing method is relevant may temporarily use this testing method from July 1, 1993 to June 30, 1994.</p> <p>8. Light multi-purpose vehicles shall comply with light truck standards.</p> <p>9. The diesel sedans, hatchbacks and wagons are prohibited to import and manufacture. The import and manufacture of light-duty passenger cars is prohibited on January 1, 1995.</p>
		In-use Vehicle Testing	—					30	1.6	40	<p>1. Instrument testing:</p> <p>1.1 The test method for smoke pollution percentage (%) shall comply with the Diesel Motor Vehicles Exhaust Emissions Testing Methods and Procedures.</p> <p>1.2 The test method for smoke opacity (m^{-1}) shall comply with the Smoke Opacity Testing Methods and Procedures of Diesel Vehicles starting January 1, 2015.</p> <p>2. Starting from July 1, 1993, the vehicles produced (date of production for domestic vehicles) or imported (on board date for imported vehicles) must comply with the standards.</p>	

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Diesel and alternative clean fuel engine motor vehicles	July 1, 1999	New vehicle model certification, new vehicle testing	Heavy-Duty Trucks and Buses	Trucks and Buses with gross weight more than 3500 kg. or Buses seated 10 or more passengers	10.0	1.3	—	5.0	0.1	—	—	35	<p>1. For heavy diesel and alternative clean fuel engine motors vehicles conducted US Transient Cycle driving on engine dynamometers. The emission standards are with g/bhp-hr as unit.</p> <p>2. For light diesel and alternative clean fuel engine motors vehicles conducted LA-4 driving on body dynamometers. The emission standards are with g/km as unit.</p> <p>3. For heavy diesel and alternative clean fuel engine motor vehicles, hydrocarbon (HC) emissions shall employ total hydrocarbon (Total HC); for light diesel and alternative clean fuel engine motor vehicles, hydrocarbon (HC) emissions shall employ non-methane hydrocarbon (NMHC).</p> <p>4. Vehicle weight means gross vehicle weight (GVW) vehicles with a weight between 2,500 kg and 3,500 kg may comply with standards for heavy or light vehicles.</p> <p>5. Durability test employing cumulative driving time, mileage, engine operation hours shall be performed as part of new vehicle model certification, and vehicle shall still comply with these standards.</p> <p>Warranty period means the effective use period of the emission control system. Durability test and warranty period requirements are shown in the following table.</p> <table border="1"> <thead> <tr> <th>Gross vehicle weight</th> <th>Durability test</th> <th>Warranty period</th> </tr> </thead> <tbody> <tr> <td><3,859 kg (Trucks and multi-purpose vehicle)</td> <td>5 years / 80,000 km</td> <td>5 years / 80,000 km</td> </tr> <tr> <td><3,859 kg–8,852 kg</td> <td>8 years / 176,000 km</td> <td>5 years / 80,000 km</td> </tr> <tr> <td><8,853 kg–14,981 kg</td> <td>8 years / 296,000 km</td> <td>5 years / 160,000 km</td> </tr> <tr> <td>>14,982 kg</td> <td>8 years / 464,000 km</td> <td>5 years / 160,000 km</td> </tr> </tbody> </table> <p>6. Instrument testing methods for pollution percentage shall comply with CNS 11644 and CNS 11645 standards.</p> <p>7. Starting from July 1, 1999, the vehicles be produced (date of production for domestic vehicles) or imported (on board date for imported vehicles) must comply with the standards.</p> <p>8. Light multi-purpose vehicles shall comply with light truck standards.</p> <p>9. The import and manufacture of diesel little buses is prohibited.</p>	Gross vehicle weight	Durability test	Warranty period	<3,859 kg (Trucks and multi-purpose vehicle)	5 years / 80,000 km	5 years / 80,000 km	<3,859 kg–8,852 kg	8 years / 176,000 km	5 years / 80,000 km	<8,853 kg–14,981 kg	8 years / 296,000 km	5 years / 160,000 km	>14,982 kg	8 years / 464,000 km	5 years / 160,000 km
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			Light-Duty Trucks	Trucks with gross weight less than 2,500 kg	2.11	—	0.155	0.625	0.05	—	—	35	
		In-use Vehicle Testing	—						35	1.2	35	<p>1. Instrument testing:</p> <p>1.1 The test method for smoke pollution percentage (%) shall comply with the Diesel Motor Vehicles Exhaust Emissions Testing Methods and Procedures.</p> <p>1.2 The test method for smoke opacity (m^{-1}) shall comply with the Smoke Opacity Testing Methods and Procedures of Diesel Vehicles starting January 1, 2015.</p> <p>2. Starting from July 1, 1999, the vehicles be produced (date of production for domestic vehicles) or imported (on board date for imported vehicles) must comply with the standards.</p>	

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Diesel and alternative clean fuel engine motor vehicles	January 1, 2004	New vehicle model certification, new vehicle testing	Heavy-Duty Trucks and Buses	Trucks and Buses with gross weight more than 3500 kg. or Buses seated 10 or more passengers	10.0	1.3	—	5.0	0.10	—	—	35	<p>1. For heavy diesel and alternative clean fuel engine motors vehicles conducted US FTP-Transient Cycle driving on engine dynamometers. The emission standards are with g/bhp-hr as unit.</p> <p>2. For light diesel and alternative clean fuel engine motors vehicles conducted US FTP-Transient Cycle driving on body dynamometers. The emission standards are with g/km as unit.</p> <p>3. For heavy diesel and alternative clean fuel engine motor vehicles, hydrocarbon (HC) emissions shall employ total hydrocarbon (Total HC) Natural gas fuel vehicles hydrocarbon (HC) emissions shall employ non-methane hydrocarbon (NMHC) standards of 1.2 g/brake horsepower-hours (g/bhp-hr); for light diesel and alternative clean fuel engine motor vehicles, hydrocarbon (HC) emissions shall employ non-methane hydrocarbon (NMHC).</p> <p>4. Trucks with a gross weight (GVW) between 2,500 kg and 3,500 kg may a comply with standards for heavy or light vehicles.</p> <p>5. Durability test employing cumulative driving time, mileage, engine operation hours shall be performed as part of new vehicle model certification, and vehicle shall still comply with these standards. Warranty period means the effective use period of the emission control system. Durability test and warranty period requirements are shown in the following table.</p> <table border="1"> <thead> <tr> <th>Gross vehicle weight</th> <th>Durability test</th> <th>Warranty period</th> </tr> </thead> <tbody> <tr> <td><3,859 kg (Light-Duty Passenger Cars)</td> <td>5 years / 80,000 km</td> <td>5 years / 80,000 km</td> </tr> <tr> <td><3,859 kg (Trucks and Buses)</td> <td>5 years / 80,000 km</td> <td>5 years / 80,000 km</td> </tr> <tr> <td>3,859 kg–8,852 kg</td> <td>8 years / 176,000 km</td> <td>5 years / 80,000 km</td> </tr> <tr> <td>8,853 kg–14,981 kg</td> <td>8 years / 296,000 km</td> <td>5 years / 160,000 km</td> </tr> <tr> <td>>14,982 kg</td> <td>8 years / 464,000 km</td> <td>5 years / 160,000 km</td> </tr> </tbody> </table> <p>6. Instrument testing methods for pollution percentage shall comply with the Diesel Motor Vehicles Exhaust</p>	Gross vehicle weight	Durability test	Warranty period	<3,859 kg (Light-Duty Passenger Cars)	5 years / 80,000 km	5 years / 80,000 km	<3,859 kg (Trucks and Buses)	5 years / 80,000 km	5 years / 80,000 km	3,859 kg–8,852 kg	8 years / 176,000 km	5 years / 80,000 km	8,853 kg–14,981 kg	8 years / 296,000 km	5 years / 160,000 km	>14,982 kg	8 years / 464,000 km	5 years / 160,000 km
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Light-Duty Trucks	Trucks with gross weight less than 2,500 kg	2.11	—	0.155	0.625	0.05	—	—	35																						
Light-Duty Passenger Cars	Passenger Cars with gross weight less than 3,500 kg	2.11	—	0.155	0.25	0.05	—	—	35																						

												<p>Emissions Testing Methods and Procedures.</p> <p>7. Starting from January 1, 2004, the vehicles be produced (date of production for domestic vehicles) or imported (on board date for imported vehicles) must comply with the standards.</p> <p>8. Light multi-purpose vehicles shall comply with light truck standards.</p> <p>9. Diesel minibuses complying with relevant testing regulations of European Union Directive 98/69/EC and subsequently revised regulations, and complying with emission standards A (2000) and B (2005) and subsequently revised emission standards in the tables of Annex I, Section 5.3.1.4, shall be deemed to comply with these standards. However, smoke emission standards for judgment by visual determination and instrument testing shall comply with the foregoing table and said regulations.</p> <p>10. Starting January 1, 2005, new diesel little buses recognized by the European Union as complying with relevant testing regulations of European Union Directive 98/69/EC and subsequently revised regulations, and complying with B (2005) emission standards and subsequently revised emission standards in the tables of Annex I, Section 5.3.1.4, shall be deemed to comply with these standards. However, smoke emission standards for judgment by visual determination and instrument testing shall comply with the foregoing table and said regulations.</p> <p>11. Starting January 1, 2006, all diesel little buses recognized by the European Union as complying with relevant testing regulations of European Union Directive 98/69/EC and subsequently revised regulations, and complying with B (2005) emission standards and subsequently revised emission standards in the tables of Annex I, Section 5.3.1.4, shall be deemed to comply with these standards. However, smoke emission standards for judgment by visual determination and instrument testing shall comply with the foregoing table and said regulations.</p>	
		In-use Vehicle Testing								35	1.2	35	<p>1. Instrument testing:</p> <p>1.1 The test method for smoke pollution percentage (%) shall comply with the Diesel Motor Vehicles Exhaust Emissions Testing Methods and Procedures.</p> <p>1.2 The test method for smoke opacity (m⁻¹) shall comply with the Smoke Opacity Testing Methods and Procedures of Diesel Vehicles starting January 1, 2015.</p> <p>2. Starting from January 1, 2004, the vehicles be produced (date of production for domestic vehicles) or imported (on board date for imported vehicles) must comply with the standards.</p>

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			Type	CO	NMOG	NO _x	NMHC+NO _x	HCHO	PM	Smoke (% opacity)	Smoke (m ⁻¹ opacity)	Smoke (% pollution)				
Diesel and alternative clean fuel engine motor vehicles	October 1, 2006	New vehicle model certification, new vehicle testing	Heavy-Duty Trucks and Buses Trucks and Buses with gross weight more than 3500 kg. or Buses seated 10 or more passengers	10.0	—	—	2.4(2.5)	—	0.10	—	—	25	1. For heavy diesel and alternative clean fuel engine motors vehicles conducted US FTP-Transient Cycle driving on engine dynamometers. The emission standards are with g/bhp-hr as unit. 2. For light diesel and alternative clean fuel engine motors vehicles conducted US FTP-Transient Cycle driving on body dynamometers. The emission standards are with g/km as unit. 3. For heavy diesel and alternative clean fuel engine motor vehicles, hydrocarbon (HC) emissions shall employ non-methane hydrocarbon (NMHC); for light diesel and alternative clean fuel engine motor vehicles, hydrocarbon (HC) emissions shall employ non-methane organic gases (NMOG). 4. For heavy diesel and alternative clean fuel engine motor vehicles, the sum of non-methane hydrocarbon (NMHC) and nitrogen oxide (NO _x) emissions values shall comply with one of the following regulations: 4.1 The sum of non-methane hydrocarbon (NMHC) and nitrogen oxide (NO _x) emission standards shall be 2.4 grams per brake horsepower-hours (g/bhp-hr). 4.2 The sum of non-methane hydrocarbon (NMHC) and nitrogen oxide (NO _x) emission standards shall be 2.5 grams per brake horsepower-hours (g/bhp-hr) but the NMHC emission standard shall be 0.5 grams per brake horsepower-hours (g/bhp-hr). 5. Trucks with a gross weight (GVW) between 2,500 kg and 3,500 kg may comply with standards for heavy or light vehicles. 6. Durability test employing cumulative driving time, mileage, engine operation hours shall be performed as part of new vehicle model certification, and vehicle shall still comply with these standards. Warranty period means the effective use period of the emission control system. Durability test and warranty period requirements are shown in the following table. <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>Gross vehicle weight</td> <td>Durability test</td> <td>Warranty period</td> </tr> </table>	Gross vehicle weight	Durability test	Warranty period
			Gross vehicle weight	Durability test	Warranty period											
			Light-Duty Trucks Trucks with gross weight less than 2,500 kg	2.61	0.056	0.044	—	0.011	0.006	—	—	25				
Light-Duty Passenger Cars Passenger Cars with gross weight less than 3,500 kg	2.61	0.056	0.044	—	0.011	0.006	—	—	25							

		Testing					<p>1.1 The test method for smoke pollution percentage (%) shall comply with the Diesel Motor Vehicles Exhaust Emissions Testing Methods and Procedures.</p> <p>1.2 The test method for smoke opacity (m^{-1}) shall comply with the Smoke Opacity Testing Methods and Procedures of Diesel Vehicles starting January 1, 2015.</p> <p>2. Starting from October 1, 2006, the vehicles be produced or imported must comply with the standards. The vehicles with certificate of compliance issued may continue to be produced (date of production for domestic vehicles) or imported (on board date for imported vehicles) till December 31, 2006.</p>
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			Classification	Testing type	CO	HC	NMHC	NOx	THC+NOx	PM	PN (#/km)	Smoke (m ⁻¹)	Smoke (% opacity)	Smoke (m ⁻¹ opacity)	Smoke (% pollution)																		
Diesel and alternative clean fuel engine motor vehicles	January 1, 2012	New vehicle model certification, new vehicle testing	Heavy-Duty Trucks and Buses	Trucks and Buses with gross weight more than 3500 kg, or Buses seated 10 or more passengers	ESC	1.5	0.46	—	2.0	—	0.02	—	—	—	—	—	15	<p>1. For heavy diesel and alternative clean fuel engine motors vehicles, ESC · ETC and ELR test cycle are necessary and those cycles have to be conducted on engine dynamometers. The emission standards are with mg/kWh as unit.</p> <p>2. For light diesel and alternative clean fuel engine motors, New European Driving Cycle (NEDC) is necessary and it has to be conducted on body dynamometers. The emission standards are with g/km as unit.</p> <p>3. Within heavy diesel and alternative clean fuel engine motor vehicles, the dedicated natural gas engines shall be subject to ETC test cycle driving on engine dynamometer, and determined the CH₄ emission which standardized at 1.1 g/kWh or less.</p> <p>4. Trucks with gross vehicle weight (GVW) between 2,500 kg and 3,500 kg may comply with standards for heavy or light vehicles.</p> <p>5. Light multi-purpose vehicles shall comply with light truck standards.</p> <p>6. Durability test employing cumulative driving time, mileage, engine operation hours shall be performed as part of new vehicle model certification, and vehicle shall still comply with these standards. Warranty period means the effective use period of the emission control system. Durability test and warranty period requirements are shown in the following table.</p> <table border="1"> <thead> <tr> <th>Gross vehicle weight (GVW)</th> <th>Durability test</th> <th>Warranty period</th> </tr> </thead> <tbody> <tr> <td>Trucks and Passenger Cars, GVW ≤ 3,500 kg (Only for NEDC testing type)</td> <td>160,000 km</td> <td>5 years/100,000 km</td> </tr> <tr> <td>Trucks and Passenger Cars, GVW ≤ 3,500 kg Buses, GVW : 3,501~5,000 kg</td> <td>100,000 km</td> <td>5 years/100,000 km</td> </tr> <tr> <td>Trucks, GVW : 3,501~16,000 kg Buses, GVW : 5,001~7500 kg</td> <td>125,000 km</td> <td>6 years/200,000 km</td> </tr> <tr> <td>Trucks, GVW > 16,000 kg Buses, GVW > 7,500 kg</td> <td>167,000 km</td> <td>7 years/500,000 km</td> </tr> </tbody> </table> <p>7. The reference mass of tested vehicles shall be defined as: The curb weight of diesel vehicle plus 100 kg. The curb weight means the weight of diesel vehicle without driver and any loading, but the regular needs such as engine with lubricant, radiator with coolant, fuel tank with fuel, and necessary OEM equipment (spare tire and tools) shall be taken.</p> <p>8. Instrument testing methods for pollution percentage shall comply with the Diesel Motor Vehicles Exhaust Emissions</p>	Gross vehicle weight (GVW)	Durability test	Warranty period	Trucks and Passenger Cars, GVW ≤ 3,500 kg (Only for NEDC testing type)	160,000 km	5 years/100,000 km	Trucks and Passenger Cars, GVW ≤ 3,500 kg Buses, GVW : 3,501~5,000 kg	100,000 km	5 years/100,000 km	Trucks, GVW : 3,501~16,000 kg Buses, GVW : 5,001~7500 kg	125,000 km	6 years/200,000 km	Trucks, GVW > 16,000 kg Buses, GVW > 7,500 kg	167,000 km	7 years/500,000 km
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Buses, GVW : 5,001~7500 kg																																	
			ETC	4.0	—	0.55	2.0	—	0.03	—	—	—																					
			ELR	—	—	—	—	—	—	—	0.5	—																					
			Light-Duty Trucks	Trucks with gross weight less than 3,500 kg	Reference Mass ≤ 1305 kg	N E D C	0.500	—	—	0.180	0.230	0.0050	10 ¹⁰ × 10 ⁶	—	—	0.5	—																

Type of Mobile sources	Date of Implementation	Application	Emissions Standards											Remarks																	
			Driving Cycle Testing									Judgment by visual determination	Instrument testing																		
			Classification	Testing type	CO	THC	NOx	THC+NOx	PM	PN	NH ₃ (ppm)	Smoke (% opacity)	Smoke (m ⁻¹)		Smoke (% pollution)																
Diesel and alternative clean fuel engine motor vehicles	September 1, 2019	New vehicle model certification, new vehicle testing	Heavy-Duty Trucks and Buses	Trucks and Buses with gross weight more than 3500 kg. or Buses seated 10 or more passengers	WHSC	1500	130	400	—	10	8.0×10 ¹¹	10	—	0.5	—	<p>1. For heavy diesel and alternative clean fuel engine motors vehicles, World Harmonized Stationary Cycle (WHSC), World Harmonized Transient Cycle (WHTC) and World Harmonized Not-to-Exceed Cycle (WNTE) are necessary and those cycles have to be conducted on engine dynamometers. The emission standards are with mg/kWh as unit and particulate number (PN) is with #/kWh as unit.</p> <p>2. For light diesel and alternative clean fuel engine motors, New European Driving Cycle (NEDC) or World Harmonized Light vehicle Test Cycle (WLTC) is necessary and it has to be conducted on body dynamometers. The emission standards are with mg/km as unit and particulate number (PN) is with #/km as unit.</p> <p>3. Trucks with gross vehicle weight (GVW) between 2,500 kg and 3,500 kg may comply with standards for heavy or light vehicles.</p> <p>4. Light multi-purpose vehicles shall comply with light truck standards.</p> <p>5. Durability test employing cumulative driving time, mileage, engine operation hours shall be performed as part of new vehicle model certification, and vehicle shall still comply with emission standards. Warranty period means the effective use period of the emission control system. Durability test and warranty period requirements are shown in the following table.</p> <table border="1"> <thead> <tr> <th>Gross vehicle weight (GVW)</th> <th>Durability test</th> <th>Warranty period</th> </tr> </thead> <tbody> <tr> <td>Trucks and Passenger Cars, GVW ≤3,500 kg (for NEDC or WLTC testing cycle only)</td> <td>160,000 km</td> <td>5 years/100,000 km</td> </tr> <tr> <td>Trucks and Passenger Cars, GVW ≤3,500 kg Buses, GVW: 3,501~5,000 kg</td> <td>160,000 km</td> <td>5 years/160,000 km</td> </tr> <tr> <td>Trucks, GVW: 3,501~16,000 kg Buses, GVW: 5,001~7500 kg</td> <td>188,000 km</td> <td>6 years/300,000 km</td> </tr> <tr> <td>Trucks, GVW > 16,000 kg Trucks, GVW > 7,500 kg</td> <td>233,000 km</td> <td>7 years/700,000 km</td> </tr> </tbody> </table> <p>6. For NEDC or WLTC testing cycle, the reference mass of tested vehicle shall be defined in accordance with EU directive 692/2008/EC and the subsequent amendments.</p> <p>7. Instrument testing methods for smoke (m⁻¹): 7.1 The test method for smoke opacity (m⁻¹) shall comply with the Smoke Opacity Testing Methods and Procedures of Diesel Vehicles. 7.2 If smoke testing is in accordance with EU Directive</p>	Gross vehicle weight (GVW)	Durability test	Warranty period	Trucks and Passenger Cars, GVW ≤3,500 kg (for NEDC or WLTC testing cycle only)	160,000 km	5 years/100,000 km	Trucks and Passenger Cars, GVW ≤3,500 kg Buses, GVW: 3,501~5,000 kg	160,000 km	5 years/160,000 km	Trucks, GVW: 3,501~16,000 kg Buses, GVW: 5,001~7500 kg	188,000 km	6 years/300,000 km	Trucks, GVW > 16,000 kg Trucks, GVW > 7,500 kg	233,000 km	7 years/700,000 km
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WHTC	4000	160	460	—	10	6.0×10 ¹¹	10	—	0.5	—																					
WNTE	2000	220	600	—	16	—	—	—	—	—																					

					Reference Mass \leq 1305 kg	NEDC or WLTC	500	—	80	170	4.5	6.0×10^{11}	—	—	0.5	—	<p>72/306/EC or UN/ECE Regulation No 24 and their subsequent amendments, and the test results shall comply with the emission standards, shall be deemed to comply with these standards.</p> <p>8. Heavy diesel and alternative clean fuel engine motor vehicles shall employ emission standards of g/bhp-hr and during US FTP Transient Cycle driving, shall be subjected to engine dynamometer testing.</p> <p>Light diesel and alternative clean fuel engine motor vehicles shall employ emission standards of mg/km and during US FTP-75 driving cycle, shall be subjected to vehicle body dynamometer testing.</p> <p>The Emissions Standards in the table 1.</p> <p>Durability testing employing cumulative driving time, mileage, engine operation hours shall be performed as part of new vehicle model certification, and vehicle standards shall still comply with table 1. The effective period of exhaust emission control system and warranty in the table 2.</p> <p style="text-align: center;">Table 1 The Emissions Standards</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">Classification</th> <th>CO</th> <th>NMOG</th> <th>NMHC</th> <th>NOx</th> <th>HCHO</th> <th>PM</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Heavy-Duty Trucks and Buses</td> <td>Trucks and Buses with gross weight more than 3500 kg, or Buses seated 10 or more passengers</td> <td>10.0</td> <td>—</td> <td>0.14</td> <td>0.10</td> <td>—</td> <td>0.01</td> </tr> <tr> <td>Trucks and Passenger Cars with gross weight less than 3,500 kg</td> <td>1,000</td> <td>19</td> <td>—</td> <td>—</td> <td>3</td> <td>2</td> </tr> </tbody> </table> <p style="text-align: center;">Table 2 The effective period of exhaust emission control system and warranty</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Gross vehicle weight (GVW)</th> <th>Durability test</th> <th>Warranty period</th> </tr> </thead> <tbody> <tr> <td>Trucks or Passenger Cars, GVW <3,859 kg (Only for FTP-75 driving cycle test)</td> <td>15 years / 241,000 km</td> <td>15 years / 241,000 km</td> </tr> <tr> <td>Trucks, GVW:2501~3858 kg</td> <td>10 years / 160,000 km</td> <td>5 years / 80,000 km</td> </tr> <tr> <td>Buses, GVW:3501~3858 kg</td> <td>10 years / 176,000 km</td> <td>5 years / 80,000 km</td> </tr> <tr> <td>3,859~8,852 kg</td> <td>10 years / 176,000 km</td> <td>5 years / 80,000 km</td> </tr> <tr> <td>8,853 ~14,981 kg</td> <td>10 years / 296,000 km</td> <td>5 years / 160,000 km</td> </tr> <tr> <td>GVW>14,982 kg</td> <td>10 years / 696,000 km or 22,000 hours of engine operation</td> <td>5 years / 160,000 km</td> </tr> </tbody> </table> <p>9. Starting from September 1, 2019, the vehicles be produced (date of production for domestic vehicles) or imported (on board</p>	Classification		CO	NMOG	NMHC	NOx	HCHO	PM	Heavy-Duty Trucks and Buses	Trucks and Buses with gross weight more than 3500 kg, or Buses seated 10 or more passengers	10.0	—	0.14	0.10	—	0.01	Trucks and Passenger Cars with gross weight less than 3,500 kg	1,000	19	—	—	3	2	Gross vehicle weight (GVW)	Durability test	Warranty period	Trucks or Passenger Cars, GVW <3,859 kg (Only for FTP-75 driving cycle test)	15 years / 241,000 km	15 years / 241,000 km	Trucks, GVW:2501~3858 kg	10 years / 160,000 km	5 years / 80,000 km	Buses, GVW:3501~3858 kg	10 years / 176,000 km	5 years / 80,000 km	3,859~8,852 kg	10 years / 176,000 km	5 years / 80,000 km	8,853 ~14,981 kg	10 years / 296,000 km	5 years / 160,000 km	GVW>14,982 kg	10 years / 696,000 km or 22,000 hours of engine operation	5 years / 160,000 km
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					Reference Mass > 1305 kg and \leq 1760 kg	NEDC or WLTC	630	—	105	195	4.5	6.0×10^{11}	—	—	0.5	—																																													
					Reference Mass > 1760 kg	NEDC or WLTC	740	—	125	215	4.5	6.0×10^{11}	—	—	0.5	—																																													

			Light-Duty Passenger Cars	Passenger Cars with gross weight less than 3,500 kg	NEDC or WLTC	500	—	80	170	4.5	6.0×10 ¹¹	—	—	0.5	—	date for imported vehicles) must comply with the standards, in addition, an On Board Diagnostics System (OBD) must be equipped on these vehicles. The light duty trucks and light duty passenger cars with certificate of compliance issued before August 31, 2019 may continue to be produced (date of production for domestic vehicles) or imported (on board date for imported vehicles) till August 31, 2020. The heavy duty engines with certificate of compliance issued prior to August 31, 2018 may carry over till August 31, 2021. The heavy duty vehicles with the above mentioned engines may be produced (date of production for domestic vehicles) or imported (on board date for imported vehicles) till August 31, 2021.
			In-use Vehicle Testing										—	0.6	—	1. Instrument testing method for smoke opacity (m ⁻¹) shall comply with the Smoke Opacity Testing Methods and Procedures of Diesel Vehicles. 2. Starting from September 1, 2019, the vehicles be produced (date of production for domestic vehicles) or imported (on board date for imported vehicles) must comply with the standards, in addition, an On Board Diagnostics System (OBD) must be equipped on these vehicles.