

Motor Vehicle Noise Control Standards

Article 1 The Standards are determined pursuant to Article 11, Paragraph 1 of the Noise Control Act.

Article 2 Terms used in these Standards are defined as follows:

- I. Acceleration noise standard value means the acceleration noise level measured at a certain distance, in a certain gear while driving.
- II. Stationary noise standard value means the stationary noise level measured at a certain engine speed.
- III. Scientific instrument means the instruments and equipment that comply with noise inspection and testing methods announced in accordance with Article 20, Paragraph 3 of the Noise Control Act.
- IV. New vehicle model certification means the new model vehicle noise review and testing performed after each type of new vehicle model has been manufactured or imported, and prior to sale or usage.
- V. New vehicle testing means noise condition testing performed after a vehicle has passed new vehicle model certification and following a certain period of time or after a designated quantity has been manufactured or imported.
- VI. Engine running noise testing of in-use vehicle means non-regular vehicle noise testing at car parks (stations), by the roadside, at diesel emissions testing stations or other suitable locations performed by the competent authority.
- VII. In-use vehicle testing means the engine running noise measurement of a motor vehicle carried out with scientific instrument installed in a fixed or non-fixed manner.
- VIII. "PMR" denotes the Power-to-Mass Ratio Index, means the ratio of rated maximum net power to mass in running order as defined: total engine net power (kW)/ vehicle mass in running order (metric ton).

Article 3 Motor vehicle noise control limits are provided as following:

- I. The acceleration and stationary noise control limits of 5th phase motor vehicles are shown as attached table 1.
- II. The acceleration and stationary noise control limits of 6th phase motor vehicles are shown as attached table 2.
- III. The acceleration running noise control limits of in-use vehicles are shown as attached table 3.

Article 4 These standards shall be implemented from the date of issuance, unless another implementation date is specified.

Testing items			Sedans, Station wagons ≤ 4000c.c.	Sedans, Station wagons > 4000c.c.	minibuses, delivery trucks, less than 3.5 tons	Delivery trucks, city buses over 3.5 tons		Motorcycles				
						≤ 150kW	> 150kW	>= 50c.c	> 50c.c. ≤ 100c.c.	> 100c.c. ≤ 175c.c	> 175c.c. ≤ 550c.c	> 550c.c.
Fifth Phase: 1 st January 2015(Motorcycles) & 1 st January 2016(all other vehicles)	New vehicle Model certification	Acceleration noise	74	74	77	78	80	72	75	77	80	80
		Stationary noise	93 (100)	96 (100)	93	93	99	84	90	90	90	94
	In-use vehicle testing	Stationary noise	93 (100)	96 (100)	93	93	99	84	90	90	90	94

Notes.

Fourth and Fifth phase control standards:

- After January 1, 2007, vehicles manufactured domestically and imported vehicles must comply with fourth phase control standards.
- After January 1, 2015, motorcycles manufactured domestically and imported vehicles must comply with fifth phase control standards.
- After January 1, 2016, all vehicles include sedans, station wagons, minibuses, delivery trucks, city bus etc., manufactured domestically and imported vehicles must comply with fifth phase control standards.
- When new vehicles are tested in accordance with Article 13 of the Motor Vehicle Type Noise Testing Compliance Verification Issuance and Revocation and Random Noise Testing Handling Regulations, the acceleration noise standard value shall be the new vehicle model certification acceleration noise standard increased by 1dB(A) .
- For sedans, station wagons and minibuses and small delivery trucks under 3.5 tons equipped with direct fuel injected diesel engines, the listed standard value of new type vehicle testing acceleration noise standard values shall be increased by 1 dB(A).
- For new type vehicle testing acceleration noise standard values of off-road vehicles over 2 tons (in accordance with 70/156 EEC Annex II off-road vehicle regulations) with engine power greater than 150 kW, the listed standard value shall be increased by 2 dB(A); for engine power less than 150 kW, the listed standard value shall be increased by 1 dB(A).
- For five-gear manual transmission sedans and station wagons, minibuses under 3.5 tons, other vehicles with an engine rate greater than 140 kW and power capacity greater than 75 kW per ton and those in third gear at 50 km/h within the testing area that exceed 61 km/h the listed standard value of the new vehicle model certification acceleration noise standard value shall be increased by 1 dB(A).
- For new vehicle type certification and new vehicle testing of sedans and station wagons with engines located in the rear, the stationary noise standard value shall be 100 dB(A). (The plane perpendicular to the front edge of the vehicle engine block and the vehicle's longitudinal center line; if located behind the center of the line connecting the forwardmost axial center and the rearmost axial center, the vehicle shall be considered to have a rear engine)
- For fire trucks and disaster relief vehicles (including vehicles with fire trucks or disaster relief vehicle chassis) with a gross weight in excess of 3.5 tons, the new vehicle model certification and new vehicle testing acceleration noise standard value shall be 81dB(A) for engine power less than 150kW and 83 dB(A) for engine power equal to or greater than 150kW.

Attached table 2—acceleration and stationary noise control limits for 6th phase motor vehicles

Noise control limits of category L																								
Limits Inspection items		Categories		Accelerated noise								Stationary noise												
				PMR ≤ 25		25<PMR ≤ 50		PMR>50		≤ 50c.c		> 50c.c. ≤ 100c.c		> 100c.c. ≤ 175c.c.		> 175c.c. ≤ 550c.c.		> 550c.c.						
New type approval and new vehicle inspection				73		74		77		81		87		87		87		92						
In-use vehicle inspection				-		-		-		84		90		90		90		94						
Note		<div>1. Vehicle types of category L test procedure shall follow Noise Measurement Method of Motor Vehicle announced by Central Competent Authority.</div> <div>2. Domestic (depends on date of manufacture) and imported (depends on date of shipment) new type vehicle types of category L shall comply with the noise control limits for 6th phase motor vehicle after 2017/01/01.</div> <div>3. Domestic (depend on date of manufacture) and imported (depend on date of shipment) vehicle types of category L shall comply with the noise control limits for 6th phase motor vehicle after 2018/01/01.</div> <div>4. For motor vehicle types of category L3 tested according to paragraph 13 of Regulations Governing the Issuance and Replacement of Compliance Certification and Sample Testing for New Vehicle Model Noise Inspections (Inspection Regulation), the noise control limits shall be increased by 1 dB(A) from the values of this table. For the applications of new vehicle type approval using noise certifications issued by EU members, the exhaust system contained fibrous sound absorbing material shall perform conditioning test. Meanwhile, noise test results in acceleration and stationary shall comply with the noise control limits of this table.</div> <div>5. For vehicle types of category L3 with PMR > 50 and acceleration noise test in 2nd gear only, the noise control limits of new type approval and new vehicle inspection shall be increased by 1 dB(A) from values in this table until 2018/12/31, and the noise control limits of new type approval and new vehicle inspection shall comply with the requirements of above table from 2019/01/01.</div> <div>6. For vehicle types of category L3 with PMR > 25, the reported vehicle sound pressure level at wide-open-throttle after being reduced by 1 dB(A), shall not exceed noise control limits by more than 5 dB(A).</div> <div>7. For vehicle types of category L5, the noise control limit of new type approval and new vehicle inspection is 80 dB(A).</div> <div>8. For vehicle types of category L with PMR > 100 and engine displacement > 175c.c. tested according to paragraph 13 of Inspection Regulation, the noise control limits in stationary shall be increased by 2 dB(A) from values in this table.</div> <div>9. Vehicles of categories L tested according to paragraphs 13 and 14 of Inspection Regulation shall perform Additional Sound Emission Provisions (A.S.E.P.) procedure; meanwhile noise test results shall comply with the requirements of Noise Measurement Method of Motor Vehicle.</div> <div>10. Vehicle types of categories L3 and L5 correspond to the motor vehicle type requirements of “Vehicle Safety Inspection Standard” announced by MOTC.</div> <div>11. The 6th to 10th contents of this Note have come into force since 2018/01/01.</div>																						
Noise control limits of categories M and N																								
Limits Inspection items		Categories		Accelerated noise												Stationary noise								
				Passenger vehicle								Cargo vehicle				Sedans and station wagons		Passenger car, truck and announced special vehicle ≤3.5 tons		Buses, trucks and announced special vehicles > 3.5 tons				
				M ₁				M ₂				M ₃		N ₁								N ₂		N ₃
				PMR ≤ 120	120 < PMR ≤ 160	PMR > 160	Seats ≤ 4; R-point height < 450 mm	G.V.W. ≤ 2.5 tons	2.5 tons < G.V.W. ≤ 3.5 tons	G.V.W. > 3.5 tons; rated engine power ≤ 135 kW	G.V.W. > 3.5 tons; rated engine power > 135 kW	Rated engine power ≤ 150 kW	150 kW < Rated engine power ≤ 250 kW	Rated engine power > 250 kW	G.V.W. ≤ 2.5 tons	G.V.W. > 2.5 tons	Rated engine power ≤ 135 kW	Rated engine power > 135 kW	Rated engine power ≤ 150 kW	150 kW < Rated engine power ≤ 250 kW	Rated engine power > 250 kW	< 4000 c.c.	≥ 4000 c.c.	
New type approval and new vehicle inspection	1 st phase	72	73	75	75	72	74	75	75	76	78	80	72	74	77	78	79	81	82	93 (98)	96 (98)	93	93	99
	2 nd phase	70	71	73	74	70	72	73	74	74	77	78	71	73	75	76	77	79	81					
	3 rd phase	68	69	71	72	69	71	72	72	73	76	77	69	71	74	75	76	77	79					
In-use vehicle inspection				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	93 (100)	96 (100)	93	93	99
Note		<div>1. Vehicle types of categories M and N vehicle test procedure shall follow UN/ECE Regulation NO. 51-03 and its amendments. Test site shall comply with requirements of ISO10844:2014 since 2021/01/20.</div> <div>2. For vehicle types other than category N2 that have obtained type approval certifications of 5th phase since 2018/7/1, applicants may apply to continue use, modify and extension of certifications until 2023/06/30, and until 2024/06/30 for vehicle types of category N2.</div> <div>3. Domestic (depend on date of manufacture) and imported (depend on date of shipment) vehicles of category M and N shall comply with the requirements of the noise control limits of 6th phase vehicle during each phase as following:<div>(a) Vehicle types of categories M1, M2, and N1:<div>1) The 1st phase came into force on 2018/07/01 and may apply to continued use, modification and extension of certifications until 2023/06/30.</div><div>2) The 2nd phase came into force on 2021/07/01 and may apply to continued use, modification and extension of certifications until 2027/06/30.</div><div>3) The 3rd phase came into force on 2025/07/01.</div></div><div>(b) Vehicle types of category M3:<div>1) The 1st phase came into force on 2018/07/01 and may apply to continued use, modification and extension of certifications until 2023/06/30.</div><div>2) The 2nd phase came into force on 2021/07/01 and may apply to continued use, modification and extension of certifications until 2028/06/30.</div><div>3) The 3rd phase came into force on 2027/07/01.</div></div><div>(c) Vehicle types of category N2:<div>1) The 1st phase came into force on 2018/07/01 and may apply to continued use, modification and extension of certification until 2024/06/30.</div><div>2) The 2nd phase came into force on 2023/07/01 and may apply to continued use, modification and extension of certification until 2028/06/30.</div><div>3) The 3rd phase came into force on 2027/07/01.</div></div><div>(d) Vehicle types of category N3:<div>1) The 1st phase came into force on 2018/07/01 and may apply to continued use, modification and extension of certification until 2023/06/30.</div><div>2) The 2nd phase came into force on 2021/07/01 and may apply to continued use, modification and extension of certification until 2028/06/30.</div><div>3) The 3rd phase came into force since 2027/07/01.</div></div></div> <div>4. For motor vehicle types of categories M and N tested according to paragraph 13 Inspection Regulation, the noise control limits of accelerated and stationary noise shall be increased by 1 dB(A) from the values of this table, and the provision of stationary noise is only for sedans and station wagons with rear-engine design. For the applications of new vehicle type approval using noise certifications issued by EU members, the exhaust system contained fibrous sound absorbing material shall perform conditioning test. Meanwhile, noise test results in acceleration and stationary shall comply with the noise control limits of this table.</div> <div>5. The control limits of the following vehicle types can be equivalent to values of vehicle types of category N1 with gross vehicle weight (G.V.W.) > 2.5 metric tons:<div>(a) Vehicle types of category M1 divided from category N1 with G.V.W. > 2.5 metric tons and R-point > 850mm.</div><div>(b) Vehicle types of category N1 with G.V.W. ≤2500 kg, engine displacement ≤660 c.c., PMR ≤35, and the horizontal distance from front axle center to R-point<1100mm.</div></div> <div>6. For off-road vehicles (which are defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3.), document ECE/TRANS/WP.29/78/Rev.3, Para. 2, fire trucks and disaster relief vehicles (include chassis developing stage) with G.V.W. > 3.5 metric tons and proving documents, the accelerated noise shall meet the requirements as follows:<div>(a) For vehicle types of categories M3 and N3, the noise control limits in acceleration shall be increased by 2 dB(A) from the values of this table.</div><div>(b) For vehicle types of category M1 with G.V.W. > 2.0 metric tons and the other categories, the noise control limits in acceleration shall be increased by 1 dB(A) from the value of this table.</div></div> <div>7. For vehicle types of category M1 complied with the requirements of wheelchair accessible vehicles of “Vehicle Safety Inspection Standards” announced by the MOTC, the noise control limits in acceleration shall be increased by 2 dB(A) from the value of this table.</div> <div>8. For vehicle types of category M3 equipped with a gasoline engine only, the noise control limits in acceleration shall be increased by 2 dB(A) from the value of this table.</div>																						

	<p>9. For sedans and station wagons with rear-engine design, the noise control limits shall not exceed 98 dB(A) for applications of new vehicle type approval and new vehicle inspection. (The motor vehicle would be considered as having a rear-engine design if the plane of front edge of engine body, which is perpendicular to the longitudinal direction of the vehicle, is located behind the middle point of the connected line made of each center of front and rear axle.)</p> <p>10. Motor vehicles of categories M and N tested according to paragraphs 13 and 14 of Inspection Regulation shall perform Additional Sound Emission Provisions (A.S.E.P.) procedure; meanwhile, noise test results in each test procedure shall comply with the requirements of UN/ECE Regulation NO. 51-03 and its amendments.</p> <p>11. Vehicle types of categories M1, M2, M3, N1, N2, and N3 correspond to the motor vehicle type requirements of “Vehicle Safety Inspection Standards” announced by the MOTC.</p> <p>12. The definition of R-point corresponds to paragraph 2.10 of item No. 78 of “Vehicle Safety Inspection Standards” announced by the MOTC.</p> <p>13. The 6th phase vehicle noise control standards came into force on 2018/07/01.</p>
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Attached table 3—Noise Control Limits for In-use Motor Vehicles

noise control limits speed limit(km/h) Inspection items	Acceleration running noise control limits of in-use vehicle	
	≤50	50<speed limit≤70
In-use vehicle determination	86	90
Note	1. The value of the determined sound level shall be rounded to the first digit after the decimal point to determine whether it meets the control limits. 2. Fire trucks, ambulances, security vehicles, engineering rescue vehicles, and toxic chemical disaster emergency response vehicles on duty and other special vehicles approved by the competent authority are not subject to this table. 3. The in-use motor vehicle noise control standards came into force on 2021/01/01.	