

The trend of noise regulation in Japan

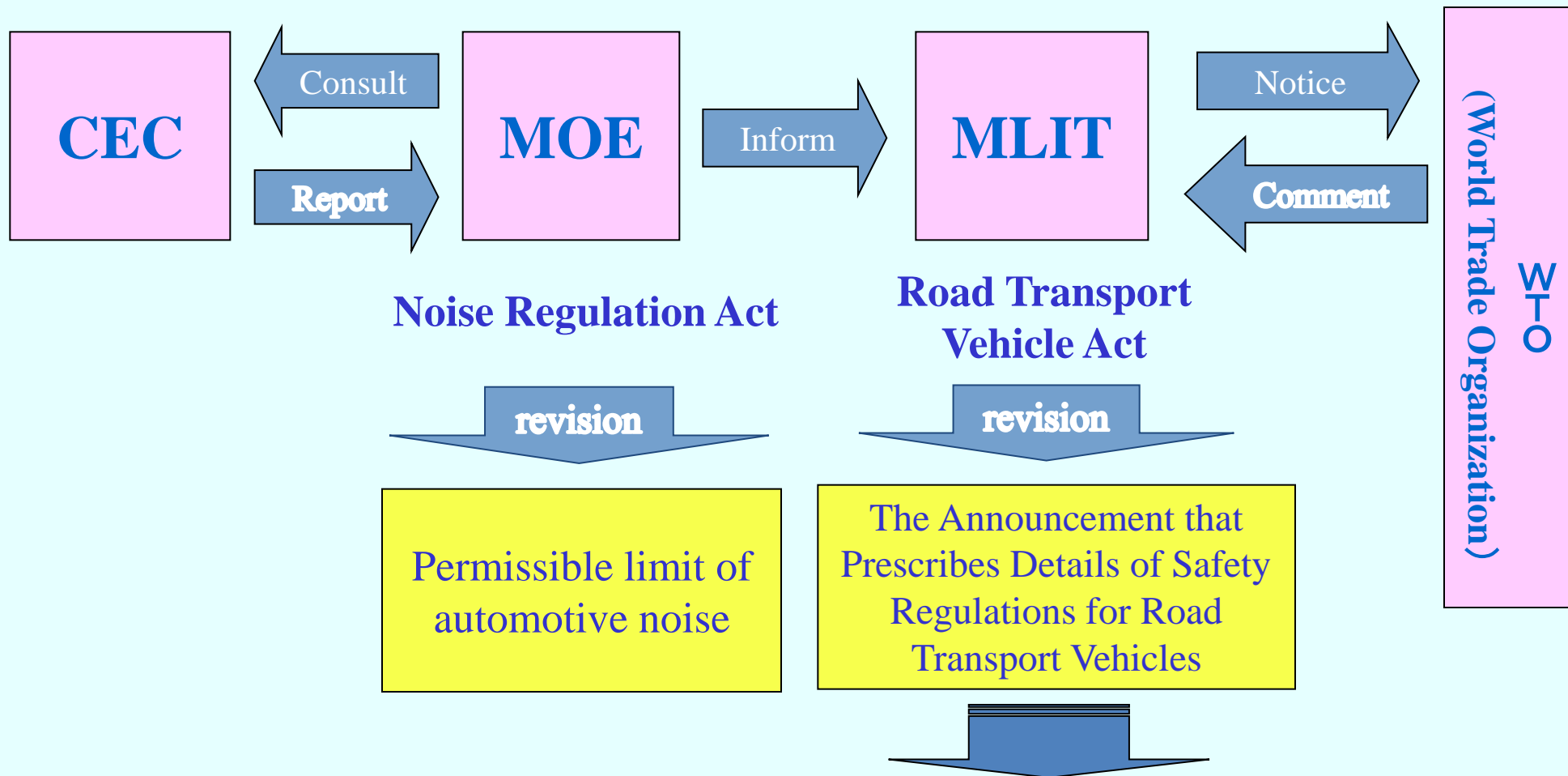
Ministry of Land, Infrastructure, Transport and Tourism

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Japan Automobile Standards Internationalization Center

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CEC: Central Environment Council

MOE: Ministry of the Environment

MLIT: Ministry of Land, Infrastructure, Transport and Tourism

Enforcement of regulation

Current vehicle noise regulation

Constant speed test
(introduced in 1951)

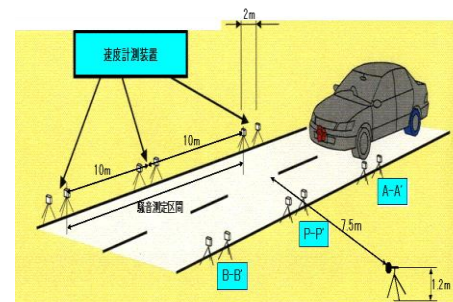
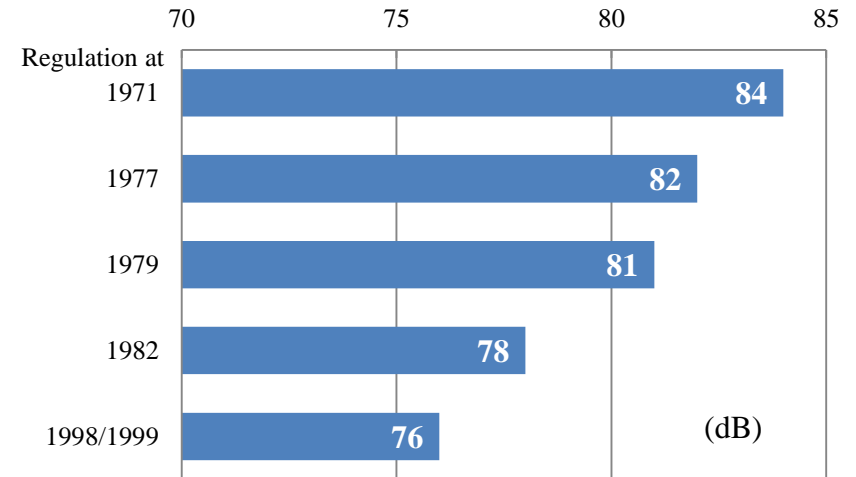
* Constant speed test for motorcycles was abolished when UN-Regulation No.41 was introduced in Japan.

Acceleration test
(introduced in 1971)

* Acceleration test for motorcycles was abolished and replaced by 'acceleration test' and 'ASEP' when UN-Regulation No.41 was introduced in January 2014.

Stationary test
(introduced in 1986)

Transition of Acceleration noise regulation value on passenger cars



■ Noise regulation value has been gradually strengthened.

【 Scope 】 M and N category

【 Outline of the Amendment 】

※ “GVWR” means technically permissible maximum laden mass.

Current regulations in Japan

- Constant speed test
- Acceleration test
(Full throttle acceleration)
- Stationary test
(Absolute value)



Next regulation harmonizing with R51-03

- (● Constant speed test is not applied.)
- Acceleration test
(Normal driving condition in urban traffic)
- Additional Sound Emission Provisions (ASEP)
- Stationary test
 - * New Type Approval Vehicles : Measurement only
 - * In use car : Relative value
- Compressed air noise (GVWR >2.8t)

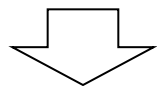
【 Date of enforcement 】

	Phase1	Phase2
New Type Approval Vehicles (Except the import vehicle)	[1 October] 2016	[1 September] 2020 (N2 : 2022)
Other than above mentioned	Not applied	[1 September] 2022 (N2 : 2023)

【Regulation value】

(Same as UNR51-03))

Phase 3 has been designed in UNR51-03 on the assumption that review will be conducted if necessary.



Japan will not adopt Phase 3 for the time being.

Veh. Cat.	Vehicles used for the carriage of passengers	Phase 1	Phase 2
M1	PMR* ¹ ≤ 120	72	70
	120 < PMR ≤ 160	73	71
	PMR > 160	75	73
	PMR > 200, no. of seats ≤ 4, R-point height < 450mm from the ground	75	74
M2	GVWR* ² ≤ 2.5 t	72	70
	2.5 t < GVWR ≤ 3.5 t	74	72
	GVWR > 3.5 t; P _n * ³ ≤ 135 kW	75	73
	GVWR > 3.5 t; P _n > 135 kW	75	74
M3	P _n ≤ 150 kW	76	74
	150 kW < P _n ≤ 250 kW	78	77
	P _n > 250 kW	80	78
Veh. Cat.	Vehicles used for the carriage of goods	Phase 1	Phase 2
N1	GVWR ≤ 2.5 t	72	71
	GVWR > 2.5 t	74	73
N2	P _n ≤ 135kW	77	75
	P _n > 135 kW	78	76
N3	P _n ≤ 150 kW	79	77
	150 kW < P _n ≤ 250 kW	81	79
	P _n > 250 kW	82	81

*1 PMR (Power to Mass Ratio) means following formula.

$$\langle \text{Maximum output power (kw)} / \text{Mass of a vehicle in running order(kg)} \rangle \times 1000$$

*2 GVWR : Technically permissible maximum laden mass (t)

*3 P_n: Rated Maximum net power (kW)

Next tire noise regulation

【 Scope 】

➤ M, N and O category

* Automobile which wear the following tires is out of scope.

- Tires having a nominal rim diameter code ≤ 10 (or ≤ 254 mm) or ≥ 25 (or ≥ 635 mm)
- Tires with a speed rating less than 80 km/h
- Professional off-road tires.
- ~~Temporary use spare tires~~
- ~~Tires designed for competitions~~
- ~~Tires intended to be fitted to road vehicles of categories other than M, N and O~~
- ~~Tires fitted with additional devices to improve traction properties (e.g. studded tires)~~
- ~~Tires designed only to be fitted to vehicles registered for the first time before 1 October 1990.~~
- Tires conforming to Regulation No.75
- Stud-less tires*

*Japanese original tires which is designed to ensure the safety on both ice and snow

【Date of enforcement】

Category of vehicle	Date of enforcement	
	New Type Approval Vehicles (Except PHP Vehicle)	Other than above mentioned
M1	1 April 2018	1 April 2022
M2、N1、O1、O2	1 April 2019	1 April 2024
M3、N2、N3、O3、O4	1 April 2023	1 April 2026

Next tire noise regulation

【Regulation value】

Tire noise

(Same as UNR117)

Class of tire	Normal Section Width (mm)	Limit dB (Stage 2)
C1	$w \leq 185$	70
	$185 < w \leq 245$	71
	$245 < w \leq 275$	72
	$275 < w$	74

The above limits shall be increased by 1 dB(A) for "snow tyre for use in severe snow conditions", extra load tyres or reinforced tyres, or any combination of these classifications.

Adopt the limit value of Stage 2

Class of tire	Normal Section Width (mm)	Limit dB(Stage 2)	
		Other	Traction tires
C2	Normal tire	72	73
	Snow tire	72	73
	Severe snow tire	73	75
	Special use tire	74	75
C3	Normal tire	73	75
	Snow tire	73	75
	Severe snow tire	74	76
	Special use tire	75	77

Rolling resistance

(Same as UNR117)

Class of tire	MAX value(Stage 1)	MAX value(Stage 2)
C1	12.0	10.5
C2	10.5	9.0
C3	8.0	6.5

For "snow tire for use in severe snow conditions", the limits shall be increased by 1 N/kN.

Unit: N/kN

Adopt the limit value of Stage 2

【Regulation value】

Wet grip

(Same as UNR117)

Category of use		Wet grip index(G)				
		C1	C2 (coming into force at October 2014)		C3 (coming into force at October 2014)	
			Other	Traction tires	Other	Traction tires
Normal tire		≥ 1.1	≥ 0.95	≥ 0.85	≥ 0.80	≥ 0.65
Snow tire		≥ 1.1	≥ 0.95	≥ 0.85	≥ 0.65	≥ 0.65
Severe snow tire	with a speed symbol ("R" and above, including "H") indicating a maximum permissible speed greater than 160 km/h	≥ 1.0	≥ 0.85	≥ 0.85	≥ 0.65	≥ 0.65
	with a speed symbol ("Q" or below excluding "H") indicating a maximum permissible speed not greater than 160 km/h	≥ 0.9				
Special use tire			≥ 0.85	≥ 0.85	≥ 0.65	≥ 0.65

Schedule of enforcement of R117-02 in Japan

- Period of Public Comment: From 31 July 2015 to 4 September 2015
- Publication and Enforcement of the revision of the Safety Regulations for Road Transport Vehicles on the same day: 8 October 2015 (tbd)

Schedule of enforcement of R51-03 in Japan

- Period of Public Comment: December 2015 (tbd)
- Publication and Enforcement of the revision of the Safety Regulations for Road Transport Vehicles on the same day: March 2016 (tbd)

Japanese contribution to the GRB activities for the future

Japan will participate positively in the GRB activities as ever, considering the issues discussed in GRB such as the limit values for R51-03 Phase 3.

Thanks for your attention !

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