

Comparison of vehicle categories under Japanese regulations with ECE
(Additional information for TRANS/WP.29/GRSP/2002/16 and
TRANS/WP.29/GRSP/2002/17)

TRANSMITTED BY EXPERT FROM JAPAN

Background

This document provides additional information for the proposals TRANS/WP.29/GRSP/2002/16 and TRANS/WP.29/GRSP/2002/17 submitted by Japan to introduce 3-point seat belts into N1 vehicles.

Japanese regulations require smaller commercial vehicles to be equipped with 3-point seat belts on the rear outboard seating positions. However, the definition of vehicle category is different from that of the ECE rules. As a reference for GRSP, the differences are summarized in Table 1, and a translation of the text of the Japanese regulation is attached.

Table 1 Vehicle category definition for seat belt equipment
 (Note: The table concerns only vehicles for the carriage of goods.)

Vehicle size	Japan (Article 22-3)		ECE R14 & R16	
	Category definition	Minimum anchorage requirement	Category definition	Minimum anchorage requirement
Small	Smaller than "Normal size vehicle" defined below.	Outboard: 3P Other: 2P	N1: Maximum mass not exceeding 3.5t	Front outboard: 3P
Medium	"Normal size vehicle" (4.7m x 1.7m x 2.0m or bigger, or gasoline engine of 2.0 liters or more)	2P	N2: Maximum mass exceeding 3.5t but not exceeding 12t	"Exposed" front inboard: 2P
Large			N3: Maximum mass exceeding 12t	"Non-exposed" front inboard: 0
				Other than above: 2P

Article 22-3 (Seat belts)

1. Each motor vehicle of a category enumerated in the left column of the following Table shall be provided with seat belts and seat belt anchorages enumerated in the right column of the same Table so as to restrain the occupants on the seats enumerated in the middle column of the same Table from moving forward or inclining their upper torsos forward excessively when the motor vehicle concerned is subjected to impacts by collisions, etc. However, this provision shall not apply to two-wheeled motor vehicles with or without sidecar and motor vehicles with a maximum speed of less than 20 km/h nor to the seats enumerated in Item (1) to (5) inclusive of Paragraph 3 of Article 22 (except those seats where only the seatback section can be folded in the case of the seats enumerated in Item (2)) and those seats for infants in the case of infants-carrying vehicles.

Category of motor vehicles	Category of seats	Kinds of seat belts
<p>Ordinary-sized motor vehicles used exclusively for carriage of passengers, small-sized motor vehicles and mini-sized motor vehicles with a riding capacity of 10 persons or less.</p>	<p>Those forward-facing seats adjacent to either side of the motor vehicle (hereinafter referred to as “the driver’s seat, etc.” in this Table)</p>	<p>Seat belts so as to restrain passengers on the seats concerned from moving forward and inclining the upper half of their bodies forward excessively (hereinafter referred to as “Type 2 seat belts”)</p>
	<p>Seats other than the driver’s seat, etc.</p>	<p>Seat belts so as to restrain passengers on the seats concerned from moving forward (except Type 2 seat belts, hereinafter referred to as “Type 1 seat belts”) or Type 2 seat belts</p>
<p>Ordinary-sized motor vehicles (except motor vehicles used exclusively for carriage of passengers with a riding capacity of 10 persons or less and passenger-carrier motor vehicles which are operated periodically on predetermined routes other than those concerned with high-speed motor vehicle national highways, etc.), small-sized motor vehicles (except those with a riding capacity of 10 persons or less)</p>	<p>All seats</p>	<p>Type 1 seat belts or Type 2 seat belts</p>
<p>Ordinary-sized motor vehicles (limited only to motor vehicles used exclusively for carriage of passengers with a riding capacity of 11 persons or more and passenger-carrier motor vehicles which are operated periodically on predetermined routes other than those concerned with high-speed motor vehicle national highways, etc.)</p>	<p>Driver’s seat and other front seat</p>	<p>Type 1 seat belts or Type 2 seat belts</p>

2. The anchorage of a seat beat in the preceding Paragraph shall comply with the following requirements:

- (1) The anchorage shall fully withstand load applied by the seat belt in the collision of the motor vehicle concerned;
- (2) The anchorage shall be constructed so that it may not loosen or become deformed by vibration or shocks, etc.;
- (3) The anchorage shall be located so that it may allow an efficient function of the seat belt installed there;
- (4) The anchorage shall be located so that it is neither damaged nor causes hindrance upon boarding and alighting;
- (5) The anchorage shall allow an easy installation of a seat belt.

3. The seat belts provided for in Paragraph 1 shall comply with the following requirements:

- (1) The seat belt shall be constructed so that it may unlikely cause the wearers' injury when the motor vehicle concerned is subjected to impacts by collisions, etc.;
- (2) Type 2 seat belt shall be constructed so that it may restrain the wearers concerned from moving forward and inclining their upper torsos forward excessively when the motor vehicle concerned is subjected to impacts by collision, etc.;
- (3) Type 1 seat belt shall be constructed so that it may restrain the wearers concerned from moving forward when the motor vehicle concerned is subjected to impacts by collision, etc.;
- (4) The seat belt shall be constructed so that it may allow easy fastening, releasing and adjustment of the belt length;
- (5) In the case of Type 2 seat belt and Type 1 seat belt to be provided for on the driver's seat, they shall be constructed so that the wearers concerned may easily move their waists and the upper halves of their bodies during normal driving.

4. Any ordinary-sized motor vehicle used exclusively for carriage of passengers, small sized motor vehicle and mini-sized motor vehicle with a riding capacity of 10 persons or less shall be provided with a warning device

to give warning to the driver in his seat when the seat belt for the driver's seat provided for in Paragraph 1 is not worn.

Attached Table 1 (Related to Article 2)

Category of Motor vehicles	Construction and engine of motor vehicles	Dimension of motor vehicles		
		Length	Width	Height
Ordinary-sized motor vehicle	Motor vehicles other than small-sized motor vehicles, mini-sized motor vehicles, large-sized special motor vehicles, and small-sized special motor vehicles.			
Small-sized motor vehicles	Motor vehicles and trailers with four or more wheels, having the dimension specified in the right column, excluding mini-sized motor vehicles, large-sized special motor vehicles and small-sized special motor vehicles (in the case of motor vehicles with internal combustion engines (except motor vehicles fueled by light oil and only by compressed natural gas), limited to vehicles with an engine displacement of 2.00 or less).	4.70 m or less	1.70 m or less	2.00 m or less
	Two-wheeled motor vehicles with or without sidecars, or three-wheeled motor vehicles other than mini-sized motor vehicles, large-sized special motor vehicles and small-sized special motor vehicles.			
Mini-sized motor vehicles	Motor vehicles other than two-wheeled motor vehicles with or without sidecars, and trailers having the dimensions specified in the right column, except for small-sized special motor vehicles and pole trailers (in the case of motor vehicles with internal combustion engines, limited to those with an engine displacement of 0.660 or less).	3.40 m or less	1.48 m or less	2.00 m or less

Category of motor vehicles	Construction and engine of motor vehicles	Dimension of motor vehicles		
		Length	Width	Height
Mini-sized motor vehicles	Two-wheeled motor vehicles with or without sidecars having the dimensions specified in the right column, except small-sized special motor vehicles (in the case of motor vehicles with internal combustion engines, limited to those with an engine displacement of 0.250 or less).	2.50 m or less	1.30 m or less	2.00 m or less
Large-sized special motor vehicle	<p>1. Motor vehicles given below, except small-sized special motor vehicles</p> <p>(a) Shovel loaders, tire rollers, road rollers, motor graders, road stabilizers, motor scraper, rotary snowplows, asphalt finishers, tire dozers, motor sweepers, dumpers, wheeled hammers, wheeled brakers, fork lift trucks, fork loaders, wheeled cranes, straddle carriers, turret-type platform trucks, motor vehicles whose chassis bend while driving, motor vehicles with caterpillar tracks designated by the Minister of Land, Infrastructure and Transport, and motor vehicles of special construction designated by the Minister of Land, Infrastructure and Transport.</p> <p>(b) Agricultural tractors, agricultural chemicals sprinklers, sickling and thrashing vehicles, rice-planting vehicles, and vehicles for agricultural work designated by the Minister of Land, Infrastructure and Transport.</p> <p>2. Pole-trailers and motor vehicles of special construction designated by the Minister of Land, Infrastructure and Transport.</p>			
Small-sized special motor vehicle	1. Motor vehicles posted in Item (1)(a) of the preceding Paragraph that have dimensions that come under those specified in the right column and whose maximum speed is 15km/h or less.	4.70 m or less	1.70 m or less	2.80 m or less
	2. Motor vehicles posted in Item (1)(b) of the preceding Paragraph that have a maximum speed of less than 35km/h			