

Partial amendments of Safety Regulations of Road Trucking Vehicles Act, equipment type approval regulations, and announcements that provide the details of the Safety Regulations of Road Trucking Vehicles Act

1. Background

In order to ensure the safety of automobiles by promoting international consistency of automobiles safety regulation, Japan contracted the United Nations "type approval mutual recognition agreement of the vehicle and etc.", hereinafter referred to as "1958 Agreement" in 1998. Since that year, in a phased manner, we have adopted the rules that are based on the mutual recognition agreement, hereinafter referred to as the "UNR".

Now that out of UNR No.137, "Passenger cars in the event of a frontal collision with focus on the restraint system", UNR No.134, "Motor vehicles and their components with regard to the safety-related performance of hydrogen-fuelled vehicles (HFCV) " and UNR No.46, "devices for indirect vision and of motor vehicles with regard to the installation of these devices" were recently decided to be adopted.

In addition to that, UNR No. 94, "the protection of the occupants in the event of a frontal collision" which Japan adopted before, has been reviewed and determined to be revised in the 167th meeting of the World Forum for the Harmonization of Vehicle Regulations (WP29) of the United Nations Economic Commission for Europe (UN/ECE).

To the responses to the written above, the required amendments shall be made on Safety Regulations of Road Trucking Vehicles Act, Transport Ordinance No. 67 in 1951, hereinafter referred to as the "Safety Regulation", Device type specified regulations (No. 66 of Transport Ordinance, 1998), and the notice defining the details of the 2002 Ministry of Land, Infrastructure and Transport Notification No. 619., hereinafter referred to as "Announcement of Details".

2. Outline of Amendment

(1) Vehicle frame and body (Announcement of Details relating to Article 22, 100, and 178)

① Passenger cars in the event of a frontal collision with focus on the restraint system

With the adaption of "Passenger cars in the event of a frontal collision with focus on the restraint system(UN-R137)", and then amendment as follows.

【Scope】

- Vehicles of category $M_{1※1}$ with a maximum permissible mass below 3.5 t $※2$
- Vehicles of category M_1 with a maximum permissible mass more than 3.5t $※3$
- Vehicles of category $M_{2※1}$ of Riding capacity 10 people $※3$
- Vehicles of category $N_{1※1}$ with a maximum permissible mass below 2.8 t $※3$

※1 As defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3.), document ECE/TRANS/WP.29/78/Rev.3, para. 2 (www.unece.org/trans/main/wp29/wp29wgs/wp29gen/wp29resolutions.html)

※2 Same scope as UN-R137

※3 Excluded scope of UN-R137

【Summary】

- Female dummy install on the passenger seat.
- To add a new injury criteria for neck
- Injury criteria for thorax changes from acceleration [g] to The thorax compression criterion (ThCC) [mm].
- ThCC of male dummy to be installed the driver's seat is injury criteria considering the elderly.

	Current standard	UN-R137
Driver's seat		
Dummy	AM50 (Hybrid III fiftieth percentile adult male)	←
Head	HIC 1000	←
Neck	—	Tensile neck force : 3.3 [kN] The fore/aft shear forces : 3.1 [kN] The neck bending moment : 57 [Nm]
Thorax	Acceleration : 588 [m/s ²]	ThCC : 42 [mm]
Femur	The femur force criterion (FFC) 10 [kN]	FFC : 9.07 [kN]
Passenger seat		
Dummy	AM50	AF05 (Hybrid III fifth percentile adult female)
Head	HIC 1000	←
Neck	—	Tensile neck force : 3.3 [kN] The fore/aft shear forces : 3.1 [kN] The neck bending moment : 57 [Nm]
Thorax	acceleration 588 [m/s ²]	ThCC 42 [mm]
Femur	FFC : 10 [kN]	FFC : 7 [kN]

【Effective date】 (※New model production only)

- Vehicles of category M₁ with a maximum permissible mass below 3.5 t
(Except imported car) : 1 September 2018
- Vehicles of category M₁ with a maximum permissible mass below 3.5 t
(Imported car only) : 1 September 2020
- Other category : 1 September 2023

② The protection of the occupants in the event of a frontal collision

With the amendment of "Passenger cars in the event of a frontal collision (UN-R94)", and then amendment as follows.

【Scope】

- Vehicles of category M₁ with a maximum permissible mass below 2.5 t
- Vehicles of category N₁ with a maximum permissible mass below 2.5 t ※1

※1 Excluded scope of UN-R94

【Summary】

- The injury criteria for ThCC changes from 50mm to 42mm.

【Effective date】 (※New model production only)

- Vehicles of category M₁: 1 September 2018
- Vehicles of category N₁: 1 September 2023

3. Schedule (to be changed occasionally)

Announcement : 17 June 2016

Application: 18 June 2016

※Please refer to the web page for UN Regulation original

http://www.unece.org/trans/main/wp29/wp29wgs/wp29gen/wp29ap_nov15.html