22 Speedometer

Refer to: R39 00-R1/C1

22.1 Effective date and Scope:

22.1.1 Effective date from 2006/7/1, the new vehicle variants of category symbols M1, N1, L1 and L3, and from 2008/7/1 all vehicle variants of category symbols M1, N1, L1, L2, L3 and L5, shall comply with this regulation.

22.1.2 Effective date from 2008/1/1, the new vehicle variants of category symbols M2, M3, N2 and N3, and from 2010/1/1, all vehicle variants of category symbols M2, M3, N2 and N3, shall comply with this regulation.

22.1.3 This practical vehicle inspection can be replaced by the competent inspection report of speedometer of the vehicle with the same chassis category.

22.2 Speedometer shall according to suitable variants and range of principle are as below：

22.2.1 The same vehicle category symbol.

22.2.2 The same axle set variant.

22.2.3 The same brand and vehicle type.

22.2.4 The chassis vehicle have had same axle set variant.

22.2.5 The same chassis brand.

22.2.6 Chassis manufacturers announced that the same chassis vehicle type.

22.2.7 If use chassis vehicle instead of completed vehicle for entire or partial testing, which shall according to suitable variants and range of principle are as below：

22.2.7.1 The chassis vehicle have had same axle set variant.

22.2.7.2 The same brand.

22.2.7.3 Chassis manufacturers declared that the same chassis vehicle type.

22.3 The speedometer shall apply SI unit. The display of the speedometer must be located within the direct field of view of the driver and must be clearly legible both day and night.

22.4 The speedometer graduation that from first graduation of indicated number shall be 1, 2, 5 or 10 km/h.

22.5 The numerical values of the speed shall be indicated on the display as follows:

22.5.1 When the highest value on the display does not exceed 200 km/h, speed values shall be indicated at intervals not exceeding 20 km/h.

When the maximum value on the display exceeds 200 km/h, then the speed values shall be indicated at intervals not exceeding 30 km/h.

22.5.2 In the case of speedometers intended for vehicles of category symbol L1 and L2, the display readings must not exceed 80 km/h, and the marked numerical values of the speed indicated shall not exceed 10 km/h.

22.6 The test shall be carried out with the vehicle at its unladen weight (curb vehicle + driver + necessary instrument). The speed indicated shall not be less than the true speed of the vehicle. At the test speeds specified below, there shall be the relationship

$0 \le V_1 - V_2 \le \frac{V_2}{10} + 4km/h$ between the speed displayed (V_1) and the true speed (V_2):

Maximum design speed (V_{max}) of the vehicle specified by the vehicle manufacturer (km/h)	Test speed (V_1) (km/h)
$V_{max} \leqq 45$	80% of V_{max}
$45 < V_{max} \leqq 100$	40 km/h and 80 % V_{max} (if the resulting speed is ≥ 55 km/h)
$100 < V_{max} \leqq 150$	40 km/h, 80 km/h and 80 % V_{max} (if the resulting speed is ≥ 100 km/h)
$150 < V_{max}$	40 km/h, 80 km/h and 120 km/h