



Proposal to introduce bodied L7 vehicles in R.E.3

**First step in three-step approach for Harmonisation of
(passive) safety requirements for
of bodied L7 vehicles**

IMMA Proposal to amend R.E.3

Insert new paragraphs 2.9.3. and 2.9.3.1 to read:

"2.9.3. Quadricycles (L7)

2.9.3.1. Bodied Quadricycles

Vehicle of category L7 with an enclosed driving and passenger compartment accessible via maximum three sides, whose maximum speed is not more than 90 km/h and whose dimensions do not exceed the following values:

- (a) Length: 3,700 mm;**
- (b) Width: 1,500 mm;**
- (c) Height: 2,500 mm."**

Justification

- There is a wide variation of different styles of L7 vehicles.
- Some are very 'car-like' in that they are equipped with a body and some car features. Typically, such vehicles are relatively fuel efficient, some electric powered.
- The car-like nature of heavy passenger quadricycles (L7) may lead to expectation that they provide similar standard safety performance as a small passenger car hence the attention to improve the vehicle passive safety.
- Consolidated Resolution on the Construction of Vehicles (R.E.3) defines L7 as:
 - 2.1.7. "*Category L₇*": A vehicle with four wheels, other than that classified for the category L₆, whose unladen mass is not more than 400 kg (550 kg for vehicles intended for carrying goods), not including the mass of batteries in the case of electric vehicles and whose maximum continuous rated power does not exceed 15 kW.
- In India, the Q-category was created recently, and safety requirements were published.
- In Korea, Safety Regulations on Micro Mobility incl. L7-category were recently implemented.
- Quadricycles are not covered under S.R.1.







Example of car-like L7 vehicle



L7-category vehicles - EU

EU Regulation 168/2013

- Heavy On road Quad
 - ATVs (L7-B1),
 - Side-by-Side (L7-B2)
 - commercial (L7e-CU)
 - passenger (L7e-CP) quadricycles.
-
- L7-A hardly exist today on the market.

| L7e | | | |
|---|---|---|--|
| Heavy quadricycle | | | |
| L7e-A | L7e-B1 | L7e-B2 | L7e-C |
| Heavy on-road quad | All terrain quad | Side By Side Buggy | Heavy quadri-mobile |
|  <div>L7e-A1</div> <div>  <div>L7e-A2</div> </div> |  |  |  <div>L7e-CU</div> <div>  <div>L7e-CP</div> </div> |
| Regulation 168/2013/EU & Delegated and Implementing Acts | | | |
| 4000 x 2000 | | | 3700 x 1500 mm |
| 15 KW | - | 15 KW | 15 KW |
| | 90 km/h | - | 90 km/h |
| < 450 kg for transport of passenger < 600 kg for transport of goods | | | |
| max. 2 | max. 2 | max. 3 | max. 4 |

L7-category vehicles - India

Introduction Q-category ((G.S.R. 99(E)) in 2014

- Fully enclosed body structure with doors
 - top edge of the doors having at least 200 mm from adjacent seat base top surface
 - steering control through steering wheel
- Specific requirements for and goods vehicles
 - maximum weight 450 kg / 550 kg
 - Maximum seating capacity
 - Maximum load 550 kg for goods vehicles
- Maximum power 15 kW
- Maximum design speed 70 km/h

L7-category vehicles - Korea

Rules on Motor vehicle management Act

- vehicle shall be designed and manufactured not to exceed 80km/h.
- Micro-mobility:
 - Length ≤ 3.6
 - Width ≤ 1.5 m
 - Height ≤ 2.0 m

Safety Regulations on Micro Mobility

- Implementation of Safety Regulations on Micro Mobility
 - Reference : L7 category vehicle in EU regulation 168/2013
 - Classification and safety regulations on Micro Mobility
 - * Research : Reference GRSP-61-24_Introduction plan for implementing safety requirements of micro mobility
 - Enforcement date: 11 July 2018
 - Classification of Micro Mobility
 - Power : Maximum continuous related power : 15kw or less
(Internal-combustion engine : 250cc or less)
 - Dimensions : Length : 3.6m or less, Width : 1.5m or less, Height : 2.0m or less
 - Vehicle Type : passenger vehicle(600kg or less), vehicle for the carriage of goods(750kg or less)



IMMA Proposal to amend R.E.3

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- Introduce **bodied L7 vehicle**
 - **enclosed driving and passenger compartment accessible via maximum three sides**
- Introduce maximum design speed
 - **R.E.3 90 km/h**
 - Korea: 80 km/h
 - EU: 90 km/h
 - India: 70 km/h
- Introduce maximum dimensions
 - **R.E.3 $L \leq 3.7 \text{ m}$ $W \leq 1.5 \text{ m}$ $H \leq 2.5 \text{ m}$**
 - Korea: $L \leq 3.6 \text{ m}$ $W \leq 1.5 \text{ m}$ $H \leq 2.0 \text{ m}$
 - EU: $L \leq 3.7 \text{ m}$ $W \leq 1.5 \text{ m}$ $H \leq 2.5 \text{ m}$
 - India: $L \leq 3.0 \text{ m}$ $W \leq 1.5 \text{ m}$ $H \leq 2.5 \text{ m}$

Next steps

- **First step**, introduce and harmonise dimension criteria in R.E.3, (July 2020 GRSG-session)
 - **Invitation for Contracting Parties comments on informal document**
 - aim to submit formal document for October session
- Second step, based on analysis of requirements in key markets (Europe, India, Korea, ...), develop proposals for three new UN Regulations addressing bodied passenger L7-category vehicles
 - Uniform provisions concerning the approval of vehicles with regard to doors
 - Uniform provisions concerning the approval of vehicles with regard to interior fittings
 - Uniform provisions concerning the approval of vehicles with regard to seats and seat belt anchorages
- Third step, proposal to amend UN Regulation No. R137 to include ad hoc requirements including an adapted test (e.g. reduced speed) for bodied L7 vehicles.



Thank you for your attention