

Proposal for amendments to ECE/TRANS/WP.29/GRVA/2020/7

Note: This informal document intends to amend to changes proposed in ECE/TRANS/WP.29/GRVA/2020/7 incorporating further feedback received, marked in red.

I. Proposal

Paragraph 5.6.2.1.3., amend to read (insert a new provision):

"5.6.2.1.3. The system shall be designed so that excessive intervention of steering control is suppressed to ensure the steering operability by the driver and to avoid unexpected vehicle behaviour, during its operation. To ensure this, the following requirements shall be fulfilled:

(a) The steering control effort necessary to override the directional control provided by the system shall not exceed 50 N;

(b) The specified maximum lateral acceleration $a_{y_{\text{max}}}$ shall be within the limits as defined in the following table:

Table 1

For vehicles of Category M₁, N₁

| Speed range | 10 - 60 km/h | > 60 - 100 km/h | > 100 - 130 km/h | > 130 km/h |
|--|--------------------|----------------------|----------------------|----------------------|
| Maximum value for the specified maximum lateral acceleration | 3 m/s ² | 3 m/s ² | 3 m/s ² | 3 m/s ² |
| Minimum value for the specified maximum lateral acceleration | 0 m/s ² | 0.5 m/s ² | 0.8 m/s ² | 0.3 m/s ² |

For vehicles of Category M₂, M₃, N₂, N₃

| Speed range | 10 - 30 km/h | > 30 - 60 km/h | > 60 km/h |
|--|----------------------|----------------------|----------------------|
| Maximum value for the specified maximum lateral acceleration | 2.5 m/s ² | 2.5 m/s ² | 2.5 m/s ² |
| Minimum value for the specified maximum lateral acceleration | 0 m/s ² | 0.3 m/s ² | 0.5 m/s ² |

(c) The moving average over half a second of the lateral jerk generated by the system shall not exceed 5 m/s³.

(d) **Special provision for vehicles of Category M₁ / [N₁]**

Notwithstanding the maximum values given in the table above, the manufacturer may declare a value for the specified maximum lateral acceleration $a_{y_{\text{max}}}$ of up to 4 m/s² for

- (i) Vehicle speeds up to ~~60~~ 80 km/h,
- (ii) Driving situations without heavy rain (e.g. the wipers are not in use at a permanent stage), and
- (iii) Ambient air temperatures above [4]°C

Where the manufacturer declares a maximum lateral acceleration of $a_{y_{\max}}$ exceeding 3m/s^2 , and where the conditions of paragraph 5.6.2.1.3. (d) (ii) and (iii) are both satisfied, the system shall linearly reduce the maximum lateral acceleration of $a_{y_{\max}}$ at 60 km/h to a maximum lateral acceleration of 3 m/s^2 at 80 km/h.

For vehicle speeds of 80 km/h or greater, the maximum values of table 1 apply regardless of whether the conditions of paragraph 5.6.2.1.3. (d) (ii) and (iii) are satisfied.

The values given in the table shall apply without exception for any other condition. [This special provision shall be subject to Annex 6 and the manufacturer shall demonstrate, to the satisfaction of the Technical Service, the safety aspects of this special provision.]

II. Justification

This informal document intends to amend to changes proposed in ECE/TRANS/WP.29/GRVA/2020/7 incorporating further feedback received
