

Report from the Informal Working Group on Acceleration Control for Pedal Error (ACPE)

- **Discussion items on 3rd informal meeting**

IWG meeting 1st meeting in web (24, 27 March 2023):

- **Confirmation of TOR**
- **Accident data , existing technologies and state of the art**
- **Discussion items**
Definition of ACPE, Vehicle categories, Collision obstacle
- **Report: ACPE-01-10-r1**

IWG meeting 2nd meeting in web (15, 16, 17 May 2023):

- **Confirmation of accident data**
- **Discussion items (ACPE-02-09r2)**
Definition of ACPE, Vehicle categories, Collision obstacle, Requirements, Distance from obstacle, Velocity (e.g. below 10km/h), AEBS interaction, Control strategies (e.g. activation, deactivation), Trigger (e.g. after collision, after Risk Mitigation Function), Confirmation of consistency with Vienna convention and Geneva convention
- **Report: ACPE-02-12**

IWG meeting 3rd meeting in BAST (19, 20, 21 September 2023):

- **Pedal application**
- **Discussion for draft proposal of ACPE based on the skeleton document (ACPE-03-14)**
 - Scope
 - Definitions
 - Specifications
 - Test procedure
- **Report: ACPE-03-15**
Status: Revision by chair and secretary is ongoing.

Skeleton document:

- Germany proposed to prevent unintended acceleration by pedal misapplication up to 30 km/h with their accident data.
- Japan proposed low speed (below 5km/h or 10km/h) based on their experience of J-NCAP.

Chair and secretary proposed a **2-step approach**,

1. low-speed system
2. “high-speed” system (up to 30km/h)

- **Pedal application**

ACPE-03-04 (UK):

UK introduced their accident data (TfL), and proposed an accelerator application force as a measurement of pedal misapplication.

ACPE-03-07 and 08 (Korea):

Korea introduced their accident data (EDR). Korea supported the accelerator pedal speed as a measurement of pedal misapplication.

ACPE-03-06 (OICA/CLEPA)

OICA/CLEPA proposed M1 only (exclude the N1), and proposed to consider the requirement for the pedestrian for the 2nd step.

Discussion for draft proposal of ACPE based on the skeleton document (ACPE-03-14)

Scope

- 1.1 This UN Regulation applies to the type approval of vehicles of Categories M1 [and N1] with regard to their Acceleration Control for Pedal Error (APCE). [Automatic transmission only]
- 1.2 At the request of a manufacturer, vehicles other than those mentioned in paragraph 1.1. above may be approved under this Regulation.

Definitions

“Acceleration Control for Pedal Error (ACPE)” means a system to detect misapplication of the accelerator control by the driver and control unintended acceleration.

Specifications

- 5.1.1. ACPE shall be able to limit unintended acceleration of a vehicle when a pedal misapplication by driver has been detected at least when an obstacle exists in front of the vehicle when intending to go forward or when an obstacle exists behind the vehicle when intending to go backward.
- 5.1.2. ACPE shall control acceleration at least when the vehicle is stationary or moving off. ("Moving off" means starting from stationary and moving forward or rearward after releasing the brakes.)
- 5.1.3. The system shall prevent or mitigate a collision to a maximum collision speed of [5/10] km/h on a stationary obstacle of "Type A" located in a range from [1m to 1,5m / to 2m] in front or rear of the stationary ACPE vehicle.

Specifications

1. Warnings
2. Interruption of Acceleration Control by driver
3. Avoidance of Secondary collision
4. Manual deactivation
5. Warning indication
6. Provisions for the Periodic Technical Inspection

Test Procedure

In the 3rd informal meeting:

Specifications included the above items in the skeleton document (**ACPE-03-14**). At the 3rd informal meeting, each paragraph (specifications and test procedure) was discussed, and it will be discussed again at the next meeting. For details, please refer to the report (**ACPE-03-15** including the history of discussion).

Schedule of meetings:

ACPE-04-03 (Furthermore information)

IWG meetings 4th meeting in Tokyo (Japan)

21, 22, 24 November 2023

Please contact ACPE IWG secretariat (including Mr. Tsuburai (tsuburai@jasic.org)) by the **13th October** if you plan to attend the meeting.

| Date | Meeting | Detail |
|-----------------------------|---|--|
| 17-18 January 2024 | 5 th Informal meeting Web (3 hours: 8-11CET) | Discussion about requirements and test procedures |
| 22-26 January 2024 | 18 th GRVA | Report of IWG activities Submit draft regulation as informal document |
| 27-29 February 2024 | 6 th Informal meeting In-Person (Europe) | Discussion about requirements and test procedures |
| Early or Middle of May 2024 | 7 th Informal meeting Web or <u>In-person</u> | Discussion about requirements and test procedures |
| 21-24 May 2024 | 19 th GRVA | Report of IWG activities Submit draft regulation as formal document |

**Thank you
for your attention**