



Department
for Transport

UK Proposal

ACPE - 11

Monday, 28 October 2024

UK Definitions: “Maximum Creeping Speed” and “Creeping”

In the previous meeting UK proposed the following:

2.13. “Maximum Creeping Speed” means the maximum steady state speed which the vehicle achieves on a horizontal surface with the powertrain engaged and operating at idle, and no acceleration or brake demand.

2.13.1. “Creeping” means the state of motion with the powertrain engaged and operating at idle, and no acceleration or brake demand, up to the Maximum Creeping Speed.

Justification:

- *Eliminates the circular reference between the two definitions and 2.13 uses maximum steady speed which ensures a clear distinction from vehicle coasting at higher speeds.*
- *Although similar wording is used in both definitions however this will be better as it does not include the full definition of maximum creeping speed and achieves the intention of the definition, without creating a loop.*

Revising performance requirements to account for creeping

Performance Requirements:

The ACPE shall limit vehicle acceleration in order to prevent or mitigate a collision with an obstacle located ~~between~~ **not more than** ~~[1.0 m and~~ 1.5 m] in front of or behind the vehicle, in the vehicle path, at the time the ~~accelerator control is applied~~ **triggering conditions (as outlined in paragraph 5.1.2.) are reached**, provided:

(d) The situation is unambiguous, i.e.:

... (vii) **The obstacle is located at least 1.0m from the vehicle at the time the triggering conditions (as outlined in paragraph 5.1.2.) are reached;**

(viii) The vehicle is travelling at or below its maximum creeping speed.

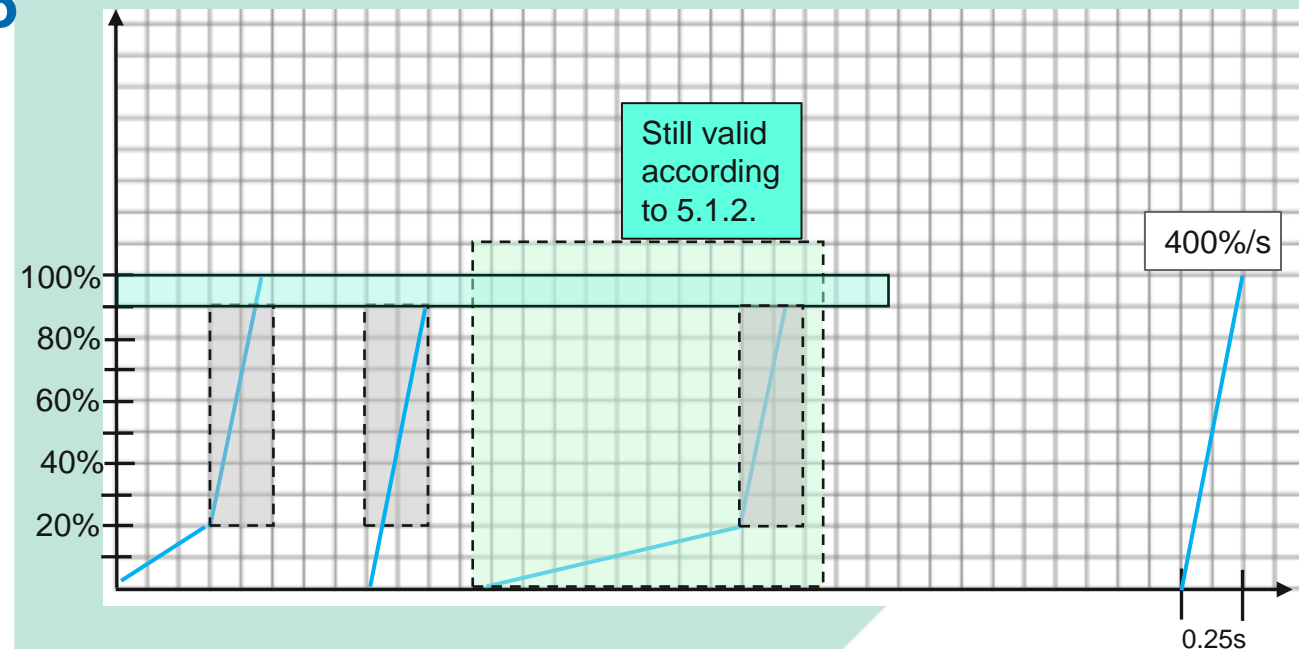
Issues with performance requirements / boundary conditions

- No constraints on how the accelerator control is pressed before reaching 20% travel
- Testing from stationary requires triggering before vehicle reaches 0.5 km/h
- Creeping is defined as having no input to the controls
- ‘Triggering conditions’ or ‘input to control’ used variably in the Regulation

Amendment text

5.1.2. An accelerator control application having a velocity of at least 400 per cent per second over a travel distance of at least 70 per cent of the total travel distance of the accelerator control, and reaching a maximum position of the accelerator control of at least 90 per cent, with that velocity shall be regarded as an accelerator control misapplication in the context of the paragraph 5.1.1.

5.1.4. The ACPE shall control acceleration when the vehicle is accelerated both from standstill **and, as relevant, while creeping.**



Amendments to testing provisions required for new definitions

6.6.2 Each test condition according to Table 1 shall be tested once with a starting point selected at the discretion of the Technical Service. The starting point shall be selected such that ~~an ACPE intervention is expected, and aiming for a creeping speed as high~~ **the triggering condition (as outlined in paragraph 5.1.2.) is achieved as close to the maximum creeping speed** as reasonably practical whilst avoiding ACPE suppression due to an AEBS intervention.

Amendment to Table 1.

Table 1, 2nd column heading:

- *Distance to target at the point triggering conditions reached / Distance to speed measuring point.*

Justification:

- *For creeping test procedure, the distance to target at the point of acceleration will not be equal to distance to target for a stationary test procedure, therefore we suggest changing the column heading to accommodate for both test procedures*

Incomplete and SP Vehicles

1.3. Vehicles where installation of means of forward and/or rear detection is incompatible with their ~~on-road~~ **intended** use may be exempted from the relevant requirements (forward and/or rear direction) of this Regulation, subject to the decision of the Type Approval Authority.

~~[1.4 — Vehicles which are intended to be fitted by a company other than the vehicle manufacturer onto incomplete N1 vehicles are exempt from the rearward relevant requirements of this Regulation.]~~

~~Or~~

~~[1.4 — Vehicles fitted onto incomplete vehicles not by the original manufacturer are exempt from the rearward relevant requirements of this regulation.]~~

1.4 Completed vehicles which have been built on a base vehicle which did not have the necessary structure to allow the installation of means of forward and/or rear detection may be exempted from the relevant requirements (forward and/or rear direction) of this Regulation, subject to the decision of the Type Approval Authority.

~~[1.5 — N1 vehicle types for special purposes (e.g. on construction sites) whose shape or characteristics (e.g. angle of departure) impede the functionality or mounting of ACPE-necessary sensors, can be exempted from this regulation.]~~