

Proposal for Correction to ECE/TRANS/WP.29/GRRF/2013/33

The text reproduced below was prepared by the expert from Italy to introduce editorial improvements and expansion of justification that have been identified since the submission of the formal document.

I. Proposed corrections

IV. Justifications for the proposed amendments

B. Justification 2

Paragraph 4.1.1.3. Measurement of PBC

Insert new Paragraph 5.

- (b) In some instances just before the wheel-locking condition for all-wheels during the PBC test, the following may happen to the vehicle for type approval:
- "(a) rear wheel lift due to maximum braking may cause difficulties in undertaking the PBC test.
 - (b) vehicle not getting into the wheel lock, because of reduction in brake performance (brake lever stroke reaches full stroke before wheel locking).
 - (c) For 3-wheeled motorcycles (~~E₂, E₄, E₅~~ **3-2, 3-4, 3-5**), the PBC test is not described and it may understood that the PBC test is not possible for these vehicle types for type approvals.

The K-method in R78-02 was designed around the ABS test. Specifically, for those motorcycles equipped with ABS, the motorcycle had to brake with more than 70% efficiency with the ABS fully cycling, relative to the maximum adhesion obtained with that same motorcycle tested without ABS (i.e. by way of the K-method). This was only applicable to vehicles of categories L1 and L3 equipped with ABS. Finally, for all other brake performance evaluations, the R78-02 specification was for a test surface "affording good adhesion".

V. Proposed amendments

"4.1.1.3 Measurement of PBC

The PBC is measured as ~~specified in national or regional legislation determined by the approval authority~~ using either:

- (a) ~~the American Society for Testing and Materials~~ **An ASTM International (ASTM) E1136-93 (Re-approved 2003)** standard reference test tyre, in accordance with ASTM

Method E1337-90 (**Re-approved 2008**), at a speed of 40 mph ~~without water delivery~~; or

- (b) the method specified in the ~~appendix to Annex 4~~ **paragraph 5. of UNECE Regulation No. 78, 01 series of amendments**

Note 1: A representative vehicle may be acceptable for PBC measurement by method (b) if that vehicle has shown the same nominal PBC on both high μ and low μ as previously determined by method (a).

Note 2: PBC measurement of the surface shall be carried out at least once a year. PBC measurement shall be completed prior to testing if any major maintenance or alterations that may significantly modify the PBC have occurred since the last measurement.

5.2. Vehicle condition

- (a) The test is applicable to vehicles categories 3-1 and 3-3.
- (b) The anti-lock system, **if fitted**, shall be inoperable between 40 km/h and 20 km/h.
- (d) Brake actuation force:

The control force that achieves the maximum vehicle deceleration rate as defined in paragraph ~~6~~ **5.1. (c)**.
