

Proposal for amendments to ECE/TRANS/WP.29/GRVA/2021/15

Proposal for a new Supplement to the 01 and 02 Series of Amendments to UN Regulation No. 90 (Replacement braking parts)

Submitted by the expert from the European Association of Automotive Suppliers

GRVA/2021/15 was prepared by the expert from the European Association of Automotive Suppliers (CLEPA) to resolve the problem of fulfilling increasingly difficult Conformity of Production (CoP) routine obligations caused by unavailability of the specifically prescribed hardware and is based on informal document GRVA-07-52.

This new proposal amends GRVA/2021/15 to better reflect the change to new hardware and requires the manufacturer, in agreement with the Type Approval Authority, to conduct a new set of baseline tests with the new hardware to “re-establish/re-confirm” CoP values to use as the reference data going forward

Modifications to GRVA/2021/15 are marked in **bold red**.

I. Proposal

Annex 9, Part A, paragraph 3.1.1. amend to read:

“3.1.1. The machine shall be equipped with a disc brake of the fixed calliper type with a cylinder diameter of 60 mm and a solid (not ventilated) and corresponding brake disc having a diameter of 278 ± 2 mm and a thickness of $12 \text{ mm} \pm 0.5$ mm. **such as to allow a rectangular piece of the friction material with an surface area of $44 \text{ cm}^2 \pm 0.5 \text{ cm}^2$ and a thickness of at least 6 mm to shall be attached to the backing plates of the disc brake.**”

Annex 9, Part A, add a new paragraph 3.1.1.1.:

“3.1.1.1. Changes in hardware from that used to establish the Registered Values held on record by the approving authority needs to be agreed ahead of time with the Technical Service using back to back tests with the same production batch/batches of friction material to reconfirm/re-establish the appropriate values with the new hardware.”

II. Justification

1. Paragraph 3.1.1. of Annex 9 in UN Regulation No. 90, covering CoP testing for brake lining assemblies and drum brake linings for vehicles of categories M₃, N₂, N₃, O₃, and O₄, currently requires the use of a very specific type and size of brake calliper and brake disc in order for the brake lining manufacturer to be able to demonstrate to the approving authority the consistency of production, batch to batch.

2. This type of brake calliper and corresponding brake rotor were commonly available when the Regulation was first published in the early 1990’s but this is no longer the case, with all major brake calliper manufacturers confirming that such brakes are no longer in series production.

3. The consequence is that holders of UN Regulation No. 90 approvals around the world are finding it increasingly difficult to fulfil their routine CoP obligations because they cannot any longer locate and purchase the specifically prescribed hardware in order to conduct the tests. We therefore need to update paragraph 3.1.1. to reflect the current reality and avoid any hardware constraints in future.

4. It is therefore proposed that we amend the regulation to remove the specific prescription as to the type and size of brake and size and form of brake disc but require the use of a pad area and thickness as originally specified, in order to provide consistency with past data.

5. In order to change to new hardware it will be necessary for the manufacturer, in agreement with the Type Approval Authority, to conduct a new set of baseline tests with the new hardware to “re-establish/re-confirm” CoP values to use as the reference data going forward.