Transmitted by the expert from Germany

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This document includes the most recent amendments adopted by the GRB informal working group during its 11th meeting to the draft 03 series of amendments to Regulation No. 51 (TRANS/WP.29/GRB/2005/2)

Annex 3

Paragraph 3.1.2.1.2.2., amend to read:

"3.1.2.1.2.2. Calculation procedure for vehicles with automatic transmissions, adaptive transmissions and CVTs tested with non-locked gear ratios

$a_{wot\ test}$ used in the determination of gear selection shall be the average of the four $a_{wot\ test,\ i}$ during each valid measurement run

If devices or measures, as described in paragraph 3.1.2.1.4.2., can be used to control transmission operation for the purpose of achieving test requirements, calculate $a_{wot\ test}$ using the equation:

$$a_{wot\ test} = ((v_{BB}/3{,}6)^2 - (v_{AA}/3{,}6)^2) / (2*(20+l))$$

Pre-acceleration may be used.

If no devices or measures, as described in paragraph 3.1.2.1.4.2., are used, calculate $a_{wot\ test}$ using the equation:

$$a_{wot\_testPP\text{-}BB} = ((v_{BB}/3.6)^2 - (v_{PP}/3.6)^2) / (2*(10+l))$$

Pre-acceleration shall not be used.

The location of depressing the accelerator shall be where the reference point of the vehicle passes line AA'."

Paragraph 3.1.2.1.4., amend to read:

"3.1.2.1.4. Gear ratio selection

The selection of gear ratios for the test depends on their specific acceleration potential a_{wot} under full throttle condition, according to the reference acceleration $a_{wot\ ref}$ required for the full throttle acceleration test.

Some vehicles may have different software programs or modes for the transmission (e.g. sporty, winter, adaptive…). If the vehicle has different modes leading to valid accelerations, the vehicle manufacturer has to prove to the satisfaction of the technical service, that the vehicle is tested in the mode which achieves an acceleration being closest to a $_{wot\ ref}$."

Paragraph 3.1.2.1.4.2., amend to read:

"3.1.2.1.4.2. Automatic transmission, adaptive transmissions and transmissions with variable gear ratios (CVTs) tested with non-locked gear ratios.

The gear selector position for full automatic operation shall be used.

The acceleration value $a_{wot\ test}$ shall be calculated as defined in paragraph 3.1.2.1.2.2.

The test may then include a gear change to a lower range and a higher acceleration. A gear change to a higher range and a lower acceleration is not allowed. A gear shifting to a gear ratio which is not used in urban traffic shall be avoided.

Therefore, it is permitted to establish and use electronic or mechanical devices**, including alternate gear selector positions**, to prevent a downshift to a gear ratio which is typically not used at the specified test condition in urban traffic.

The achieved acceleration $a_{wot\ test}$ shall be greater or equal to a_{urban}.

If possible, the manufacturer shall take measures to avoid an acceleration value $a_{wot\ test}$ greater than 2.0 m/s².

The achieved acceleration $a_{wot\ test}$ is then used for the calculation of the partial power factor k_p (see paragraph 3.1.2.1.3.) instead $a_{wot\ ref}$."
