

Proposal for amendments to the 03 series of amendments to Regulation 51

Note: The text reproduced below was prepared by the expert from the Netherlands supporting the discussion on document ECE/TRANS/WP.29/GRB/2014/5 in GRB60 September 2014. Modifications to the text are marked in **bold characters for new** or as ~~strikethrough for deleted text~~.

I. Proposal

Annex 7, paragraph 3.1., delete second text block amending to read:

3.1. Determination of the anchor point for each gear ratio

For measurements in gear i and lower, the anchor point consists of the maximum sound level L_{woti} , the reported engine speed n_{woti} and vehicle speed v_{woti} at BB' of gear ratio i of the acceleration test in Annex 3.

$$L_{\text{anchor},i} = L_{woti, \text{Annex 3}}$$

$$n_{\text{anchor},i} = n_{\text{BB}, woti, \text{Annex 3}}$$

$$v_{\text{anchor},i} = v_{\text{BB}, woti, \text{Annex 3}}$$

~~For measurements in gear $i+1$ the anchor point consists of the maximum sound level L_{woti+1} , the reported engine speed n_{woti+1} and vehicle speed v_{woti+1} at BB' of gear ratio $i+1$ of the acceleration test in Annex 3.~~

~~$$L_{\text{anchor},i+1} = L_{woti+1, \text{Annex 3}}$$~~

~~$$n_{\text{anchor},i+1} = n_{\text{BB}, woti+1, \text{Annex 3}}$$~~

~~$$v_{\text{anchor},i+1} = v_{\text{BB}, woti+1, \text{Annex 3}}$$~~

Annex 7, paragraph 3.2.1 replace the term " L_i " by the term " L_j ," amending to read:

3.2.1 Calculation of the slope of the regression line for each gear

The linear regression line is calculated using the anchor point and the four correlated additional measurements.

$$\text{Slope}_k = \frac{\sum_{j=1}^5 (n_j - \bar{n})(L_j - \bar{L})}{\sum_{j=1}^5 (n_j - \bar{n})^2} \quad (\text{in dB/1,000 min}^{-1})$$

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$$\text{With } \bar{L} = \frac{1}{5} \sum_{j=1}^5 L_j \quad \text{and} \quad \bar{n} = \frac{1}{5} \sum_{j=1}^5 n_j ;$$

where n_j = engine speed measured at line BB'

II. Justification

1. Both text blocks are thought to originate from an earlier text version during the development of R5103. The proposed corrections have been agreed earlier in GRB and GRBIG,ASEP
2. The text block in paragraph 3.1, dealing with measurements in gear $i+1$, is superfluous, as the control range in Annex 7 paragraph 2.3 allows only measurements in gears $k \leq$ gear i .
3. The term " L_i " is a typing error, leading to meaningless results and should be replaced by the term " L_j ".