

## Proposal to amend GRPE/2021/08

The modifications to the current text of the Regulation are marked in bold for new (highlighted in yellow) or strikethrough for deleted characters. New text from GRPE-82-25 is in red.

### I. Proposal

*add a new paragraph 1.1.4., to read:*

**“1.1.4.           Equivalent approvals**

**An approval to the 06 and above series of amendments to UN Regulation No. 49 is considered to demonstrate compliance to this Regulation for approval with regard to the emission of visible pollutants. ~~In this case no additional approval to this Regulation is necessary~~ C.I. engines and motor vehicles with C.I. engines type approved to this series of amendments to UN Regulation No. 49 have no visible pollutant emissions according to the specifications defined in in paragraph 6.**

**1.1.4.1.       Provisions specified in paragraph 6.1, 24.1 apply. Together with the provisions for the approval mark specified in UN Regulation No. 49 the provisions for expressing an adsorption coefficient in  $m^{-1}$  according to paragraphs 5.4.3., 5.4.4. and 23.4.3. also apply. The applicable adsorption coefficient is according to the provisions of Annex 5, paragraph 3. to this Regulation  $X_M + 0.5$ , where  $X_M$  is in this case zero.”**

### II. Justification

1. UN Regulation No. 24, to limit the visible smoke in order to avoid poor visibility situations on the road, has been successfully applied in type approval for years.
2. However, engines certified with UN Regulation 49-06 series (corresponding to Euro VI) have no smoke. They are either CI-engines with DPF or SI-engines which, by principle, have no smoke.
3. CI-engines with DPF, even with a broken filter and/or with a type A or B OBD fault code, have smoke emissions less than 0,5  $m^{-1}$  during free acceleration test and almost zero at steady state test. Note that the permitted production variability together with measurement inaccuracy is 0,5  $m^{-1}$ .
4. Thus, it is useful clarify that UN Regulation 49-06 series engine certification does not include the certification according to UN Regulation 24, therefore the scopes should be adjusted accordingly.
5. This amendment does not exclude applying UN Regulation No. 24 for road side inspection for vehicles type approved under UN Regulation 49-06 series.