

## Type-Approval Procedure

### Information System of the German Type-Approval Authority

#### **Indication of the deviation factor $D_e$ and the verification factor $V_f$ according to regulation (EU) 2017/1151 as well as to the correlation regulations ((EU) 2017/1152 and 2017/1153) in the emission and whole vehicle type approvals**

##### Question or problem:

Whether the manufacturer-specific CO<sub>2</sub> fleet objectives have been achieved is assessed on the basis of the CO<sub>2</sub> emission values determined in the New European Driving Cycle (NEDC). Since the CO<sub>2</sub> emissions are now to be determined in the WLTP test cycle, the emission values must be correlated to the NEDC until 31 December 2020, subject to any derogations (see correlation regulations). They are converted using the calculation tool "CO<sub>2</sub>MPAS". Samples are taken at random to verify the manufacturer's information on the NEDC CO<sub>2</sub> value (MDV) by physical measurements on the test bench.

When performing physical measurements based on a sample (see Annex I, section 3.2.6 of the correlation regulations) or due to a directive of the type-approval authority (see Annex I, section 3.2.7 of the correlation regulations), a deviation factor  $D_e$  is calculated which is recorded in the type-approval and the certificate of conformity. Furthermore, a verification factor  $V_f$  is determined (see Annex I, section 3.2.8 of the correlation regulations).

Among other things, the deviations of the average specific CO<sub>2</sub> emissions from the target value of the fleet of a manufacturer depend on a correction factor. For each manufacturer, this factor is determined from the deviation factor  $D_e$ , the verification factor  $V_f$  of all approvals issued for such manufacturer pursuant to R (EC) no. 715/2007 and the registration numbers (see Article 6 of the correlation regulation (EU) 2017/1152 and Article 7 of the correlation regulation (EU) 2017/1153, respectively).

The European Commission has advised the KBA about possible discrepancies regarding the provision of the deviation and verification factors in the approval documents.

##### Result:

It must be ensured that the European Commission receives the right deviation and verification factors. Therefore, the KBA asks the manufacturers to check the already submitted approval documents and to ensure accuracy of this information in the future. If there are any errors, applications for correction of the relevant approvals (emission and whole vehicle type approvals) must be submitted.

The European Commission has discovered the following discrepancies which the manufacturer must include in their examination for accuracy.

- The NEDC CO<sub>2</sub> values were not recorded in Annex VIII of the whole vehicle type approval.
- The deviation and verification factors
  - o were not recorded for interpolation families having a random number between 90 and 99.
  - o were indicated for plug-in hybrid vehicles which are not intended for use in CO<sub>2</sub>MPAS.

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- The deviation factor De
  - o was interpreted as the percental difference between the NEDC CO2 value calculated by CO2MPAS and the NEDC CO2 value previously provided by the manufacturer (MDV) and was provided accordingly. It is the percental difference between the NEDC CO2 value of the physical measurement and the NEDC CO2 value previously provided by the manufacturer (MDV) which is correct.
  - o was provided in percent (e.g. 3%) instead of as a decimal (0.03).
  - o did not need to be provided since it was not necessary in this case (Annex 1, sections 3.2.6 and 3.2.7 of the correlation regulations did not apply, e.g. no sample, exceeding the manufacturer's values by more than 4%, etc.) but the verification factor Vf was provided as "0" instead of "not applicable".

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Rita Valeria Beck