

DDE 5.0/5.1 Injector Volume Calibration

The tolerances given to the injectors on manufacture mean that the actual injected volume of fuel deviates slightly from the theoretically calculated volume of fuel. These injection volume tolerances are determined for each injector across the entire operating range following manufacture by measurements at the suppliers. From these measurements, an adjustment value is generated for each injector.

During vehicle assembly, after installation of the DDE control unit, the adjustment value of each installed injector is stored in the DDE control unit. The adjustment values are allocated to the individual cylinders according to the installation of the injectors.

The injection volume calculated by the DDE control unit during engine operation is corrected slightly by these adjustment values thus improving the exhaust emissions.

The service function can be used to change the adjustment values of the fitted injectors in the control unit or store new values.

The structure of the alphanumeric adjustment value depends on the exhaust emission stage of the engine:

- Exhaust emission stage EURO 3: **six-digit**
- Exhaust emission stage EURO 4: **seven-digit**

This adjustment value is stamped on the top of each injector, see illustrations below.

Behind the adjustment value, an injector ID has also been stamped (2), but this is not relevant to the calibration. The injector ID is slightly offset from the adjustment value and is has a slightly larger font size.

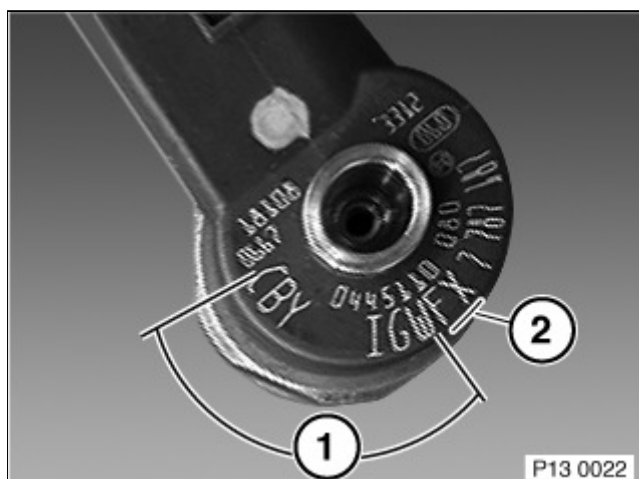


Fig. 1: Example of adjustment value EURO 3, first version

1. Six-digit adjustment value
2. Injector ID (not relevant for calibration)

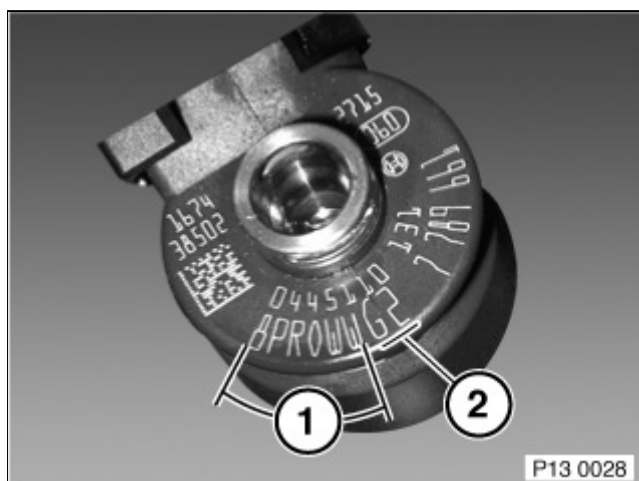


Fig. 2: Example of adjustment value EURO 3, second version

1. Six-digit adjustment value
2. Injector ID (not relevant for calibration)

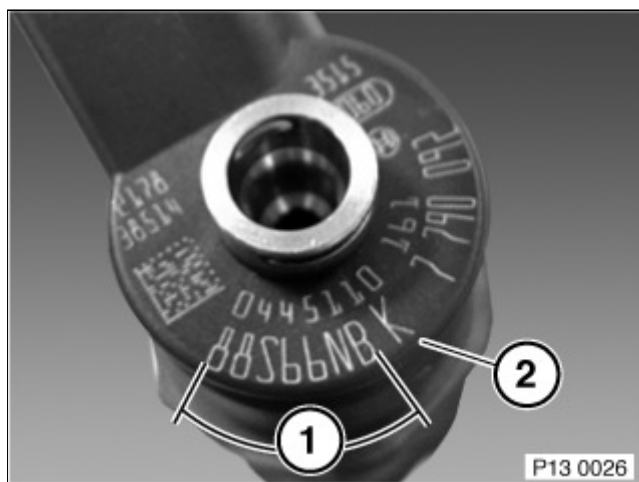


Fig. 3: Example of adjustment value EURO 4

1. Seven-digit adjustment value
2. Injector ID (not relevant for calibration)

Important: If injectors have to be replaced, it must be ensured that the stamped adjustment value of each injector is assigned to the right cylinder in the DDE control unit.

Note: For cylinders for which no new adjustment value is entered, the old adjustment value is retained in the DDE control unit.

Important: If the DDE control unit has been replaced, the injector quantity adjustment also has to be carried out so that the adjustment values of the fitted injectors are stored in the new control unit!