



Technical Report #3

***Report on the regulation of
pump injectors in TDI engines of the
VAG group***

Technical Report

Report purpose

To inform about the necessity of the regulation of pump injectors in TDI engines of the VAG Group whenever a replacement of these components or related components is performed, for instance, replacement of camshaft and hydraulic lifters.

Introduction

A pump injector is a system consisting of an injection pump and an injector, as one only component, whose function is to generate a high pressure and the injection of diesel inside the combustion chamber in the right quantity and at the exact moment. Each cylinder has one of these elements.

To generate the necessary pressure, the axis of the camshaft has as many lobes as pump injectors the engine has.

Working conditions of the engine, mainly temperature and friction, make tolerances necessary in the manufacturing of pieces that are in contact, and also respect the necessary clearances for the right performance of the different elements.

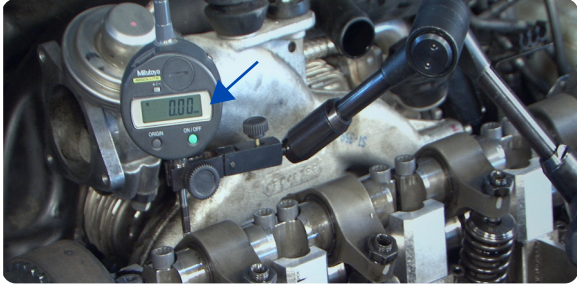
Regulation of pump injectors

Before disassembly and regulations, it is recommended to let the engine cool, because expansions may affect measures.

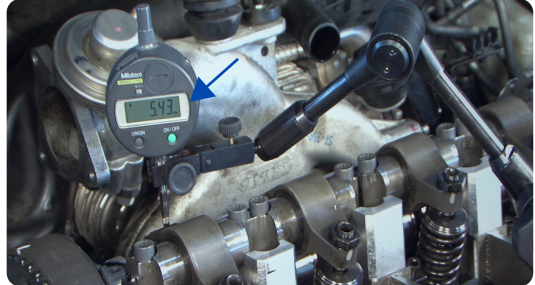
Necessary stages for the regulation of pump injectors.

- 1** *Remove the valve cover, following manufacturer specs.*
- 2** *Place the probe of the comparing clock and its support in such a way that the probe is on the part of the rocker that actuates the lobe.*
- 3** *Turn the lobe axis until the injector lobe reaches its maximum height, then the injector will be powered.*
- 4** *When this point is reached, loosen the nut and tighten the screw in the rocker and a resistance is visible.*
- 5** *Loosen screw 225° using a goniometer.*
- 6** *Keep the screw in this position and tighten the nut 3kg.*
- 7** *All previous steps must be applied to the rest of pump injectors.*
- 8** *Doing the reverse operation and checking that the screw move is 225°, we will verify that the adjustment is correct.*

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