

VW electronic timing setting

Good mechanics instinctively know what feels right. However, the bolts for the electronic camshaft adjustment in many 1.0-1.6l TSI engines from Volkswagen (EA211) cannot be tightened accurately enough by hand. This precision is of vital importance, as the innovative combustion process of these engines, with intake valves that close again while the intake stroke is still in progress, will only work if the timing and lead angle are exactly correct.

Problem

When fitting the timing belt, the bolts for the camshaft adjustment (Fig. 1) must be loosened. After belt replacement, the timing and lead angle for the electronic camshaft adjustment are not set accurately enough with mechanical locking tools.

Cause

A new combustion process means that the intake valves can be closed very early on this engine while the intake stroke is still in progress. Loosening the bolts for the camshaft adjustment can cause the timing to be set incorrectly or inaccurately, which has a major effect on mixture preparation.

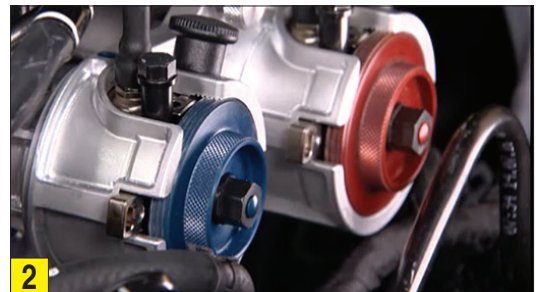
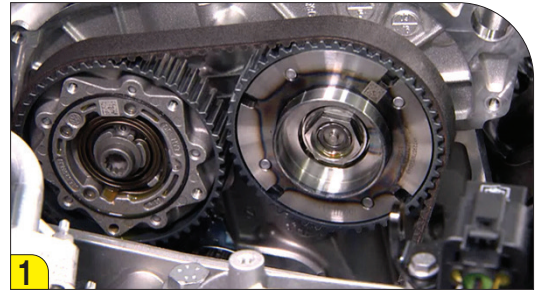
Solution

The basic setting needs to be programmed and adjusted electronically using testing tool VAS 611 007 (Fig. 2).

The VAS 611 007 tool is capable of setting the camshaft angle so that it is accurate to one tenth of a degree (Fig. 3). Additional time allowance for this setting work is approximately 2.5 hours.

There are two different adapters for the tool (Fig. 3):

- Tool VAS 611 007/8 for three- and four-cylinder TSI units without Active Cylinder Technology
- Tool VAS 611 007/4 for four-cylinder TSI units with Active Cylinder Technology



Continental has many technical bulletins to help mechanics with installations and settings. These bulletins can be found at www.continental-engineparts.com.