



febi 45956

102196, 102426, 106512,
106513, 171970, 172004



To fit:

Volkswagen, Audi, Seat & Skoda
various models



EN

Timing Chain Kit and Camshaft Bracket

Problem

Extended engine-cranking time before starting or a rattling noise from the engine area. Engine management fault lamp illuminated or engine not starting.

Possible fault codes stored:

P0016 Camshaft timing advance (Bank 1) target value not attained

P0328 Knock sensor 1 single too high

Cause

Timing chain elongation. Failure of the oil non-return valve for the camshaft timing control.

Solution

When diagnosing the symptoms listed above there maybe more than one cause.

If the engine is not running smoothly, with one or more fault codes present, monitor the timing data from the ECU. This should not exceed +/- 5 degrees.

If the data is reading over 5 degrees at idle or during a snap wide open throttle test then the screen for the oil non return valve, located in the camshaft adjuster bracket has come apart and lodged itself within the camshaft adjuster spool valve and the intake camshaft adjuster (Fig 1).

For more technical information please visit: partsfinder.bilsteingroup.com



febi 45956

102196, 102426, 106512,
106513, 171970, 172004

**To fit:**

Volkswagen, Audi, Seat & Skoda
various models

EN



Figure 1

If the engine does not run, start by checking the mechanical timing. If the mechanical timing is found to be incorrect, determine the cause of the incorrect timing. e.g., timing chain has jumped position. Inspect for a missing oil screen in the camshaft adjuster bracket. If there has been piston to valve contact, the complete timing chain kit will need to be replaced, along with the cylinder head assembly and any other damaged parts.

If the oil screen is present and the mechanical timing is correct, inspect the intake camshaft spool valve, for damage or if the end of the valve has come apart, resulting in a portion of the spool valve being left in the adjuster bore.

Replace the timing chain kit, camshaft adjuster bracket, intake camshaft and the spool valve adjuster.

Follow the vehicle manufacturer's procedures during the inspection and replacement. It is recommended to replace the engine oil and filter as part of the repair.

For more technical information please visit: partsfinder.bilsteingroup.com