

AST4810

Petrol Engine Setting/Locking Tools



IMPORTANT: Always refer to the vehicle manufacturer's service instructions, or proprietary manual, to establish the current procedures and data. Product Information Sets detail applications and use of the tools with any general instructions provided as a guide only.

Applications:

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V W GROUP 1.2 Single (6v.) and Twin Camshaft (12v.) 3 cylinder Petrol engines (02-) in

SEAT

Ibiza/Cordoba

SKODA

Fabia

Fabia II

Roomster

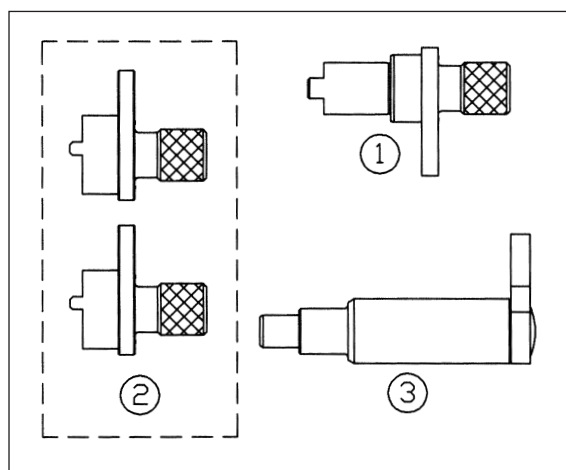
VOLKSWAGEN

Polo

Eos

Fox

AWY, AZQ, BMD, BME, BBM and BZG engines



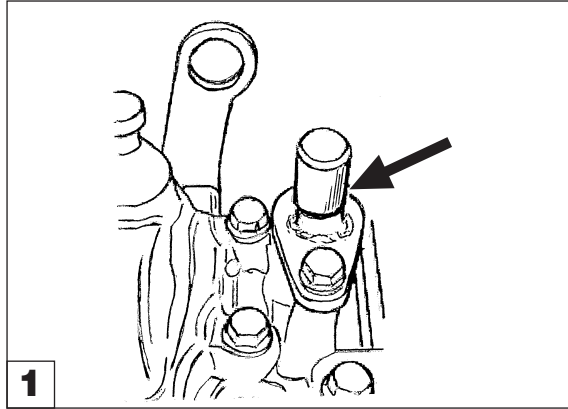
Kit contents/spares

Item	Part Number	Description
1	AST4811	Camshaft Setting Tool (AWY/BMD/BBM)
2	AST4812	Camshaft Setting Tool Set – PAIR (AZQ/BME/BZG)
3	AST4813	Flywheel Locking Pin
-	AST4810-84	Case + Insert



The V W Group 1.2 engine range, introduced from 2001, can be a single camshaft 6 valve (AWY/BMD/BBM) variant or a twin camshaft 12 valve (AZQ/BME/BZG) engines.

Chain drive – crankshaft to camshaft(s), they require use of a Flywheel Locking Pin, common to both engines, and a Camshaft Setting Tool for s.o.h.c.-AWY/BMD/BBM, and a pair of Camshaft Tools for the twin camshaft-AZQ/BME/BZG engines.

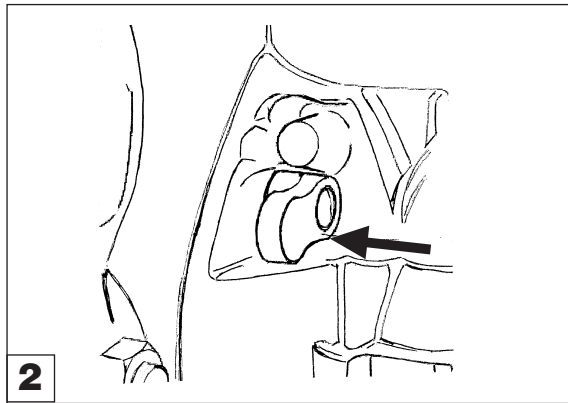


AST4811 Camshaft Setting Tool – AWY/BMD/BBM

Checking valve timing

AST4811 enters through the top of the engine to locate the camshaft timing 'slot'.

Remove the air cleaner, Hall sender unit and engine speed sensor. Turn the crankshaft, in the normal direction of rotation, so that the 'slot' in the camshaft is seen in the hole for the Hall sender unit. Insert AST4811 Camshaft Setting Tool. It should locate into the camshaft with ease. Secure in place with M6 bolt.



AST4813 Flywheel/Crankshaft Locking Pin (used for both twin camshaft and single camshaft engines (AWY/BMD/BBM + AZQ/BME/BZG))

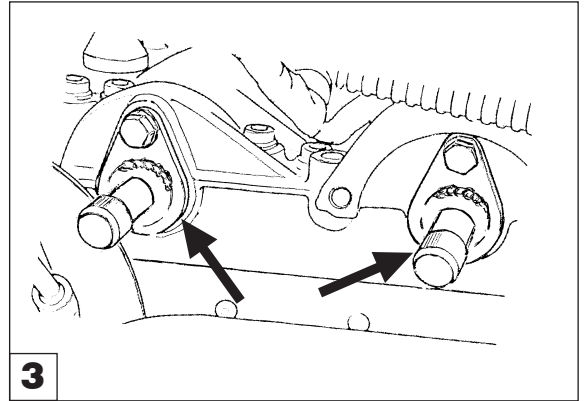
The crankshaft is locked in timed position by inserting AST4813 Pin through housing and into the flywheel. If it is not possible to insert the AST4813 Pin, remove AST4811 Camshaft Tool, turn the engine 360°, and then insert Camshaft Tool and Flywheel Pin.

Valve Timing Adjustment

Should it not be possible to insert both the Camshaft Tool and Flywheel Pin with ease, the timing can be adjusted by positioning the 'slot' in the camshaft so it is visible in the hole for the Hall sender unit and inserting AST4811 Tool. Then, using a suitable sprocket counter-holding tool, hold the camshaft sprocket and slacken its bolt. Turn the crankshaft until AST4813 Pin can be inserted correctly into the flywheel.

Counter-hold the camshaft sprocket and tighten the sprocket bolt.

Remove both tools, turn the crankshaft 2 times, and recheck valve timing by ensuring AST4811 and AST4813 fit correctly and with ease.



AST4812 Camshaft Setting Tools (Pair) – AZQ/BME/BZG

Identical procedures to the AWY/BMD/BBM single camshaft engines except the pair of Camshaft Setting Tools – AST4812, enter 'slots' at the rear of the camshafts.

Remove the air cleaner and both covers at the rear camshaft ends.

Remove the engine speed sensor and turn the crankshaft so that the 'slots' in the rear of camshafts are horizontal.

AST4812 Tools can now be inserted into the 'slots' and secured in place with M6 bolts, hand tight only.

For valve timing adjustment, fit the AST4812 Camshaft Setting Tools and slacken both camshaft sprocket bolts.

Insert AST4813 Flywheel Locking Pin and counter-hold camshaft sprockets whilst tightening the sprocket bolts.