AUTOTECH sport tuning

Installation Instructions

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Part Number: 10.109.402k
Description: ADJUSTABLE CAM SPROCKET, A1/A2 16-Valve

Notes:

Advancing the sprocket will increase low end (low RPM) performance, while retarding the sprocket will help the top end performance. This is also good when reinstalling a resurfaced head, because the timing will automatically be retarded when installing a head with the cam closer to the crank shaft. This sprocket will allow you to adjust for the peak performance and power range desired.

Procedure:

1.Tighten the five flange head screws on the sprocket with a 5/16" 12-pt socket to a torque value of 90 in. lbs. Do not use loctite!

2.Remove the upper timing belt cover to gain access to your stock sprocket

3.with the ignition key out of the car, and the car in neutral, take a wrench and turn the crank until the timing belt sprocket is set to the zero position lining up with the marks on either the cam cover as found in the instructions for finding Top Dead Center in your Volkswagen repair manual

4.With the large wrench, remove the center bolt on the sprocket and carefully slide the sprocket off the camshaft end without moving the timing belt.

5.Due to variances in each valvecover, some clearance of the valvecover may be required near the cam gear. The "ears" of the valvecover may need to be slightly clearanced towards the cylinderhead. An easy way to test for adequate clearance is to remove the drive key [woodruff key] from the camshaft. Install the gear without the belt, then rotate the gear on the nose of the cam. If there is no interference. Then it is time to proceed to step 6.

6.Install the adjustable cam sprocket with the TDC locating mark in the same position as the stock one was when you removed it. Install the bolt torquing it to factory specs [48ft/lbs], failing to do so will void warranty, Use Loctite on this bolt! Be sure the Autotech logo faces away from the head.

7.Re-install and tension the cam belt being sure the crank and intermediate shaft gears have not moved.

8.Loosen the five flange head screws in the slotted holes so that the plate can slide then relocate it to the position of your choice. With a large wrench on the center bolt that holds the sprocket on move the plate so the mark you are selecting is in alignment with the mark on the outer "Black" gear. Locating the timing mark on the black part of the sprocket from "O" Clockwise or to the "R" side of the sprocket "retards" the camshaft in single degree increments up to 10 degrees. Moving in the opposite direction "advances" the camshaft timing.

CAUTION Certain camshaft and engine combination result in an "interference" engine, where excessive cam timing changes will result in engine damage. Be sure to rotate the engine over by hand to ensure valve-to-piston clearance ***BEFORE*** attempting to start any engine after adjusting cam timing

7. Retighten all five outer screws (90 in lbs) and test your car. It is a good idea to leave the upper timing belt cover off temporarily, while you test changes on the cam timing to suit your driving needs

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