

## Biland Cambelt Replacement and Adjustment

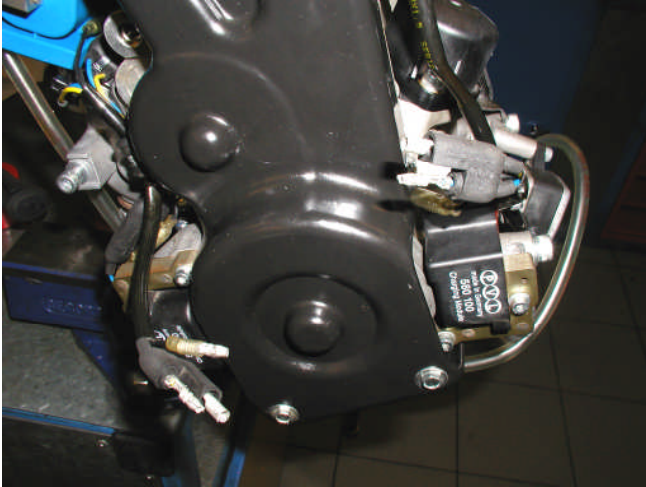


Fig.1

Begin by disconnecting the electric cable that runs in front of the cam cover. Remove the 3 bolts in the side of the cover (8mm head) and the 2 at the front and rear (7mm head). (Fig. 1)

Remove the cover taking great care not to lose the 3 spacer washers off the mounting pillars. (Figs. 2 & 3)

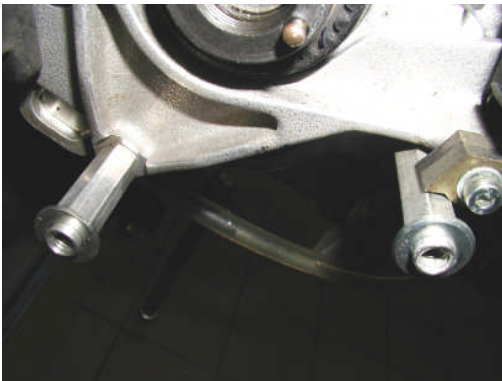


Fig. 2



Fig. 3

### CHECK CAM TIMING

The pulley on the crankshaft has one chamfered spline and this must be aligned with the vertical line on the crank case (Fig. 4)

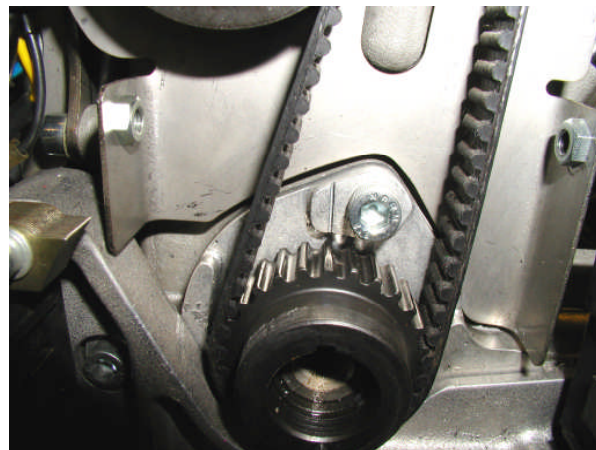


Fig. 4

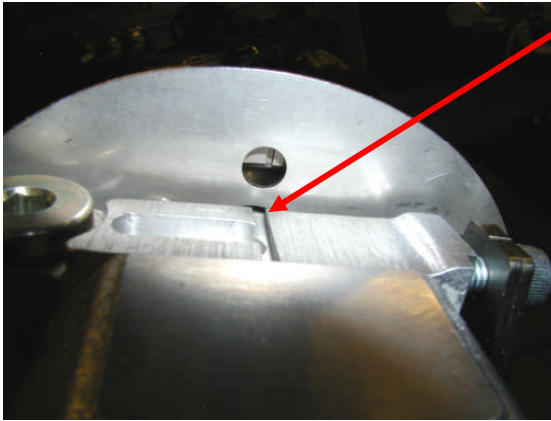


Fig. 5

For the camshaft there is a mark on the back of the camshaft pulley that must be aligned with the mark on the top of the high pressure oil pump casing (Fig. 5). This mark on the camshaft pulley is visible through the hole in the rear cambelt cover.

### TO REPLACE THE CAMBELT

Next, secure the crankshaft by putting a punch or similar object through the ring gear on the outside of the clutch and into the spare hole in the front of the crankcases. (Fig 6)

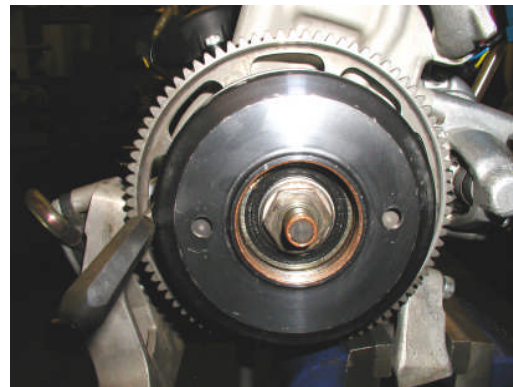


Fig. 6

Remove the Allen head bolt that secures the ignition Rotor. (Fig. 7). The Rotor will now prise off gently with a screwdriver. It is not on a taper and is secured with a peg. Slacken off the 13mm nut holding the cambelt tensioner and the belt will become slack enough to remove. (Fig. 8).

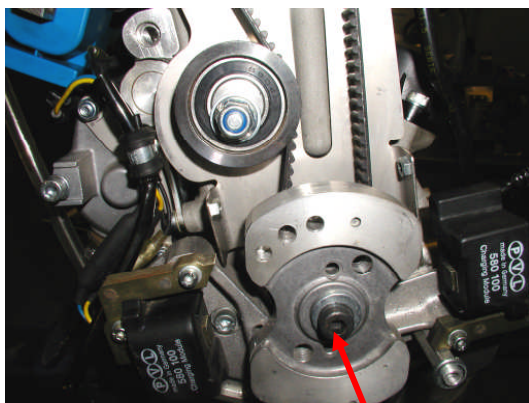


Fig. 7

*Allen head bolt*

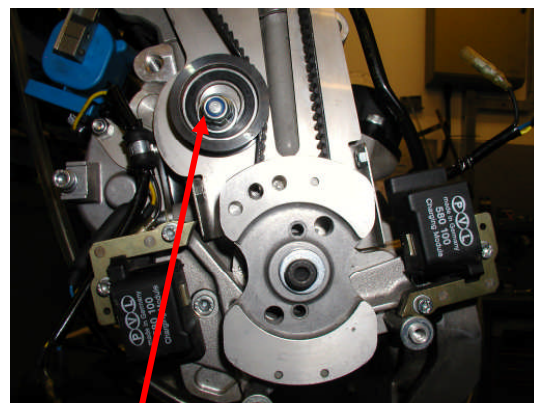


Fig. 8

*13mm nut*

**When fitting a new belt it is imperative that the crank shaft and the camshaft are aligned correctly. If not, serious damage will occur to the motor.**

## FIT THE NEW CAMBELT

In order to get the timing marks to line up when you fit the new belt the cam pulley will have to be turned against the pressure of the valve springs and may take a few goes to get it right initially. Once the belt is in the correct position, lever the eccentric pulley to tension the belt. This is best done with a cranked bar as shown in Fig. 9.

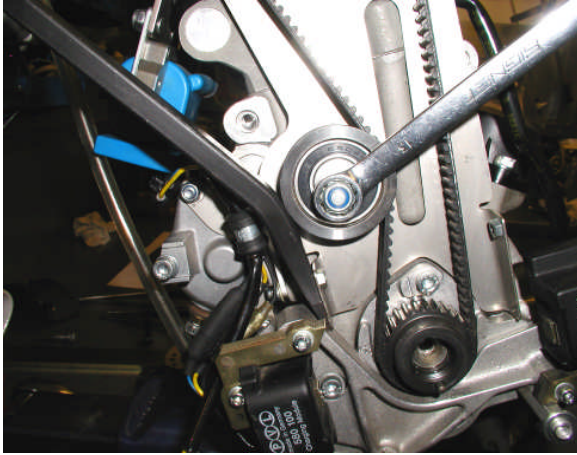


Fig. 9

When the tension seems correct tighten the tensioner nut (13mm spanner). Now check the belt tension. This should be measured on the long stretch of belt opposite the tensioner and should be measured where the head and block castings join (Figs. 10 & 11).

Using a ruler measure the deflection of the belt from fully left to fully right and this should be 12-13mm. (Figs. 10 & 11). If not readjust it with the belt tensioner pulley as already outlined.

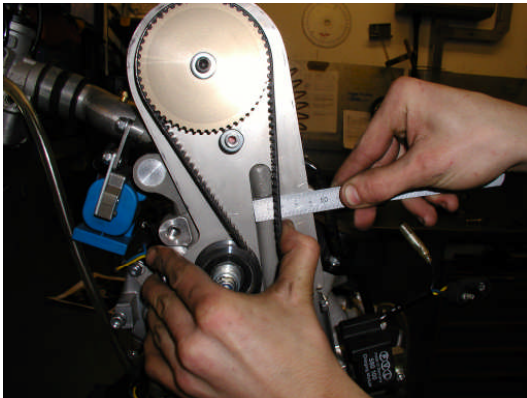


Fig. 10

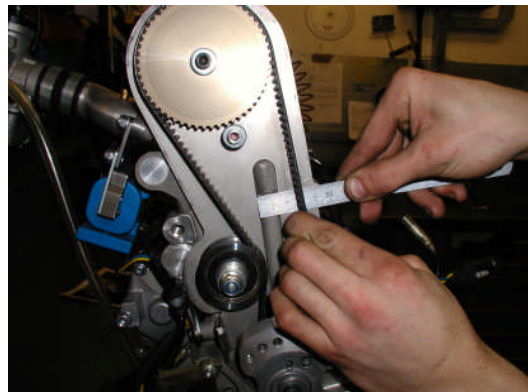


Fig. 11

When you are happy with the tension and cam timing refit the ignition rotor using Loctite 243 on the bolt. Using an Allen key in the rotor bolt, rotate the motor a couple of times (with the spark plugs removed) to allow the belt to find its running position on the pulleys and recheck the tension. Now recheck the alignment. Note that the camshaft rotates at half crankshaft speed so if you align the crankshaft and you can't see the camshaft mark it may be because the camshaft is 180° out. Rotate the crankshaft 1 revolution and look again.

If tension and alignment are OK refit the cover. Be sure that the 3 spacing washers are in place (Figs. 2 & 3) and that they don't fall off as the cover is put on, refit the 5 bolts. When reconnecting the cable it is best to pull the electrical connectors out of the rubber shroud, make sure the connectors are making a good connection and then push the rubbers over the connectors. If you don't do this it is possible for the rubbers to push together without the actual connectors making contact and the motor will then misfire. Put a cable tie around the connector to ensure that it doesn't pull apart. Job done.