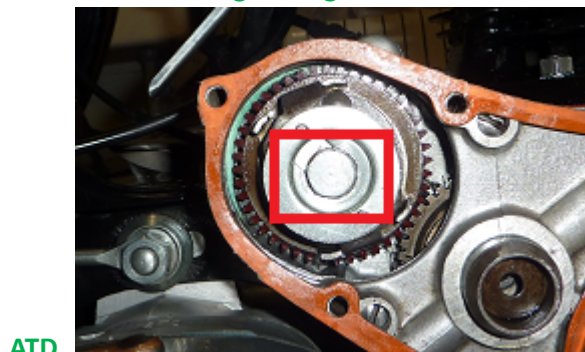


Timing Buzzer Instructions – K2F. Follow the colour coded instructions for ‘**Manual**’, ‘**Automatic (ATD)**’ or ‘**Both**’ depending on your magneto type. Additional useful information can be found in the appendix when indicated [Note#].

1. Take the points cover off the magneto and check that the points gap, when fully open (i.e. the heel of the points is resting against the thickest part of the cam ring), is set at about 0.012" (twelve thou). This can be done before the magneto is fitted or whilst on the bike.



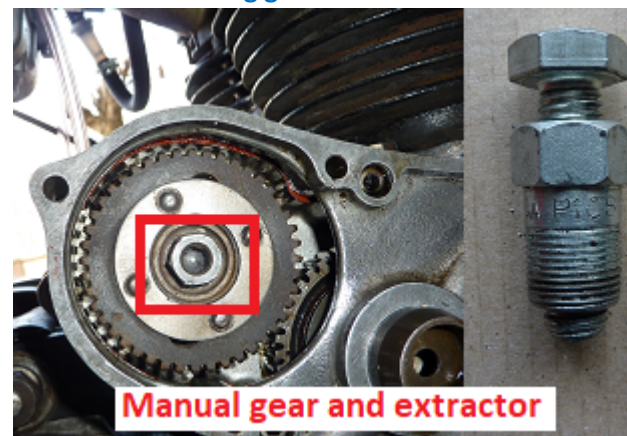
2. Remove the timing cover and withdraw the ATD by undoing the centre nut. It will come loose after a few turns then tighten again as it extracts the



3. Use the advance and retard lever on the handlebar to make sure the cable is slack and the cam ring is fully rotated anti-clockwise. Note that the cam ring only rotates a few degrees. [Note1]



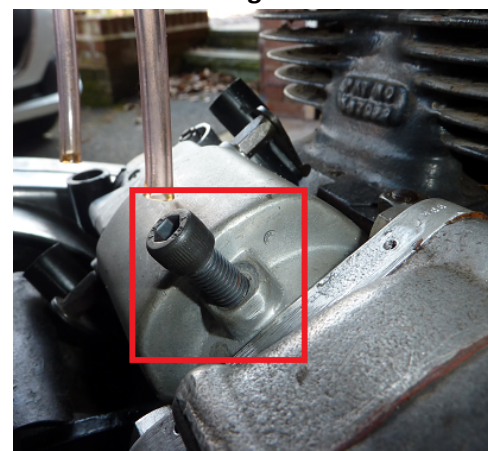
4. Undo the nut then use the correct extractor to withdraw the timing gear.



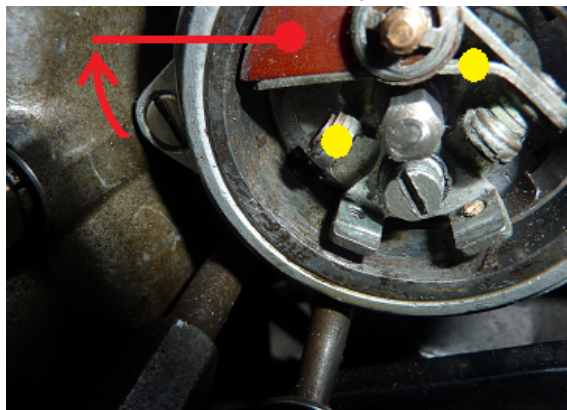
5. Remove the earth brush...



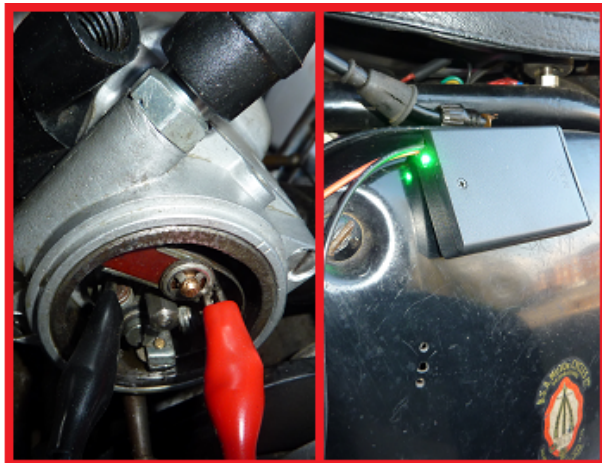
6.and replace with the armature locking peg, but only screw in a few threads. Do not lock the armature at this stage.



7. Rotate the points so that the heel of the points is in the 9 o'clock position (approximately), then attach the buzz box leads to the locations shown by the yellow dots. [Note 2 for earlier brass points]



8. Switch the buzz box on and stick it with the internal magnet on to a suitable location. The buzz box will make an audible (irritating) sound!



9. Rotate the points clockwise until the buzz box goes silent or the tone changes. The heel of the points will now be at the 11 o'clock position (approximately). Screw down, finger tight only, the armature locking screw. This will hold the points in the 'just opening' position.



10. Disconnect the buzz box leads and remove the buzz box and switch off. The magneto is now set up and ready to be timed to the engine. Remove both spark plugs. Turn the engine over slowly, by hand on the kickstart, until pressure can be felt under the finger pressed over the left hand spark plug hole.



11. Engage top gear. Insert a suitable probe in the left side spark plug hole. [Note 3]



12. Rotate the rear wheel forwards to locate 'Top Dead Centre'. Then rotate the wheel backwards so that the probe drops the required number of millimetres to correspond with your bike's ignition timing data (firing position btdc) e.g. **below**. Continue to rotate the wheel backwards so that the probe drops another 2 or 3 mm then forwards again to the firing position. This procedure takes any backlash out of the timing gear drive train.

E.g. BSA A10 – Iron head models, 8.5 mm

E.g. BSA A10 – alloy head models, 9.5 mm

13. **Manual magnetos:** Replace the timing gear and press it onto the armature taper. Attach the washer and centre nut and screw up finger tight only. Remove the armature locating screw and replace the earth brush. Tighten the magneto gear centre nut.

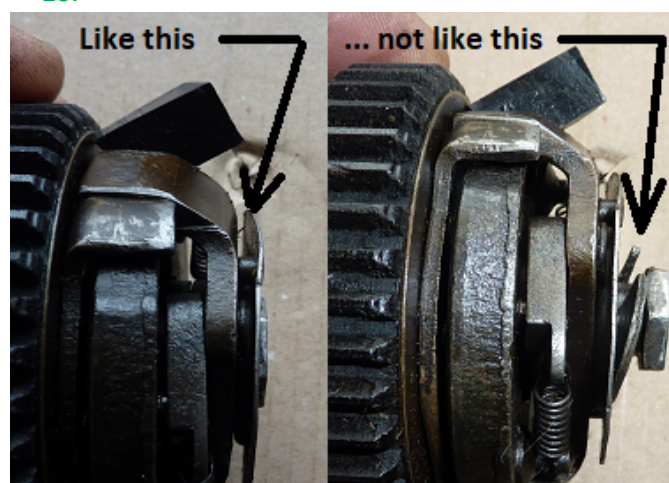
14. **Automatic magnetos:** Fit wedges into the ATD so that the unit is held fully open against its springs. Make the wedges out of rolled up card, rubber or wood.



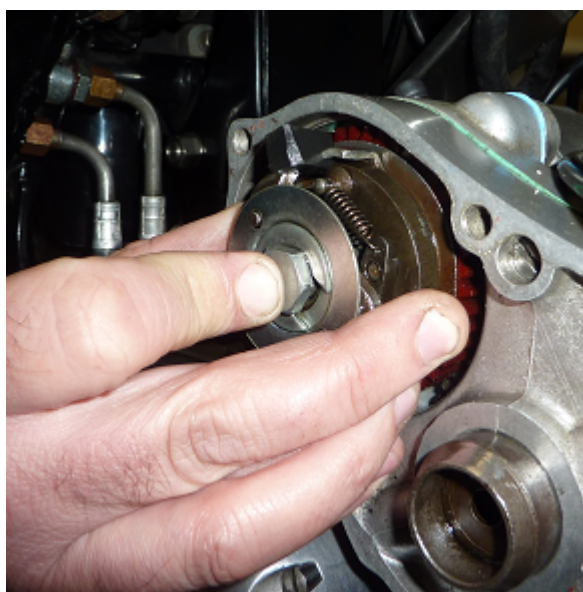
15. **Fit the ATD.** When fitting the ATD make sure the head of the centre nut is always pressed against the 'C' washer so that all components are sandwiched together (see 16 right and 17 below). Do not allow the ATD gear to grip the armature taper until the centre nut is becoming finger tight. As the centre nut becomes finger tight press the ATD gear onto the armature taper, tighten the nut firmly but finger tight only. Remove the armature locking screw and replace the earth brush. Use a ring spanner or socket to put a small amount of tension on the centre nut. Remove the wedges and finish tightening the centre nut.

[Note 4]

16.



17. **Keep the centre nut pressed in whilst fitting the ATD.**



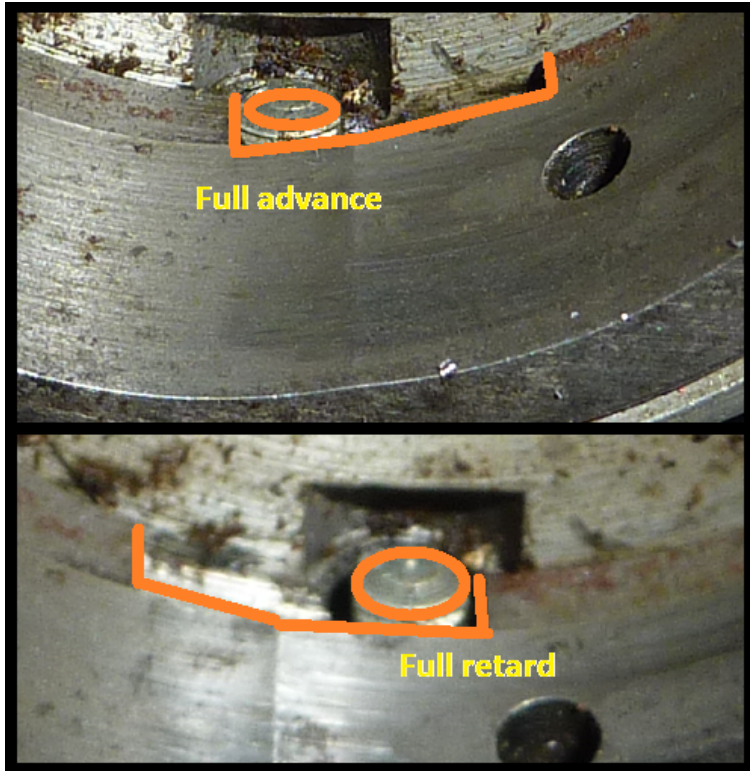
18. **Connect the spark plug leads so that the left hand magneto pickup is connected to the left hand spark plug.**



Fit the spark plugs, timing cover and any other components and..... start the bike!

Additional Notes

Note 1: The handlebar lever manually controls the advance of the magneto ignition. When starting the bike the advance / retard lever should be pulled to tighten the cable by about 50% of its travel. This retards the ignition. Over-retarding will make the bike difficult to start, insufficient retard will cause the kickstart lever to kick back and can cause injury or damage to the engine. As soon as the bike starts, the lever should be returned to the full advance position, i.e. cable in the slack position. If the cable is adjusted properly the cam ring should be able to shift between its full advance and full retard positions easily. Close inspection of the cam ring will reveal a cutaway and a stop which controls the extent of movement. The points usually rotate clockwise so rotating the cam ring anti clockwise advances the moment when the points open. See photos, right (points removed for clarity).



Note 2: Connect leads to locations shown



Note 3: This may look a bit 'Heath Robinson' but it is accurate enough. Make sure the top of the probe is too wide to fall into the cylinder via the spark plug hole!

Note 4: When fitting the ATD start to turn the centre nut and as soon as it finds the thread pull the gear towards you gently to prevent it meeting the taper too early and to prevent the 'C' washer falling out from behind the centre nut. The centre nut also has a left hand thread on its shaft which acts as an extractor when removing the ATD. This left hand thread can bind in the ATD gear if the components are not held together during fitting.