



The majority of these tips have appeared in club newsletters over the years. Please note that you use them at your own risk as neither the Bristol Austin 7 Club nor the authors can be responsible for the results of trying to follow the instructions given.

Setting Ignition Timing - (With thanks to Meshing Point, June 2001)

I recall a snippet from our bush telegraph when a member of the SA7C asked for re-timing instructions having removed a dynamo for some reason.

Assuming the dynamo has been refitted in an operational state, remove No: 1 plug. With thumb over plughole, using the starting handle, turn engine to determine the compression stroke on this cylinder. After which, turn engine 1 1/2 turns; insert a suitable probe through plughole and continue to rotate engine VERY slowly until the top of the piston is felt against the probe and the top of the cylinder is reached: Top Dead Centre (TDC)

Rotate the distributor shaft until the conductor end of the rotor arm is facing directly at the distributor cap terminal for the No: 1 spark plug. Insert distributor into dynamo housing, rotate distributor clockwise or anti clockwise as necessary to observe contact points are about to open. If this rotation is in excess of the small amount normally required to keep the centre of the rotor arm still on good terms with the No. 1 terminal, it may be necessary to remove the distributor sufficiently to turn the shaft to engage the next tooth in the dynamo drive gear.

Once all this has been achieved and the plug leads are correctly connected to the respective plugs, clockwise from the terminal for plug 1, in the order 3, 4, 2, and you should be back in business.

Did you check the distributor contact gap - .012 in, not to mention the plug spark gaps which should be .025 in?

Now that the engine fired up first time, the advance/retard setting to your liking and the clamping bolt tightened, how about making life a bit easier to execute a similar job next time round in addition to other advantages?

First, establish a datum point on the timing gear/starting handle shaft front cover, immediately below the fan driving pulley. Ensuring that No. 1 piston is at TDC - compression stroke, draw a similar mark on the inside of the flange pulley. If access to the flywheel is available, the TDC position is where the 1/4 mark is directly opposite the rear block holding down stud. The ignition fully advanced position is obtained by turning the flywheel back 1 7/8 inch (20 degrees), make a suitable identifying mark opposite block holding down stud. At this point, make a similar identifying mark on the fan pulley. The distance between the two marks should be 3/8 inch (9mm).

Obviously, this can be achieved even if access to the flywheel is not immediately convenient. Tip: The benefit from these identifying marks will be enhanced if they are either white on a previously painted small area of black, or black on white.

Now to the interesting part. With the aid of a simple strobe light (e.g. Halford, etc. connected in series with the lead to No: 1 plug, with engine running aim the light close to your identifying marks on the pulley wheel flange when they will hopefully appear to be static. In the case of manual advance/retard controlled distributors, operation of the control will be seen by the strobe to be varying between the TDC and 20 degrees before TDC marks relative to the modern mark on the casing - assuming the timing setting is correct.

Where auto advance/retard distributors are concerned, simply progressively increase the engine revs from idle to the equivalent of a 30/40 mph running speed when a similar scenario will be evident as just described. Failure to do so will indicate remedial action for the distributor being required. If the appearance of the movement between the two marks is not the previous hoped for static situation, indeed, is erratically jumping about like a headless chicken when running the engine at varying speeds, start looking for the source of the problem in any one or more of the following: Worn gear(s) in any of the train commencing at the crankshaft cannot be ruled out, but the most likely culprits may be the gears at either end of the dynamo, distributor shaft end float and/or drive gear, or, more often than not, worn distributor bushes.

A distributor spindle flopping about in worn bushes can result in the contact breaker opening irregularly resulting in different gap openings and varying plug spark intensity, not to mention the pistons getting a spark of encouragement for commencement of the next cycle not necessarily at precisely the same time as each other.