



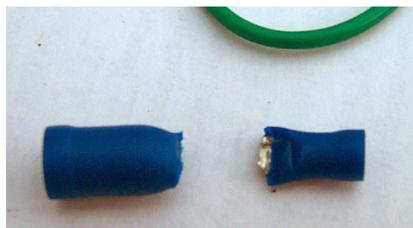
The majority of these tips have appeared in club newsletters over the years. Please note that you use them at your own risk as neither the Bristol Austin 7 Club nor the authors can be responsible for the results of trying to follow the instructions given.

Ignition timing and Bosch distributor - further - by Geoff Hardman

Geoff Hardman of the Cornwall Club sent his thoughts on Terry Griffin's article on Bosch Distributors published in the October 2011 issue:

Having done several Bosch distributor mods myself, I was very interested in Terry Griffin's article in the October mag. He's absolutely right that the best way to set the max advance is with a strobe off of the flywheel. However, there's a slight oversight which means that he might not be getting the best from his mod.

It's true that the Bosch distributors vary a bit in terms of maximum advance from manufacturing plant to plant, and for peak performance, setting them with a strobe at high revs is ideal. However, unless you make a small additional modification to reduce their "swing", the 27 degrees of advance travel will mean that at very low revs, the car will be grossly over retarded. The later Lucas distributors had about 8 degrees of travel, (earlier ones were 5 degrees). This means that with the right advance "on song", the spark falls back 8 degrees at tick-over. Now, if you don't reduce the "swing" on the Bosch, for the same timing point at high revs, the idle timing will now be 27 degrees further back, or in effect, 19 degrees FURTHER retarded than with a Lucas. It will tick-over nicely, be very quiet, but from take-off won't pull the skin from a rice pudding! A bit more won't hurt, but it's advantageous to constrain the change to about ten degrees so that a fully tuned advance at high-ish road speed (say 25mph in 3rd in my Box, to lug us up a hill) doesn't result in weak performance at take-off.



Blue bullet connector shortened like this.

How I do this is to cover the pin in the centrifugal advance mechanism (exposed as Terry says when you remove the points base-plate) with an insulated female electrical bullet connector with the wiring part cut off, just squeezed down on to the pin so it can't move. Now the advance arm will hit it earlier, and the maximum travel will be cut down. My rough measurements show this to be 10 - 12 degrees, much nearer the Lucas spec, but with all the advantages of nice unworn components. The perfect fit seems to be with a "blue" bullet (the colour denotes the crimp size).



Distributor showing Geoff's mod crimped in place.

Having done that, and setting up in Terry's manner, I get all the advantages of a fully "on song" engine at speed, but without losing out any precious pull as the revs drop. Stops me exercising the gear-change hand so much, as well!

Terry Griffin adds the comment:

The advance range on the 009 dist: is from 12 degrees on some to 15 degrees (equivalent to 24 to 30 crank degrees), and the spring rates vary, all this on the same model distributor, but it is the best option. Are you aware that Accu Spark now do a 009 distributor at a very good price. See www.accuspark.co.uk . Also a good discount is offered on a timing light if ordered with a distributor. I have tried the light and for a basic timing light, it is excellent.

... and Ron Hayhurst concludes the discussion:

Sal has given me a preview of the above note from Geoff so that we can have a consistent message when setting the timing with a Bosch distributor. Terry, as many of us know, really knows how to get the maximum hp out of 748cc, having won the Bert Hadley Trophy in 2011.

It's all to do with "horses for courses" – literally. Terry agrees that the timing will be over retarded at low revs unless a packer is used, although he hasn't seen it drop below 5 degrees at tick-over. When racing, it follows that high revs are the

order of the day, so it just doesn't matter too much to him to alter the power at the other end of the scale – he never uses it!!

So the message for most of us is to go along with Geoff's mod. Also, Terry again emphasises the importance of using a strobe and a good timing mark when setting the timing confirming that Bosch as distributors can vary through having one or two springs "as found", and may have different spring ratings.