K-Bike Ignition Timing

By Greg Amy
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I have an alternate method to timing K100s, alternate to the known methods posted on the IBMWR site:

http://skylands.ibmwr.org/tom/tech/k75_timing.html
http://skylands.ibmwr.org/tom/tech/k100_timing.html

I've never worked on a K-bike before, but I'm pretty handy with tools (work on cars a lot). I studied these methods and deduced that it could be a pretty easy job. I pulled mine apart and looked it over, and saw how it was done (and I also considered Don's edition of using a protractor instead of linear measurements - that way seems easier.)

However, I learned a few things from Don in private email: first, the center of the V-notch represent TDC; second, that there is an additional notch on the K100 bikes, that being a round-cornered notch at 24 BTDC. From Don's pages on the dyno testing of 30 BTDC I deduced that timing the K-bike via the convoluted factory method of measuring valve lift and rotating the Hall Effect sensor results in a timing of 24 BTDC. Based on that, I assumed (hopefully correctly) that I can use my Sears timing light to check and see if that were correct. It were. I used all four of my hands to hold a mirror and the timing light and to rev the engine (you shoulda seen it) and I verified that on my K100, at least, the timing is dynamically set to that round notch (why doesn't the factory do it that way...?)

Not wanting to rest on my laurels (and wanting 30 BTDC) I thought back to the listed procedure. Sure seems like a lot of work to mark a timing mark. Then I looked over at my nifty-difty Sears timing light and remembered I bought an adjustable timing light. With that device I can dial in any advance into the gun and it will automatically move the TDC mark for me. Example: I can dial in 24 BTDC into the gun, and when I rev the engine it will show the TDC mark lined up.

So, I took my nifty light and checked the idle timing. I found that the static timing at idle is 9 degrees BTDC.

Finally, the 30 BTDC. This was the easy part. 30 (desired) - 24 (factory) = 6 more advance desired. 9 BTDC at idle + 6 = 15 BTDC idle setting by the light.

So, in a very roundabout way, I'm saying that if you don't want to do the rotor marking, and you have an adjustable timing light, then if you set you ignition timing at idle to 15 degrees, this should translate to 30 BTDC total advance. Alternatively, if you're into the measuring and marking, then mark your rotor at 15 BTDC and use that as your setting at idle, instead of bothering the neighbors with zipping the bike to 6K.

I'd really like it if someone that has already marked their rotor, and has access to an adjustable timing light, could verify this.

I've been riding the bike for a week, and I don't detect any detonation and the bike seems to run fine!