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REF: Engine Control - SUB-01E

A Neat Timing Trick

The procedure is here at Wild West Cycle.com ¹⁾

It basically amounts to adding a TDC mark on the timing cup rather than on the flywheel. ²⁾

In theory that works fine.

One thing to be aware of, though, is that dial-back timing lights and dual-fire ignitions on Harleys don't always get along.

Dual fire was stock on bikes that have timing cups.

The way a dial back light works is that it looks at the rpm of the engine based on the interval between firing pulses.

Knowing the rpm, it can calculate how much time equals how many degrees of crank rotation, and delay it's strobe appropriately based on where you've got the dial set.

You then use the TDC mark instead of the advance mark.

In most four stroke motors, you get one firing pulse every 720 degrees of crank rotation.

This is what the dial-back light is expecting to see, and it bases it's rpm calculation and strobe delay on it.

Well, in a dual fire Harley motor, you get two sparks every 720 degrees of crank rotation, the real spark and the wasted spark.

What's worse, they don't even come at even intervals: 405 degrees followed by 315 degrees followed by 405 degrees, ad infinitum.

It confuses the hell out of a dial-back light, and really makes it's answer untrustworthy.

If you're lucky, your light will filter the uneven interval and average the two.

But you still have a 2X rpm assumption, which is going to mean you'd have to dial in twice as much timing as you actually want.

I've seen people try to do it but using a dial back light on a dual fire HD is just a bad plan.

It works fine if you've upgraded to single-fire, though.

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¹⁾

http://www.wildwestcycle.com/f_timingtrick.html

²⁾

aswrcing of the XLFORUM

<http://xlforum.net/forums/showthread.php?p=4018569&highlight=upgraded+crank+timing+mark#post4018569>

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