

Points vs. Electronic Ignition

One of the largest debates in the British bike owner's fraternity is, "Which is better, points or electronic ignition?" The choice of points or electronic ignition (EI) can directly affect your ignition timing. Ignition timing is directly responsible for not only the performance of your machine, but also the health of the engine as well. Since the engine is air cooled, and since ignition timing directly affects the combustion temperature, it's easy to see that if the ignition timing gets too far off, then expensive things start to melt!

Background

The term "points" refer to the ignition contact set your bike was equipped with from the factory. Most Brit bikes use a separate set of points for each cylinder whether it is a single, twin or triple. Most Brit bikes up until about 1979 came new, or "stock", with points. And if points were the only bother, then most people could make due. However, motorcycle engines run at many different engine speeds and need to adjust the ignition timing to account for that. To do this Lucas fitted an "auto-advance unit" (AAU) behind the "points plate".

The AAU incorporates an ingenious, but none too accurate, system of bob weights that fling outward according to the engine speed. The bob weights are counter-acted by a set of springs to pull them back inward as the speed slows. This speed sensitive mechanism changes the ignition timing by adjusting the ignition cam position while the engine is running.

The problem is that not only do all ignition points close up over time, but on British motorcycles the AAU also has terrible wear problems (especially after 30 years). So the ignition timing ends up being affected in about 10 different ways. Brit bike owners are given the option of spending ~\$100 on a new AAU in hopes of correcting their erratic idle and spotty performance (and still dealing with the points gap), or spending ~\$120 on an electronic ignition.

The electronic ignition replaces all the touching, wearing, mechanical parts with non-touching, non-wearing, electrical sensors. Further more, the ignition advance curve, which used to depend upon the bob weights getting flung around like a square dance partner, is replaced by an exact mathematical formula programmed into the control box.

Both systems have their place. For "shop queens" that are ridden infrequently, for bikes that are ridden only short distances, or for competition bikes that need to loose the weight of the battery... points may be the best option. However, most "daily riders" can usually benefit from being converted to an electronic ignition system.

Both systems also have advantages and distinct disadvantages. Obviously the points can be jury rigged with a stone on the side of the road to get you home. They'll also operate just dandy with a poor charging system and/or bad battery, with the system voltage down around 7V. Most electronic ignitions on the other hand, require a battery with a *minimum* of 12V at *all* times. To maintain the battery in tip-top shape requires that your wiring and charging system be first rate.

So you pay attention to the points, or you pay attention to your electrical system. If you're going to dance, you'll have to pay someone!

My advice

1) If your "new to you" Brit bike is equipped with points, then ride the machine the way it comes and see what happens. If the machine is running there's no reason to fix something that ain't broken. You may find that the bike runs great just the way it is, or you may find that you don't ride the bike often enough to warrant such an expense.

2) If your "new to you" Brit bike runs erratically and the AAU turns out to be the issue, then you may be forced to upgrade. But remember that the total cost of the upgrade may also include a set of 6V ignition coils and a complete charging system check.

3) If you find that you are riding long distances or riding more than 2-3 times a week, then the upgrade may represent a savings due to the fact that you'll not need to set or check your ignition timing as often as with points. But again, make sure your charging system is in tip-top shape.

Hope this helps!

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