

Ignition Coils

Are they any good? We will consider the aluminium cased Lucas coils that were fitted to all Commandos and the Norton/Triumph/BSA twins from 1950s onward and the Wipac coils fitted to the lightweights. The same testing applies to both.

PRIMARY RESISTANCE (i.e. resistance between the two terminals)

Lucas 6V coils-2.2 Ω (Ohms)

Lucas 12V coils-5.3 Ω (approximately)

Wipac 12V coils - 4.5 Ω

In general for all coils, primary resistance for 6v items will be less than for an equivalent 12v

SECONDARY RESISTANCE (measured between either of the terminals and the HT lead connector). All coils – up to 10K Ω (10,000 Ohms).

There shall NOT be any connection between either of the terminals or the HT connector and the case. The case is NOT part of the ignition circuit and does not have to be earthed, but earthing the case will provide suppression of electrical interference and is good practice.

When in use the HT can break down to the case, obviously this then 'fails' the coil. Points or electronic? Neither affects the above issues, reasons for failure will be the same. But a failed coil might take out the electronic ignition.

Over tightening the clamp should be avoided, this can cause the case to distort and very soon 'kills' the coil. Another killer is the loss of oil from the coil, as soon as any quantity is lost, the coil will overheat.

CONNECTION POLARITY. The +/- markings on the coil should follow the battery polarity. If reversed the coil still works and is not damaged (the coil may be a bit less effective), however the polarity of the spark at the plug is reversed. Yes it works, but the long term effect on the plug wear can be seen. Bear in mind that the points side of the coil is in effect the 'earth' side. The body of the spark plug is also earthed.

IDENTIFICATION

Large **MA6 or MA12V are 52mm dia.** and are often taken as car coils from the 50s-60s, resistances are as above.

Small **17M6 or even 17M12 are 40mm dia.** used on the Commando, later Triumph etc and still sold in a Lucas style box, maybe Green but can be Red/Black.

There was a German made coil with same dimension case, and of course very similar resistance, and doing the same job-made by **PVL**. They were very reliable but expensive. From experience the **Emgo** (now sold in the Lucas Green or Red/Black box) is also reliable

It is funny in a way, for many years we have lambasted Lucas-'Prince of Darkness' and now we are saying 'Genuine Lucas' as if it is something wonderful. In fact having sold and fitted these parts over the years, the REAL Lucas was not that bad, compared to some of the new far-eastern parts. And WIPAC - another maker from the past, is often lambasted, some of their products left us 'less than impressed' while others from this manufacturer are above reproach. Their ignition coils and their alternator rotors for the 1" crank seem to last forever.