

# RICHARD GOODE AEROBATICS

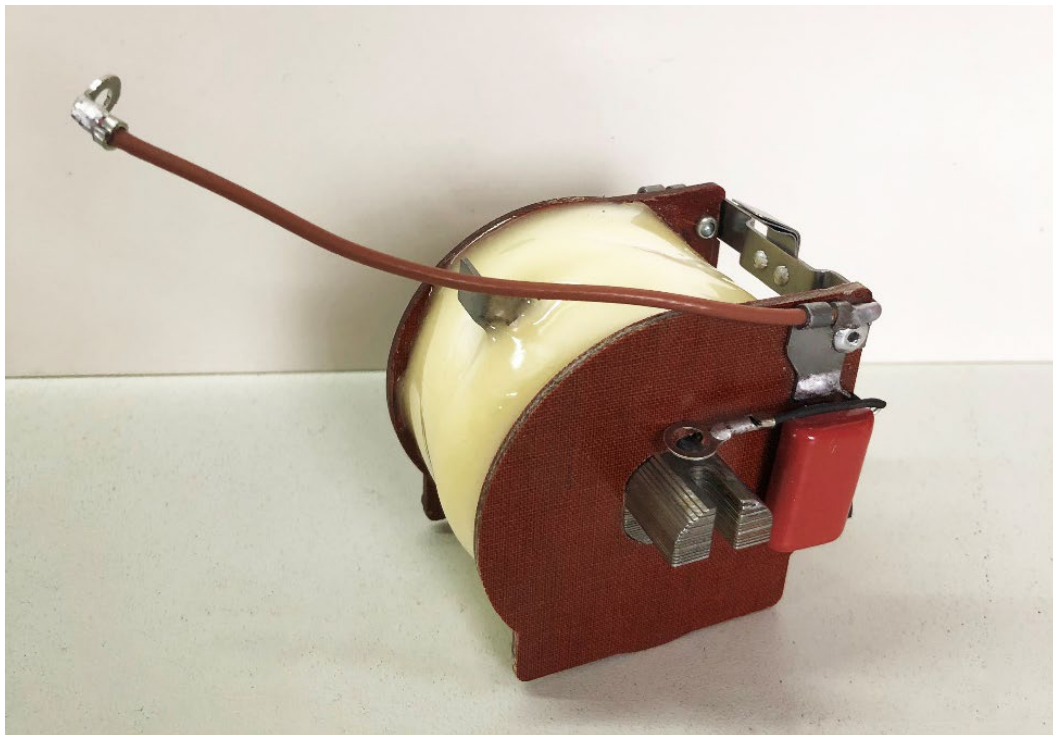
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**WORLD LEADERS IN EAST EUROPEAN & CHINESE RADIAL AIRCRAFT ENGINES**

## Our new AYC coils



By way of background – over the last 20 years we were increasingly encountering people with magneto problems. Typically this would manifest itself after about 30 minutes of flight when the engine heat had soaked through to the magneto, which would then momentarily stop but then continue. However, if you continued to fly over a period of hours the engine then would stop for several seconds, and ultimately would actually fail altogether. So we've had three forced landings that I know of because of this.

We went to a UK specialist in old magnetos, who normally work on old racing cars, and quite quickly they came up with the answer which was that the magneto was based on the pre-war Scintilla design with a specific fault in which the capacitor, an intrinsic part of the coil, was put inside the coil of hotwire and over a period of time would degrade with the combination of age and heat and would eventually fail. The Russians and Chinese never had this problem because their engines were automatically overhauled, even if they never been used, after six years storage!

So the UK company developed a new coil with an external capacitor which was an excellent solution. However we started getting a very significant demand for the coils which they couldn't meet. So we spent time examining the world's coil business, and came up with one of the biggest companies in the world, inevitably in China, who make over a million coils a year, from lawnmowers to original equipment for Ferrari cars! Although our business was very small by their standards, they could see an element of prestige of supplying coils to the aviation industry so have been incredibly helpful and supportive. They further developed the UK design, with better wire; better shellac insulator; and importantly the latest Panasonic capacitor, of course bonded to the outside of the coil.

Having put so much effort into these coils, we then thought it could be worthwhile seeing if we could obtain formal certification, so went to EASA, who control all aviation in Europe (as the US FAA), and went through an incredibly laborious process, but ended up with full certification from them. Importantly, we had to do extended testing on a special machine, from which we were able to demonstrate that our new AYC coils produced a spark that was 15% to 20% stronger than a perfect condition original Russian coil, leading to easier starting; smooth running and a little more power.

So we now have these in full production; the coils are absolutely identical for the AI 14/M 14 Russian engines and for the Chinese HS-6 engines. The photo above is of a new coil and you can see the external capacitor.

**Importantly there are two different sizes of the mounting "slot" for the coils, and we need to know which one your current coils have. The majority have a small slot, which is 3.8 mm while a few have the larger slot at 5.1 mm. If you have the smaller slot coil but need the bigger slot, it is easy and acceptable to simply file the slot to enlarge by 1.3mm.**

We give an unlimited guarantee on all AYC coils for 5 years, although we are confident that they will last dramatically longer.

Please contact us on the telephone number or email address above if you would like to order coils. We would obviously need your delivery address and telephone number.



**RICHARD GOODE AEROBATICS**  
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