Re: Switch mode regulators − PWM, VFM, etc.

Source: http://sci.tech−archive.net/Archive/sci.electronics.design/2006−08/msg00013.html

- *From*: Mike Monett <No@xxxxxxxxx>

- *Date*: Thu, 03 Aug 2006 18:40:54 −0400

Joerg <notthisjoergsch@xxxxxxxxxxxxxxxxxxxxx> wrote:

> That was on the really primitive ones. But a simple trick could be
> used to cut the magneto over a portion of crankshaft angle. This
> was done on the Gnome engines that were AFAIK used in the Sopwith
> Camel. IIRC they gave you only two selector positions on the
> Gnomes: All cylinders firing or only one cylinder firing. Since
> mixture was still being sucked into the others stories have it
> that if you cut for too long and then re−applied full ignition
> there could be a big kablouie and the engine went to shreds.

Here's a report from a pilot actually flying one. Apparently, the procedure is to shut off the fuel and keep the ignition on. This makes a lot more sense:)

~~~~~~

Coming down from altitude is usually accomplished by shutting off the fuel, but not cutting off the ignition. With the propeller windmilling, forward pressure on the stick is needed to hold the nose at a fairly steep angle toward the earth to maintain a safe airspeed. It's important to keep the propeller turning so that when you turn the fuel back on, the engine will restart.

[...]

If, to descend, you shut off the magneto to the engine but leave the fuel on, you are flirting with danger. While the engine is turning over, fuel is being fed into the engine and exhausted from it into the cowl. Turning the engine back on could ignite the raw fuel collecting in the cowl.

Even with the fuel off, however, there is still a problem to contend with: the oil pump is geared directly to the engine, and even when the engine is off, as long as it is rotating, oil is being pumped into the cylinders.

This could oil up the "sparking plugs" (as they were referred to in 1917), and this could prevent them from firing when the ignition is turned back on.
~~~~~~

The Gnome engine manual tells you to keep the ignition on during the glide to prevent this from happening.

In theory, it sounds right, but it really doesn't work because too much oil is pumped into the cylinders, especially on an extended glide.

http://www.findarticles.com/p/articles/mi_qa3897/is_199808/ai_n8823870/pg_7

~~~~~~

Regards,

Mike Monett

Antiviral, Antibacterial Silver Solution:
http://silversol.freewebpage.org/index.htm
SPICE Analysis of Crystal Oscillators:
http://silversol.freewebpage.org/spice/xtal/clapp.htm
Noise−Rejecting Wideband Sampler:
http://www3.sympatico.ca/add.automation/sampler/intro.htm
.
~~~~~~