

# AN ARTICLE ABOUT VERY LONG RUBBER MOTORS

An article entitled "Flightline Airy musings by Tom Arnold" published in the October 2005 issue of Scale Staffel Newsletter of San Diego, CA, Gerald Sullivan, Editor

When I read Dave Stott's article in FM about 4 to 5 times hook to motor peg length, I was sure that our esteemed FAC founder was smoking rope. I mean, come on, have you ever tried to cram that much rubber into an aircraft? You get a balled up mess and it is all at the tail and if you don't destroy the fuselage fishing it out, you should. Actually Dave used three different "stand alone" methods: a prop stop at the nose block, a slick tube of acetate around the length of the motor and, finally, a loose sleeve around the motor peg. The first two were pretty intuitive as to how they prevented bunching, but the last one — the sleeve was beyond me. I could not envision how it could work. Well, I am here to eat humble pie because it works and really works well. I mentioned the Welkin that busted a minute last month and that was the one that grabbed me and lifted me up against the wall, as I had built a Welkin before. I KNEW how it should fly.

The "loose sleeve" or "wobbly peg" or whatever you called was the buzz of the Non-Nats and the proof was circling overhead for 2 days. It was really exciting. Here is the gist of it. Most users of it just slipped a very oversize aluminum tube over their regular peg. That was it. Tell me that this high tech move is too expensive and cuts out the ordinary guy. The explanation of how it works, and a number of pilots had set up workbench demos to see how it did do its magic, is that by allowing the motor to shift, roll, and twist at the peg as it unwinds it prevents that big knot from forming around the peg. For some reason it works itself out of a jam and lets the full winds come out. Now you still have a long sloppy motor to slide back and forth but you have gotten every turn out of it you could before then.

Braiding the motor and the forward prop stop are two solutions — Dave picked the prop stop. The consensus was that the wobbly peg worked 7 out of 10 times and if it never got any better than that, it is still fantastic. Several discussions brought out the fact that if the rubber should work its way off the sleeve and then grab the rigid peg, the whole process is defeated and could well be the 3 out of 10 times it did not work. The most obvious solution to that is careful cutting of the sleeve to take up most of the peg length or the attaching of some thin ply circular guards over the ends of the sleeve. Sort of like a bobbin that the rubber would go around.

Using the sleeve though requires you to craft a new type of stuffing stick that allows you to hold the sleeve-rubber motor combo. That, and you will probably need to pay close attention to the peg area as a whole to make sure you give that knot lots of room and as little to hang up on as possible.

Dave was able to get 4 to 5 times HTP (hook to peg, ed.) length with all three mechanisms in play. Amazingly, the pilots at the contest reported very close results with only the sleeve. They may have stacked the deck in their favor by braiding as well as having a relatively "clean" interior fuselage. Whatever, the sleeve got the credit. Theoretically, you could double your turns with this wobbly peg (and you probably cannot) but even a 20% increase in motor run would make it the

nuclear power of rubber scale. Man, that Douglas A-20 Havoc looks a lot more possible now!

(Ed Note: This idea obviously has applicability to all rubber power models, not just scale. I have used a large tapered center punch to flare the ends of the sleeve to help keep the rubber on board.)