

Subject: Re: [c-a] Fitting Electric Start to Vari-Eze

Date: Fri, 8 Oct 1999 09:15:50 -0400

From: Bruce Layne <laynes@lex.infi.net>

To: canard-aviators@canard.com

[The Canard Aviators's Mailing list]

I really like the starter on my LongEZ. It's good peace of mind should the engine quit at low altitude where I couldn't dive to 130 KIAS to windmill start. On the harder to justify side, hand propping seems old fashioned and thus inconsistent with the sleek looks of a canard plane. But hand propping makes a lot of engineering sense. Why add all that weight and screw up you for a device that's used for five seconds every flight? Burt certainly didn't like the idea, as demonstrated in the numerous Canard Pusher articles.

That said, if you're still set on the idea you might look into the new 4.4 pound sealed lead acid battery that provides 200 Amps of starting current. It's called the UltraStart Red high cranking battery, it sells for \$79 and is marketed by Flightstar Aircraft. This information came from the November 1999 Kitplanes magazine, page 13. You can reach FlightStar at 860-875-8185, or <http://www.fly-flightstar.com/>

If you mounted the battery and starter contactor very close to the starter and near the CG, you would not need a long run of heavy wire to carry the current from the nose, you'd have very little loss in the wiring providing more effective cranking, and you'd minimize the effect to the weight and CG.

Of course, nothing is free. Flight Star is in the business of selling ultralight planes. The 4.4 pound battery will not have anywhere close to the capacity of the 25 Amp hour battery I have in my LongEZ. The 200 amp starting capacity is close enough to the larger battery's 225 cold cranking amps, but it won't last nearly as long. If your Varieze starts in three pulls, you'll probably be OK most of the time. After that, you'll probably be back to flipping it over by hand. The reduced capacity also won't allow you to add lots of energy consuming devices and expect the battery to source the load for very long if the alternator dies. Also, before committing to the small battery, be sure you can adequately charge it without overcharging it.

Chief Aircraft had a starved electrolyte battery that weighed about 11 pounds, provided enough amps for starting, about 12 Amp hours of capacity and could be completely discharged without damage, but it doesn't seem to be in the last catalog they sent me. You could call them at 800-447-3408 and ask.

Lastly, Aircraft Spruce has a 10 pound 14 Amp hour capacity Yumicrom battery that they describe as "used in the VariEze and LongEZ. Easily handles the load of starting a Lyc. O-235 engine." Check out page 348 of the 1999/2000 catalog, part number YB14LA2.

Whatever you decide, one of the newer light weight permanent magnet high performance starters seems essential. Good luck, and many happy starts.

Ian Pountney wrote:

> Does anyone have any advice on the following: I have a Vari-Eze which

> is hand swung, I am considering converting to electric start, but have a
> few questions as to the viability of fitting the extra items.

- For details on sponsors of this list, copyrights, and how to remove
- yourself from this list, please visit:

<http://www.canard.com/canard-aviator-sponsors.html>

(c) 1997, 1998, 1999 Canard Aviators. support@canard.com