ElectroAir electronic ignition group buy is on.

As the shoulder harness group buy was popular, and there was interest in electronic ignition for its improvement in fuel efficiency, airspeed, and hot starting, we negotiated another group buy for electronic ignition. For those wondering about the delay, we waited for a competitor (SureFly), but they are showing approximately a year delay. Both look like they will be nice upgrades! Meanwhile, in honor of our 60th anniversary, ElectroAir agreed to the best pricing we have seen! Although Northeast did the negotiation, this is on behalf of all Comanche pilots (see nod to our Bonanza and Mooney members). For those who just did their mags, we apologize for the delay.

Please reply if interested/in need, or with any questions. As you can see, if we make the count the savings are nice. There are limited mods we can make to our airplanes that pay us back, and this is one of them. Special runs through March 15, 2019.

Contact Information:

- ElectroAir sales@electroair.net
- 327 Catrell Drive 517-552-9390
- Howell MI 48843

Group-buy offered by SmoothPower
talk / text to Darrell
281-728-8732

Details follow:

ElectroAir group buy special for 4-Cyl (twin and 180) and 6-Cyl (250/260) Lycomings:

A) 4 Cyl Lyc 320/360, Part # EIS 41000 (applies to PA-24 180s as well as PA-30/39)

- 4-cyl Lycoming Electronic ignition Kit
- +4 massive electrode plugs
- +ignition switch panel (replaces keyed switch)
- +S/H to you / your A&P

$2995 out the door - freight included

B) 6 Cyl Lyc 540 Part #61000-5M (applies to PA-24 250/260s)

- 6-cyl Lycoming Electronic ignition kit
- +Fine wire plugs (the only ones PMAd for Lycoming 540)
- +Switch panel
- +S/H to you or your A&P

$4850 out the door - freight included.

For those curious about the savings: list prices on package of are as follows:

Lists electronic ignition + plugs + switch panel (replace ignition) :

4 Cyl (all) list $4000 group buy $2995 (5) Savings: ~$1050 considering freight (PA-24 (180)/-30/-39)
6 Cyl (lyc) list $6384 group buy $4850 (10) Savings: ~$1600 considering freight (PA-24 250/260)

Benefits to electronic ignition?

Intangible benefits:

- No more hot start problems.
- One less mag to maintain
- Smoother (nice for you, super nice for your engine and airframe)
- Better airspeed, particularly at altitude, due to spark advance and longer stronger spark.
- Cleaner greener running engine! (4 cyl generally see 0.75-1.0gph less fuel burn; 6 cyl typical 1.5-2.0gph less fuel burn)
- Cooler exhaust valve temps due to complete burn in cylinders

How it works and why it promotes engine life (very cool):

The Goal of any highly tuned electronic ignition system is to get as much power out of the fuel being sent to these engines as possible. The gains are achieved 2 ways:

- more powerful, longer duration spark (vs magneto)
- As MP starts coming down as altitude increases, Electroair firmware starts advancing the timing curve. It does this because the less dense fuel-air mixture at altitude takes longer to burn. Peak pressure needs to occur between 10 and 17 degrees after top dead center (TDC), because that is where you have most mechanical leverage over the crankshaft. On a fixed spark (Mag), that can only be optimized for one situation.

So....the way a cylinder works:
On each downstroke the fuel and air mixture goes in. On the upstroke, at 20-25 degrees before TDC, the burn begins. The piston continues up, and the burn is rapidly accelerating and expanding (cylinders need peak pressure at 10 to 17 degrees after TDC for best power stroke)

As it is Now (e.g. with fixed timing /mags):
At altitude we are not burning everything. Furthermore, we are dumping burning mixture, because for the fuel air mixture we have at altitude, the fixed spark timing occurs too late, and the spark is too weak and short to get everything burned. As a result we get less power, with this still-burning mixture crossing our exhaust valves, which results in higher exhaust valve temps that can reduce jug life.

As it is with "tuned" electronic ignition w/ stronger spark and responsive timing:
Electronic ignition adjusts the spark to the situation using a longer duration and much stronger spark to get a complete burn, at the optimal crankshaft location, and at the full range of altitudes we fly at. This is why we get faster speed at altitude in addition to lower fuel consumption.

Strong ROI solely in fuel savings alone. Does not include savings through increased speed, thus less time burning fuel, and lower maintenance costs. Assuming you usually run Rich of Peak:

Potential fuel savings of at $5/gal x 100 hours/yr:

- 4-cyl: 0.75 to 1gph = $375-$500 per year = ROI 4 Cyl: 6 years at 100 hrs/yr
- 6-cyl: 1.5 to 2gph = $750-$1000 per year = ROI 6 Cyl: 4.8 years at 100 hrs/yr
- Plus a reported speed improvements of 2-3kts.

If you also are replacing or even rebuilding a mag (rebuild $500-$1300; Bendix exchange $1300; replace $1200-$2600), the ROI break-even may shorten to a few years. In all cases it then starts paying you back.

So: nice to have an ROI, however not overnight. The electronic ignition justification is typically: get rid of hot start problems, save fuel, go faster and smoother and quieter, have lower maintenance costs.

If you need maintenance e.g. to replace ($?) or rebuild ($550 - $900) a mag, the ROI gets much shorter and you then have half the magneto maintenance.

One more possibly cool thing: ElectroAir is working on a system with a generator that will feed 8Amps to the battery. (Alternator failures less icky!!!) my understanding is these systems will be able to be fitted with the generator system by replacing the other mag.

Lastly, as we have a couple of Bonanza and Mooney drivers that come to our fly-ins, Darrell is willing to let us join forces with our Bonanza driver friends (and other continentals) - but ONLY if they are willing to post that Comanches are completely awesome birds.

So: for 6 Cyl continentals 61000-1M (for the Bonanza)

List $6010.50
$4850 group buy (fine wire)
$4570 group buy (massive)