Cardinal Flyers get actual at Hoxton Pk

A recent international gathering of The Cardinal Flyers Online group at Hoxton Park, NSW, showed the fun and value in meeting to compare notes with operators of similar aircraft.
Paul Millner, digest editor, Cardinal Flyers Online www.cardinalflyers.com provided this report -

Cardinal Flyers Online (CFO) is a worldwide organization of Cessna Cardinal owners and operators, centered around electronic services provided via www.cardinalflyers.com and a daily email digest of what's up in Cardinaldom, that can be subscribed to on the website.

CFO organises fly-ins so Cardinal pilots can meet in person the folks they have been corresponding with electronically. Besides camaraderie, these gatherings also provide an opportunity to inspect each other's aircraft for interesting modifications, or maintenance opportunities, that might otherwise have escaped notice.

Although the majority of Cardinals are in the US and Canada, and hence the majority of the gatherings are there as well, CFO members hail from the six flyable continents, and so there is call for gatherings over a broader geography as well. Recent European fly-ins have been in France and Belgium.

Cardinal Flyers in Australia inquired late last year about organising a fly-in somewhere around Sydney, and we worked out timing for when several US Cardinal Flyers would be country. Vic Milo of Hoxton Park was our generous local host. The fly-in extended from Friday evening, February 23 through Saturday, February 24.

Friday evening, about a dozen of us assembled at the Phoenix Flying Club at Hoxton Park, and with a bit of refreshment, discussed the state of the art in Cardinal modifications… the benefits of turbocharging for low altitude flight (speed, range, and economy), benefits from PowerFlow exhaust systems, CASA views on American STC's, and the availability of STCs versus field approvals on the various Maple Leaf speed mods (enhanced landing gear fairings for the fixed gear Cardinals, tailcone fairings for all Cardinals).

Participants described their experiences in getting various modifications and improvements fabricated, installed, and approved.

The recent apparent prohibition on even changing one's own oil and filter was cause for some comment on CASA sanity, as how can safety be improved by putting barriers between owner/operators and the airplanes they know intimately? The Americans present commented on the unfortunate choice of LAME as an acronym for a professional.

Saturday morning, we met back on the flight line for a tour of the assembled Cardinals. Folks showed off their modifications, and explained how they had overcome various maintenance challenges. Among the most interesting were a couple of RGs with a manual nosegear uplock release in the cockpit. It was not clear under what circumstances that would be a useful thing; as in the event of hydraulic failure, the gear would not extend and lock anyway. And absent hydraulic failure, it's not clear why hydraulic actuation wouldn't release the uplock anyway.

One Fixed Gear Cardinal owner had modified his later year aircraft to have the in-the-wingtip landing and taxi lights of the '68 through '71 Cardinals, and then removed his cowl mounted lights. Although this should improve bulb life, it's a lot of work!

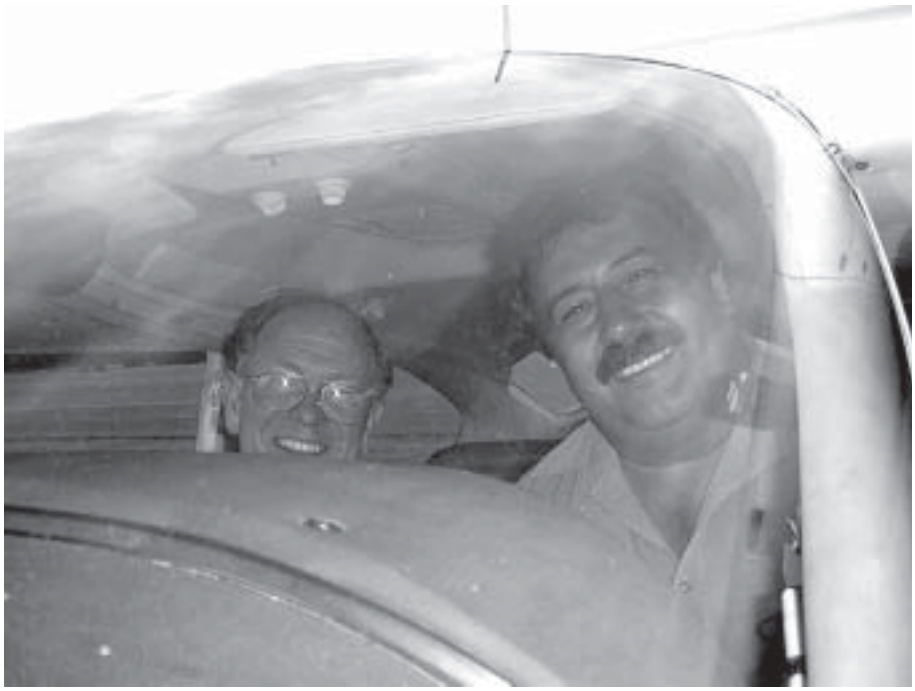
Another FG owner had added an electric, dual note, car horn to his aircraft. His rationale to CASA was that this did a good job of scurrying the 'roos off back country airstrips. It was also speculated that honking the horn while flying above the beach would be a good way to make young ladies sit up and take notice, whether they happened to have the straps of their bikinis fastened at the moment or not.

Vic Milo showed off his 9" photo port in the floor. He reported that the previous owner had had to slightly reroute some of the control cables to make room for the port, but it offers unrestricted photo access.

Ian Poyitt's '76 Fixed Gear Cardinal sported a three bladed prop, which Ian reports offers improved ground clearance, particularly important on gravel surfaces. Ian had already fitted a PowerFlow exhaust system as well, and as part of that installation, installed a stainless cowling exhaust port surround, to reduce impact air infiltration to the below-the-cowl region, thereby improving engine cooling by maintaining differential pressure across the engine.

VH-XPR, owned by Ian Poyritt, the only three-blade prop equipped Cardinal at the Hoxton fly-in, also equipped with PowerFlow low restriction exhaust system.

CFO visitors from California, from left Harry Myler, Paul Millner, Steve Harris (Moruya), and Duane Allen. Not shown, Audrey Morrison.



Duane Allen, Walnut Creek, California, and fly-in host Vic Milo, Hoxton Park, inspecting Vic's aircraft from the inside out.

Some of the things the US visitors noted were the refueling grounding tabs that had been added to every aircraft. Since most of the fueling nozzles inspected didn't have a corresponding grounding cable, and the "ground anywhere on the aircraft" technique used in the states had not resulted in an ignition event since World War II, it was not clear what the safety advantage is of these unseemly tabs.

Similarly, none of the US visitors had seen an HF installed in a Cardinal before. However, according to the reports of the owners with these radios installed, the visitors still had not seen a properly functioning HF installed in a Cardinal. The fuel quantity placards for each quarter tank level were also new, since the FAA only requires checking that the fuel gauge is accurate at empty.

US pilots were also perplexed at the CASA required placards as to location and function of the cabin door handles. Apparently there are rescue personnel who require this guidance, as they haven't operated the handle on a car door in the past twenty years or so.

One aircraft had the alternate static valve soft-wired shut. This seemed a little unusual, since good operating practice would be to check the alternate static in cruise at least monthly, to verify the discrepancy, if any, between usual and alternate static sources. Wiring the valve seems to make that very difficult.

We had a wonderful steak, sausage, salad, and pavlova lunch, hosted by Vic and his lovely wife Rada, in the commodious facilities of the Phoenix Flying Club. Following lunch, we returned to the flightline.

In inspecting the details on the participating aircraft, it became apparent that a set of eyes familiar with the Cardinal, but unfamiliar with your particular bird, is an inspection well worth it for any of us!

Among the difficulties identified, any of which could be costly if left uncorrected, were baffle seals installed wrong way out, and/or detached from the baffles. This can cause uneven cylinder heating, which the single point factory CHT instrumentation in incapable of detecting. The resultant mid-TBO cylinder overhaul due to poor valve seating will seem to have "come from nowhere" as instrument indications "were always good!"

One aircraft was discovered to be missing its lower cowling bumper plate, a feature common to the 177 and 172. For some reason, this plate is often omitted by mechanics after starter or alternator replacement. However, lacking the plate, aerodynamic loads will push the lower cowl up into the spinner backing plate, machining away both.

The subject aircraft had already lost the stiffening edge curl from the lower cowling Fiberglas nosebowl, and abrasion was evident on the spinner backing plate. The eventual result is in-flight loss of the spinner, and backing place, with resultant significant prop imbalance and vibration.

These cataclysmic events can also result in loss of the nosebowl, and even separation of the cowling from the aircraft, with attendant possibility of airframe damage, and if the bits should decide to fly THROUGH the windscreen, pilot and passenger damage as well. All for want of a AUD$100 bracket.

One aircraft was discovered to have a loose air filter, allowing dust laden air to enter the engine during ground operations. This diminishes the purpose of the air filter, and increases engine wear.

One aircraft exhibited classic baffle wear against the cylinder fins, which significantly reduces the effectiveness of the baffle in directing cooling airflow

THROUGH the fins, rather than bypassing them.

It was surprising to note that only one RG sported a gear mirror, given the attention to nosegear unlock add-on hardware. And that mirror was custom. There are a couple of STC holders for a inspection cover fitted mirror, and these are quite satisfactory for verifying gear operation and position.

One aircraft exhibited the governor-to-prop line wearing against the aft edge of alternator, due to improper angle on the engine front case fitting. The lack of grommet in the baffle pass-through contributed to the line's freedom of movement (and freedom to wear).

One aircraft exhibited an after-market rudder trim tab, which turned out to have been "required" because of misrigging of the factory provided rudder trim. In particular, the rudder trim indicator had been bumped, causing it to jump a groove in the rudder trim wheel, giving misleading readings.

Several Aussie owners commented on the high cost of owners manual replacement, AUD$100. These are available directly from the Cessna factory, via credit card purchase, for US$15, from Cessna Customer Care Supplies and Publications, voice 316-517-5800, fax 316-941-7271 Note that later year Cardinals don't have owners manuals, but instead Pilots Operating Handbooks, and these are pricier.

The group also received a demonstration on long endurance GPS, using an external gelcel battery.

This is the general benefit of Cardinal Flyers Online, and indeed, any type club…sharing model specific data, and model specific sensitivities, to help greatly reduce the cost, and increase the satisfaction, of ownership of our birds.

Cardinal Flyers Online has an unusual value to offer in that via the daily email digest questions can be answered by any of the 1550+ participants worldwide in short order. And perusing these questions and answers on a daily basis helps folks regularly recognize an impending problem, even if they had thought everything was going just fine!

For instance, we've had a number of saves by repeatedly publicizing the necessity of an aluminum gasket plate between the governor and the engine on the D-series Lycomings (O360A1F6D and IO360A1B6D in the case of Cardinals). The non-D, non Bendix 2000/3000 mag equipped engines on the majority of the fleet, do not require this plate. However, omitting in on the D engines has led to the loss of several aircraft, after pumping all oil overboard, though fortunately, at least so far, no loss of life.

Similarly, we've identified a susceptibility to corrosion in the cabin carry through spar that is easily prevented, but very expensive to repair…

We've captured these, and nearly a thousand pages MORE of Cardinal specific content on our website, www.cardinalflyers.com Membership is required for full access, but important content, like our recommended Cardinal prepurchase checklist, which addresses many of these model specific specialties, are available for all comers. And the daily email newsletter is available, at least at present, for all who are interested. So visit us at www.cardinalflyers.com and see us at next year's June/July 2003 Cardinal fly-in in Redcliffe, Queensland. Contact Ian Poyritt at 07-3203-5582 for more information on the 2003 Redcliffe fly-in, or contact us online! We're already working plans for 2004 Oz flyins as well.