



Welcome to the winter 2008 edition of the Zenith Zodiac XL Australian Newsletter.

Where has the time gone? I started this newsletter just after our Natfly BBQ but got called out to go fly in Iraq and Afghanistan with a RAAF C130H from May till July.

Just before I went I had a holiday down the coast and stayed at Mallacoota in Victoria. Whilst there I called in on a fellow XL Scratch builder who we will meet later.(Honest honey, what a coincidence, a zenith builder in the same location) - *Chris Sinfield*

Goodbye my Friend.

Clive and his wife were tragically killed last month when their aircraft crashed on the way back from a flying safari of North Queensland. Clive was last seen at 6000 feet in the cruise. He was checking in on the radio along with the others in the group, including Eddie Seves Zodiac XL, but failed to check in 15 mins later.



The wreckage was found the next day. No survivors.

The investigation is in the hands of the QLD Coroners Office assisted by RAA. So a lot can not be said till the inquiry is complete.

What can be said was the aircraft went in under power, both wings intact, all flight controls attached and connected to the control cables. Clive made no distress call at all.

Clive was getting over the last stages of a head cold and over the last few flights reported getting exhaust fumes into the cabin.

The RAA said the autopsy should be able to tell if he suffered an in flight incapacitation or not. More will follow as it is released from the Coroners Office.

Clive was living the dream and he and Eddie were on their way back in their XL's after a great flying safari when this happened. I was going to include a trip report but I will wait till next newsletter.

NATFLY 08 Zenith Zodiac / Sport Air Australia BBQ

This years Natfly BBQ was still well attended even in the wet and windy conditions. Liezel was there from Sport Air and I put on our annual Zodiac BBQ. We all gathered around 1pm on the Saturday to meet and greet. It was great to finally put faces to names we only talk to on the phone. This year we were graced by 3 Zodiac XL's Eddie, Geoff, and Clive's.



Left: Getting their free shirt for displaying their aircraft.

Below: Me and the BBQ



Left: Zenith Zodiac Australian builders at the BBQ. Could this be you next year??

- Chris Sinfield

Zodiac CH 650 - Introduction from kitplanes magazine



Zenith Aircraft's second debut at AirVenture was the new Zodiac CH 650. Available as a kit, plans-built plane or factory-built SLSA by AMD, the CH 650 is based on the Zodiac CH 601 XL model. **Developed in response to builder feedback**, the 650 has a larger cabin than the 601.

A major improvement is the **larger canopy** with increased headroom. Staff engineer Caleb Gebhardt noted, "We changed the **latching system** so it's simpler and easier to build. The lighter canopy is easier to control in windy conditions, and when you're sitting on the ramp, it won't pop up on you." The 601 XL latch is in the canopy frame, and the studs are on the fuselage.

On the new system, the latch is built into the fuselage so you keep the heavy pieces of the system on the fuselage; the studs are built into the framework. It also offers rollover protection in the canopy system using vertical tubes.

Gebhardt adds, "The 650 is a combination of the XLs in different markets: the European XL, the AMD factory-built plane and the kit-built XL.

We took what we liked best about all three and put them into one aircraft. We think it's a major improvement."

Well, what about the 601 XL you've completed (or are still completing)?

No worries. Gebhardt told us, "We worked hard to make sure that the major portions that we changed were retrofittable for the XL. The rudder has been swept back for greater efficiency and a cleaner look. We changed a lot of little things to make it easier to build that aren't necessarily obvious. They'll reduce build time, and will remove confusion in reading the plans or looking at parts. It's more streamlined and more clear."

The CH 650's takeoff roll and landing distance are the same as the XL and booked at 500 feet, with a 1000 fpm climb. Using a 110-hp Jabiru 3300 as an example engine choice, max cruise at 75% power is 138 mph, with a stall speed of 44 mph with flaps, and 51 mph without. With an empty weight of 695 pounds and a gross weight of 1320 pounds, the 650 allows a useful load of 625 pounds; fuel capacity is 24 gallons. Of course, your personal engine choice and the resulting performance figures may vary.





Here the XL fuse sides have been strengthened by what looks like L angles at 45 Deg's. This would be very easy to put into our own aircraft.



Here is a close up of the new Canopy Latching System. I have looked at this and will put it into my older canopy.

If you missed going to OSHKOSH check out the new Zodiac 650 on the web. Type in www.Youtube.com

Type in Zodiac 650 and go from there.

<http://www.youtube.com/watch?v=RxMw-mzZOJU>

Oshkosh 2008

I had the privilege to go to the much anticipated Oshkosh this year, an event every aviator should attend at least once in their life. But, what is a trip to the States without a stop at the Zenith Factory?



After landing in ST Louis and taking a short bus ride up to Mexico Missouri I arrived Thursday afternoon where I was immediately taken on “the tour” to put names to faces.

Left: Caleb – Engineer

Right: Roger – Zenith Test Pilot

A very well organized factory was somewhat quiet at the end of a busy day, except for one corner of the workshop where the new STOL750 was undergoing its last finishing touches before Oshkosh .

On a closer inspection I realized that what still looked like a shell to me, was flying its first flight the very next day followed by a 5 hour flight up to Oshkosh the Saturday morning – Now that’s confidence in a product.

After the first flight took place Friday morning, and the quick installation of a trim, the three STOL aircraft (701, 750 and 801) were all lined up outside the hangar, ready to go. The Zenith Crew from Mexico were joined by the guys from Georgia early Saturday morning and we all waited for the fog to lift.



I flew in the “Mixmaster” Cessna 337 Skymaster to take some Aerial photography of the 3 STOL aircraft in flight and admired the Mississippi river from above as we crossed the breathtaking landscapes. Nothing could have prepared me for the approach into Oshkosh.

One by one aircraft start appearing on the horizon and before you know it you part of the action as aircraft big and small, slow and fast have to line up above the railway tracks overhead Ripon Airfield with no radio communication except a welcome message with instructions.

Shortly after tuning into the Oshkosh frequency excitement starts filling me as that aviation adrenalin starts pumping through my veins. One last peppermint and a very big smile to my co-pilot John we wait for our instructions from the busiest air traffic controllers I’ve ever heard.

What resembles the sound of a horse race commentator; the aircraft get filed behind each other. With great anticipation we listen out for anything that resembles our aircraft to be called on by the ATC. With all the experimentals in the air, the ATC calls out white low wing rock your wings if you copy, followed by yellow high-wing rock your wings and eventually skymaster rock your wings if you copy...

A final glance over the never ending “car park” filled with rows and rows of aircraft I notice two huge fluorescent dots on the runway before we turn finals. To my amazement the ATC is landing the aircraft on the numbers and the two dots simultaneously to handle the huge amounts of traffic arriving.

The white low wing gets the orange dot, the yellow highwing the green dot and we get the numbers. Only seconds before touchdown, I hear...”yellow aircraft turn left onto taxiway, ...yellow aircraft expedite turn, YELLOW AIRCRAFT TURN LEFT ONTO GRASS NOW !!!...” There’s silence in the cockpit and we touch down on the numbers safely before rolling past the yellow aircraft (now in the grass) with a huge smile and a wave of relief.

And then there was Oshkosh From the old Warbirds to the new and futuristic Jetpack, everything that flies or wants to fly is there. Its simple...you have to see it to believe it.



I spent my days learning all about the Zodiac 650XL and the new STOL CH750, networked and took many photos. (There is more information about both aircraft on the Zenith Webpage)

There are big dreams for Zenith Australia and my biggest goal this year is to get all the Zenith builders both Zodiac and STOL together into one big networking builders group.

Oshkosh '09?? ...I'll be there...will you? –

Liesel Maree - SPORT AIR SERVICES, GOLD COAST



**Left:
Sebastien
Heintz
(Mexico MI)
& Mathieu
Heintz
(Canada)**

Aussies at Oshkosh Zenith 2008 Dinner

Guess who went to this years Oshkosh? Here is their story.

The dinner was a very good night; it was conducted by Mark Townsend from CANZAC. *(Photo on the right)*

It was a very informal time and we had plenty of time to talk to all of the other builders and the staff from Zenith. All of the staff at Zenith were very easy to talk to - A great bunch of people.

All of the new builders that have completed the project since the last dinner were asked to stand and give a short talk about there project.

If the attendance gets any bigger they will have to relocate to a larger venue. They have used the present venue since the conception of the Zenith Builders Dinner.

At the Zenith dinner Mathieu Heintz got up and talked about all the improvements in the 650, being a culmination of all the things from their different aircraft worldwide. It will make the aircraft better and reduce their inventory requirements.

He also discussed the touchy subject of wings and stated that Zenith has had no conclusive evidence from NTSB or any of the problem aircraft which indicate same type of failure. NTSB has a full time engineer investigating these things and they have not asked Zenith to change anything.



Unfortunately Liezel was not able to attend due to her flight home earlier that day, so it was up to the four of us to show the OZ Flag.

- Ian Ratcliffe, Brisbane

Photo on left shows:
Jack Pittar from Canberra building a 601XL (in the rear),
Peter Ratcliffe, David Ratcliffe, Ian Ratcliffe all from Brisbane - brothers all building a 601XL

May I introduce a fellow XL builder?

As I said in my intro, I went on holidays past Mallacoota met Glenn Anderson. Glenn is doing it tough as he is a scratch builder. He says it's great as there is not much to do in Mallacoota at night. As a visitor I think Mallacoota is a great place to visit except in the Holiday season.



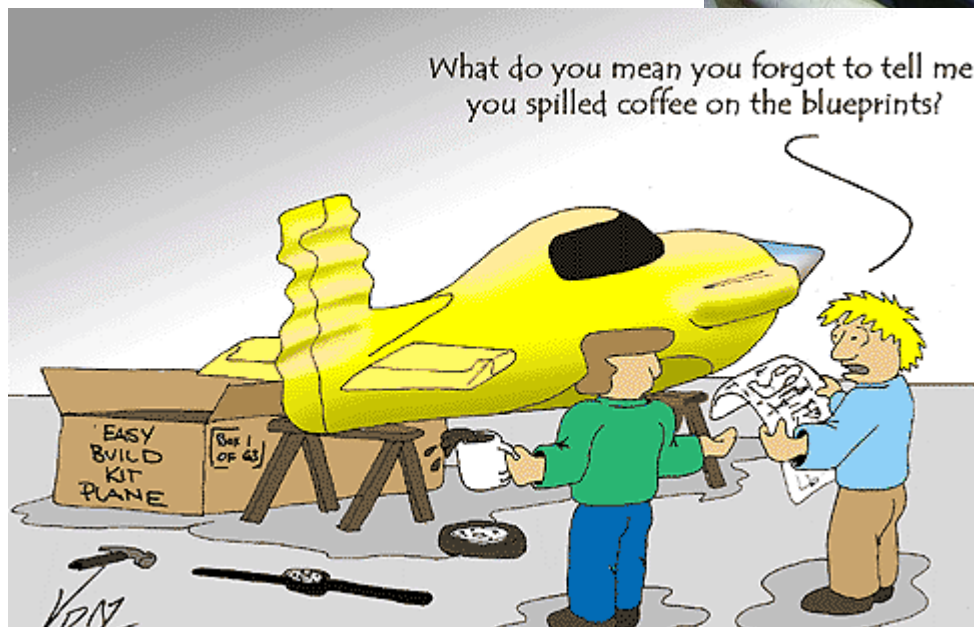
Glenn is also an IT guy and tinkers in electronics as well. Of course he has his own builder's website at

<http://www.eastcoastit.net.au/zenith>

The bit that really geeks (read envious) me is that Glenn built himself his own flight simulator with motion and visuals.

So now he practices his Zodiac XL flying whilst he is pounding away at metal. *How cool is that.*

Here is a shot of him flying with the canopy hood raised.



New Letter from Chris Heintz about Aileron Flutter and Rigging

Following is a section of the flight test report from Alan concerning aileron flutter:

There was one major issue encountered during the flight testing programme. Aileron flutter occurred on the first flight, my intention was to carry out some brief handling checks and to stall the aircraft to ascertain the stall characteristics and the stall speed to compare with book figures. Conditions on the day were good though there was a mild chop. I was carrying out the clearing turn prior to the stall when the flutter occurred at about 114 knot IAS.

At first the flutter was very mild to the point that I thought it was an increase in the light turbulence of the day, but it developed a rhythm and there was a distinct flapping movement observed in the wings. Power was reduced in an attempt to both reduce speed and see if the flutter vibration was due to an engine/propeller vibration. As the speed decreased the flutter ceased.

I decided to terminate the flight at this point; I still wasn't sure what the problem was and wondered if something had become detached from the airframe. I flew at reduced speed back to the airport and an uneventful flapless landing was carried out. A thorough inspection was carried out and nothing obvious could be found wrong with the aircraft.

We came to the conclusion that perhaps aileron flutter was the problem. A thorough inspection was carried out on the aileron system.

The aileron cables were slightly loose and were readjusted using tension gauges.

No further flutter was experienced after the cables were adjusted. The cables were originally installed in cold weather the first flight occurred in warm weather, this may have been a reason for the cables being loose.

Chris Heintz Writes back

In the flight test report, Alan states that he experienced aileron flutter. It must be noted that with my designs, flutter is not a problem, so long as the control system is properly rigged.

On many aircraft, it is well known that if the aileron control cables are not tensioned, the ailerons are basically loose, which could possibly start flutter.

The way to prevent flutter with my designs is to make sure that your control cables are always tensioned.

When making up a control cable in your shop, you need to be careful that the control cable is very tight around the cable thimble and that the thimble is tight against the nicopress sleeve. See FAA AC 43.13-1B section 7. All other parts of the control cable assembly must be very tight. Ideally, you should pre-tension your cables before installing them. This is commonly done on certified aircraft. I believe that on the CH2000, control cables are pre-tensioned to 750 pounds. The idea here is to make sure that the control cables will not slowly loosen over time.

I do not like giving out cable tension numbers because they do not mean much unless you have a good quality calibrated tensiometer (cable tension gauge). Additionally, if you do not use it properly, you can get inaccurate results.

The bottom line is that before flying your aircraft now, and 5 years from now, is that all your control cables must be tight. What is tight? Take a look at a typical light 2 place certified aircraft. This will give you a good idea of what I am talking about.

If you do have a calibrated cable tensiometer and you know how to use it, here are some suggestions.

One method to make sure that your aileron control cables stay tight is to tension them to about 75 pounds for the first flights. After a few hours of flying, tension them to about 30 pounds.

In the first +25 hours of your experimental flight test program, I would recommend that you check the tension often. Tensioning the cables should be done in warm weather. Tension should than be checked every 50 hours, or sooner if the aircraft has not been flown for some time.

Rudder tension should be about 22 lbs +/- 5 Aileron tension should be about 30 lbs +/- 5 Elevator tension should be about 40 lbs +/- 5

Chris Heintz

SPORT AIR STOCK

There are 3 QUICK BUILD kits now stock at the Sport Air Services Depot on the Gold Coast . All kits are Zodiac 601 and upgrade option is available for the XL650 on the Quick Build Kit.

Prices start at AUD 29,995 Excl GST – Ready for pick-up

I am planning a container for October shipment, any kits, parts, FWF kits, etc. from the USA can be added to this shipment, this will save shipping costs and will be ready for pickup on the Gold Coast. Please let me know your orders ASAP. to book your spot.

Liezel – Sport Air Services

sales@sportair.com.au

www.sportair.com.au

Tel: 07 5599 2053

For Sale

Rob Moodie in Newcastle NSW has been unwell for some time and so is putting his XL project up for sale. Contact Rod for more details if you know someone who wants ane.

- All flying surfaces complete except R/H wing.
- All assembled units zinc chromate primed internally.
- All outer surfaces corrosion proofed but not primed.
- Long range fuel tanks.
- Aileron trim.
- Landing light kit.
- Whelen strobe kit.
- All hardware including rivets to complete project.
- Spent well over 12k plus assembly time.

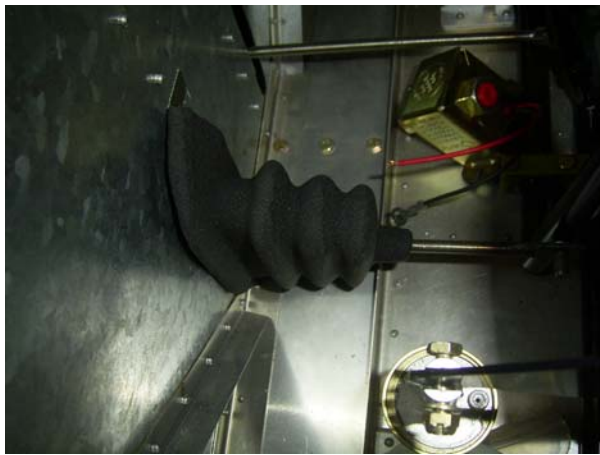
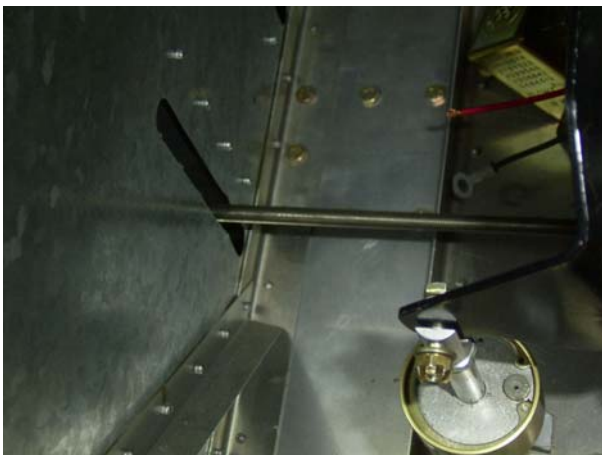
A great start for someone considering an XL, would only need to purchase and assemble fuse, gear and canopy etc.

Would consider 10k for the lot.

Phone Rob at Newcastle 0407240393 or Email him at trenchmaster@bravo.net.au

Bits and Bobs

I found a good idea from the USA about what to do with the Nose wheel steering rods where they go through the firewall. The new kits have a sliding plate arrangement that you can buy and install but mine was not that new. Enclosed are the before and after shots. It's a gearbox stick cover. I have just placed it in place for the time being but it will have a metal plate attaché to the firewall.



"It can be purchased from JB-Custom Fabrication on E-bay. This particular boot is used on certain Jeep models for the twin shifters. It costs around \$26.50 plus shipping. Good news is you only need to buy one and carefully cut it in half. The following steps describe the installation:

- 1) Call up this Internet location > <http://stores.ebay.com> in the USA
- 2) Look for the following part > Twin stick shifter boot, Bronco / Jeep / Blazer / Scout and order it."

Not Happy with a free Aussie Newsletter?

Then you can sign up for the Zenair Newsletter. This one you have to pay \$33 US a year. Not sure how much worth it, it is as I have only seen a few copies. I guess the fly in details and for sale ads would not be much use to us here in Australia, but there may be some other interesting reading. Here is the address.

<http://www.zenair.org/nuke/index.php>

The Zenair Newsletter

Created and written for all Zenith aircraft kit or plans owners and those interested in Zenith products.

Zenith Aircraft, one of the largest of the homebuilt aircraft companies, has published a newsletter since the mid '70's. The newsletter has been continually growing in both size and membership. Current issues are now twelve pages in length.

Zenair News can be a great help to you as it allows each subscriber to keep in touch, on a regular basis, with other subscribers and the aircraft company. The newsletter's goal is to support the builders and owners of Zenith aircraft by way of news, photos and technical discussions. It is also a way to keep informed of Zenith fly-ins and air show events around the world. Your input to the newsletter is encouraged!

More about **Zenair News**:

- a. Six newsletters are published each year (bimonthly)
- b. The cost of a subscription is \$28 per year for U.S./Canadian subscribers (US Funds); \$33 foreign (US Funds)
- c. The newsletter will be mailed to you First Class
- d. There is a For Sale and Wanted section - no charge for subscriber ads
- e. Back issues are available and extremely important because the newsletters carry updates and changes from Zenith Aircraft
- f. Access to the members only area of the www.zenair.org website

The arrangement of **Zenair News**:

- 1. Bulletins (important notices)
- 2. Column by Zenith Aircraft officials
- 3. Fly-in announcements and reports
- 4. Construction updates from Zenith Aircraft
- 5. Technical tips from builders
- 6. Flying Zenair aircraft photos
- 7. General news from subscribers and photos
- 8. For Sale and Wanted ads