



GO-ROUND

ALDINGA AERO CLUB MONTHLY NEWSLETTER

July 2022.

Editor: John Chambers

Unusual Aircraft - Vought V-173 - "Flying Pancake".

The Vought V-173 "Flying Pancake" was an American experimental test aircraft built as part of the XF5U program during World War II. The original prototype, designated the V-173, was built of wood and canvas and featured a conventional, fully symmetrical aerofoil section. Designed as a "proof of concept", the initial configuration was built as a lightweight test model powered by two 80 hp (60 KW) Continental A-80 engines turning F4U Corsair propellers. These were later replaced by a pair of specially modified 16 foot three-bladed props. A tall, fixed main undercarriage combined with a small tailwheel gave the aircraft a 22 degrees "nose high" angle on the ground.



The disc wing design featured a low aspect ratio that overcame the built-in disadvantages of induced drag created at the wingtips with the large propellers actively cancelling the drag-causing tip vortices. The propellers were arranged to rotate in the opposite direction to the tip vortices, allowing the aircraft to fly with a much smaller wing area. The small wing provided high manoeuvrability with greater structural strength. The empennage consisted of two vertical fins with rudders, all-moving stabilizers with anti-servo tabs and two large elevator/trim surfaces on either side of the centreline on the trailing edge of the wing platform.



The aircraft proved to require a lot of force to control at low speeds during in-flight testing, but the tail design made the aircraft controllable.

In January 1942, an advanced version of the V-173 was built, known as the Vought XF5. This version was a larger aircraft with all-metal construction and was almost five times heavier. Although a prototype was constructed, it only performed brief hops on the runway and it never entered true controlled flight.

The first flight of the original V-173 was on 23rd November, 1942. The aircraft's most significant problem concerned its complicated gearbox that routed power from the engines to its two long propeller shafts. The gearbox produced unacceptable amounts of vibration in ground testing, delaying the aircraft's first test flight for months. In addition to this, on the first few flights, the pilot was never able to achieve enough speed to achieve the correct amount of airflow over the control surfaces to pull the aircraft into level flight. Flight testing of the V-173 went on through 1942 and 1943 with 190 flights, resulting in reports of UFO's from surprised Connecticut locals. Charles

(Continued on page 2)

Club Executive



Club postal address:
P O Box 726
Noarlunga Centre 5168

David Ellis	President	0458 578 311
Evan John	Vice President	0408 804 289
Steve McGuiness	Secretary	0412 773 081
Philip John	Treasurer	0400 499 401
John Chambers	Newsletter Editor	8391 4720

(Continued from page 1)

Lindbergh piloted the V-173 during this time and found it surprisingly easy to handle and exhibiting impressive low-speed capabilities. It was almost impossible to stall the aircraft. On one occasion, the V-173 was forced to make an emergency landing on a beach. As the pilot made his final approach, he noticed two bathers directly in his path. The pilot locked the aircraft's brakes on landing, causing it to flip onto its back. Remarkably, the airframe proved so strong that neither the plane nor the pilot sustained any significant damage. Despite their inability to stall the aircraft, low speed handling was a persistent issue largely due to the shape of the lifting body. The aircraft acted as an airbrake when it was pulled into a high angle of attack. This meant that the control surfaces, the horizontal stabilizers in particular, would become very hard to operate at low speeds such as stalls, take-off and landing.

The V-173 made its last flight on 31st March, 1947. In 131.8 hours of flying over 190 flights, the designer's theory of a near-vertical take-off and landing-capable fighter had been proven. This project would be improved upon by including the addition of potential armament. Nevertheless, there is no record of a "Flying Pancake" ever entering useful service and they exist now only as museum exhibits.



July's Club Meeting.

Sunday 3rd July, the club's monthly meeting included a practice forced landing from 2000 feet over the airfield's runway intersection. Six pilots took part, all in RaAus registered aircraft. One of those was the club's newest member, Sib Bukhare. There was only a light, variable wind but some participants were unable to reach the altitude set because of cloud cover. However, all were able to land safely on whatever runway chose. Good practice - you never know when it might happen "for real"!

The usual BYO BBQ lunch followed and the day culminated in a comp arranged by my sim manager Steve on the club simulator.

'Adventurer of the Year' Enters Outback Air Race.

The first Australian woman to ski to both the South and North poles is set to enter August's Outback Air Race. Linda Beilharz was awarded the Medal of the Order of Australia in 2010 and also named Australian Geographic Society's Adventurer of the Year.

The Outback Race did not go ahead in 2021, but the 2022 race will see 100 competitors fly a total of 3,800 kilometres across three states. The 13 day challenge will begin on 29th August and culminate in a finale at Coffs Harbour on 11th September. With just two months to go, the organisers have begun to release the names of this year's confirmed entrants. Linda Beilharz, nicknamed "the Icy Pole Lady", is one of the country's most notable female adventurers. In 2004, she became the first Australian woman to ski 1,100 km from the edge of Antarctica to the South Pole. Then, 16 years later, she trekked for 56 days over cracking ice to reach the North Pole. In total, she skied 780 km, including covering 27 km in 17-hour days with just an hour's sleep per night. Outback Air Race organisers say her team, the Hopeful Hildas, are trying to raise \$10,000 for the event which raises funds for the RFDS and has garnered more than \$3.1 million in donations since its foundation in 1996.



Qantas Flight from London to Use Sustainable Cooking Oil Fuel.

Qantas flights from London will be partly using sustainable aviation fuel (SAF), derived from used cooking oil. In a major shift towards sustainability, the flag carrier has signed a deal with BP to purchase 10 million litres of SAF in 2022, with an option to purchase up to another 10 million.

(Continued on page 3)

(Continued from page 2)

This represents up to 15% of Qantas' annual fuel use out of the British capital and will reduce its carbon emissions by 10%. The fuel will be produced with certified bio feedstock from used cooking oil and other waste products. This is then blended with normal jet fuel.

Qantas claims zero emission technology like electric aircraft or green hydrogen are still a very long way off for aviation, and even further away from long-haul flights like London to Australia. SAF and high-quality carbon off-setting are therefore critical on the path to net zero.

Aviation biofuels typically deliver around 80% reduction of greenhouse gas emissions on a lifecycle basis compared to the jet fuel it is replacing and is the most significant tool airlines have to reduce their impact on the environment. The technology is already tried and tested, and it can be used in the aircraft we have now, which is why government and industry overseas are investing heavily to build their own SAF industries.

75th Anniversary of the Beechcraft Bonanza.

This month's EAA AirVenture (Oshkosh) commencing on Saturday 23rd will be the 32nd AirVenture and will celebrate the 75th anniversary of the Bonanza.

In 1989, the American Bonanza Society, responding to the previous year's AirVenture where their member's aircraft were unable to tie down together for the week's activities, commenced organizing formation flight clinics to train their members intending to fly to Oshkosh. This was the beginning of what is now known as the B2OSH formation arrival. From all over the USA, Bonanzas and Barons whose pilots had completed the formation training, gathered at Rockford, Illinois and flew from there into Oshkosh where, having arrived together, they were able to tie-down & camp together. They lined up on the Rockford runway, three abreast and were waved off at 10 second intervals.

In 2007 a guy by the name of Larry Gaines took over the role of "head organizer" of the B2OSH



formation, a role he still has. In 2008 I contacted Larry and, through him, got a seat for myself on a Bonanza flying to Oshkosh from Seattle, across the Rocky Mountains at 14,500 feet (oxygen equipped plus de-icing), half way across the U.S, to Rockford via an overnight stop in Ainsworth, Nebraska. Along the way we were progressively joined by other Bonanzas until we had a ten ship group flying in loose formation.



On the Saturday morning of the start of AirVenture 2008, there were 93 Bonanzas and three Beechcraft Barons lined up on the Rockford runway, three abreast. I was in the centre aircraft of the 13th "element" (row) - being superstitious I insisted it was 12A! What a great flying experience! The lead pilot did all the navigating and contact with ATC and his aircraft was the only one with an active transponder. On arrival, the two left aircraft landed on the main north-south runway whilst the right hand aircraft landed on the parallel taxiway which is used as a runway during the week of AirVenture. During that week, the Oshkosh tower is the busiest in the world, in terms of aircraft movements.

When the AirVenture week ended, Larry offered me a ride in his Bonanza for a two day flight down the length of the U.S to visit the famous Bone Yard in Tucson, Arizona. During that trip

(Continued from page 3)

we flew, for some time after our departure in a loose formation of eight Bonanzas and Larry handed me control from the right hand seat. I quickly found that “holding station” in a formation was a little tricky! Despite my somewhat poor performance, he subsequently gave me control again to land for one of our lunch time fuel & food stops and I was able to handle that without damage to us or the plane!

This year, there are 138 Bonanzas registered to take part in the B2Osh formation arrival to AirVenture on July 23rd. Would be quite a sight to see.

10 Years Ago.

In 2012, Go-Round regularly included an aviation quiz in each issue. In the July issue the question was “What is the Angle of Dip? Is it (a) Between the crankshaft and the firewall, or (b) in the magnetic compass, or (c) the amount of nose depression in a tri-cycle undercarriage when the brakes are applied harshly, or (d) something that happens on the ballroom floor?”

The next month’s issue provided the answer. It’s (b). The magnetic lines of force around the globe do not follow the curvature of the earth precisely. So, depending on your latitude, the “angle” between the card on your compass and the ground you are on is the Angle of Dip.

The July 2012 Go-Round also featured the “runway” on Fraser Island’s main beach where an aircraft and crew touts for business taking tourists for scenic flights.



Diary Dates.

All Tuesdays - Member’s coffee & chat from 0930 hours.

Sunday 7th August - BYO BBQ lunch from 1100 hours.

Wednesday 10th August - Committee meeting at the club 1930 hours.

Sunday 14th August - Annual General Meeting, 1200-1500 hours. Complementary lunch for all attendees from 1200 hours, Please, for catering purposes, notify president David of your intention to attend. General Meeting from 1300 hours.

Sunday 4th September - At 1130 hours, flying comp in the simulator., followed by BYO BBQ lunch..

Sunday 18th September - The club’s annual commemoration of the Battle of Britain. Pilot briefing at 0715, providing details of our mission to clear the skies of the enemy. Then, upon the (hopefully) safe return of our gallant pilots and their crew, there will be a gourmet breakfast served at 0900.

Sunday 23rd October - Jamestown Air Spectacular.