Australian

Mooney

Pilots Association

Volume 33 No. 3, Aug, 2023

NEWSLETTER

The amazing 6 seat pressurised Mooney 301 of 1983

Cover:

Ever wondered what the 'M" stands for in TBM? Mooney of course! So how did this fantastic Mooney design escape Kerrville and end up being made in Tarbes (the TB part) by the French of all folks? It was a piece of Lopresti aerodynamic genius. Responsible also for Mooney's most successful line the M20J/K, the 301 was Lopresti's Mooney failure. Although designed to be capable of 301mph, weighing much more than a 201 with a smaller wing, it was considered heavy and slow powered by only a Lycoming 540. Those enormous full length Fowler flaps were necessary to enable it to take off and land at sensible speeds. Amongst numerous changes of ownership at Mooney at the time, the French Socata company realised the potential of the 301. At first they teamed up with Mooney. However, the then new Mooney managerial iteration decided the 301 wasn't worth pursuing. The French persisted, added turbine power and the Mooney was developed into the highly successful TBM series, now having sold well over 1000 of those magnificent 300 kt masterpieces. The prototype 301 above was cut up and scrapped in France. The rest, as they say, is just history…. https://www.youtube.com/watch?v=hg7XohmqQfk

Lopresti: 'if you build an airplane like brand X you will lose'. They didn't listen.

THE PREZ SEZ

Welcome to the July 2023 President's report.

Not much has been happening within AMPA since my last report. Inland NSW has been experiencing really bad flying conditions over the last week or so but along the coast it has not been too bad.

Your Committee and especially our Treasurer John has been discussing the implementation of rearranging our membership fees to align with our financial year, which ends on 31 December each year. This is why you will have received a membership renewal for only 6 months recently.

These amendments will be voted on at a Special General Meeting to be held at our Orange fly-in on Sunday 22 October 2023. So please renew your membership before then to be eligible to vote.

We are also researching the implementation of "Associate Memberships" to allow partners and friends to become additional members of AMPA. At present we have Junior Members, Honorary Life Members and Ordinary Members. This would also have to be ratified at this Special General Meeting.

If you have any suggestions, please let me know and we can discuss at Committee level.

We are talking to our insurers about a better deal and trying to encourage more members to participate in the PSP's that we run each year. The next one will be in WA next year.

As discussed, our next event is our Spring flyaway to Orange in NSW over 20-23 October 2023. Dean

Benson has put together a great weekend of activities around the beautiful Central West region of NSW. Please jump on board and register. At the moment we are short on numbers so please register as soon as possible. These weekends are always very informative and full of fun. They are great to catch up with fellow Mooniacs and meet new ones.

Registration is open now on the website.

So that's about it for my report this time. Once again don't forget to register for Orange in October. Get in early so you don't miss out.

Cheers

John Smith (0408 692 929)

Vale John Kelman

I'm saddened to report the death of John Kelman aged 82, at his home ("Rossendale Station") near Gympie on 18th July. John was a long serving and foundation AMPA member and Mooney enthusiast. John was the owner of VH-ERJ and attended numerous flyins, PPPs, PSPs and maintenance programs. Many would remember the fly-ins to his (and wife Lyn's) property at Carmor, adjacent to Kakadu. John frequently flew his Mooney on the long trip to and from Carmor and Rossendale to assist with the development of this superb wildlife reserve.

John was a very practical man and, as a 'cockie', had an intense interest in things mechanical. In 2003 he set himself the task to build a 2/3rd Spitfire replica which turned out to be a 13-year achievement, cementing his fascination for all things Spitfire. but recent health events lead to him selling his beloved Mooney.

John had aviation in his veins, flying nearly all his life with strong aviation antecedents. His mother, Peggy Kelman, was a prominent aviator and the 7th female pilot to be licenced in Australia, her cohorts and friends at the time, Nancy-Bird Walton and Jean Batten. Peggy and John's father flew from England to Australia in 1940 with WW11 operational and Peggy pregnant with John, a memorable feat.

Lyn Kelman AO accompanied John to many Mooney fly-ins and is well known to many Mooniacs and we offer Lyn and the family our sincere condolences for this very sad loss of a wonderful man.

https://www.couriermail.com.au/news/queensland/fraser-coast/i-built-my-own-second-world-war-spitfire-plane/news-story/2c6c3972d5e24f91d15b711a414d0222

Peggy Kelman with four of her children in front of an Auster J 4 Archer monoplane, circa 1952

New members

Welcome to Matt Brennan

Hello Matt, it's great that you've decided to fly fast, dropped those inefficient tinny Wichita and Independence things and joined AMPA. Matt is from Goombungee, Queensland and owns a beautiful '88 205 to be based at Toowoomba. Matt is a flying civil engineer in regional and outback Queensland. He has mostly Bonanza A36/M35 and C182 time plus some time in multi engines. He has flown on cattle stations and long distance mostly.

Matt has a PPL, SEA, MEA, VFR, LL and will look to upskill to IFR at some stage. He has been flying since 2019 but started training in 2011 in rotary

wing. He has 750-800 hours flying experience and has very recently purchased VH-KDC.

Hope to see you at Orange, in the 205 if not before. No doubt some of the locals up there will say Hi very soon! Please don't hesitate to reach out to AMPA members if you'd like advice or just to chat about Mooneys!

AMPA Calendar

Membership renewal

Annual memberships are due for renewal by 30 June, as usual. Many members take advantage of the three year discounted rate but it's often difficult to remember when those expire. There's no need to worry – the governor of the AMPA Reserve Bank (John Martindale) knows when your membership expires and he will be delighted to send you an invoice when he wants some of you money again.

The simple solution to any uncertainties is to assume that, if you don't receive a renewal notice by June 30, your membership has not expired and you don't need to pay this year. Of course, you can always contact John directly at treasurer@mooney.org.au.

Gold Coast Air Show

August 18 – 20

Pacific Airshow Gold Coast will be a three-day weekend event featuring heart-pumping aerobatic demonstrations by the world's finest aviators, VIP meet and greet events, social parties, and so much more. Featuring the best civilian performers and military aviators from around the globe, Pacific Airshow Gold Coast is set to be the largest air show event to ever take place in Australia.

It has been suggested that AMPA members attend as a group and reserve a block of accommodation for the weekend. If you are interested in joining the group, please contact Howard Hobbs (hh643@bigpond.net.au) for more information.

Spring Fly-in

October 20 - 23

We're planning the next fly-in to Orange in September. Visit Mt. Canobolas, Botanical Gardens, Parkes Observatory, Parkes Aviation Museum and the general area of Orange.

Registrations are coming in steadily but there's still plenty of room for more.

Accommodation is in high demand in the town in spring so we recommend you book your accommodation and send your registration form to Dean Benson now.

You can be sure it will be another fun-filled weekend with interesting excursions, a winery or two (or three or ….) and excellent food.

All the details you need can be downloaded from the website or from the link below.

Registration and itinerary

2024 AGM

Next year's AGM fly-in will be to Port Lincoln in South Australia. You will be able to enjoy fabulous Coffin Bay oysters, swim with the tuna, visit local wineries and much more.

IFR Refresher

Date TBA

Several years ago, we ran an on-line IFR refresher course that was very well attended and very highly regarded by our members. We are hoping to run the event again later this year. It will be an on-line event focussing on the changes in the new Part 91 as well as other important operational matters. Ed: This was fantastically informative. Even if you're just thinking of a PIFR or CIR, it's extremely valuable. And if you did your IFR rating a few years ago, even more so! The AMPA IFR 'cheat sheet' that accompanied the last course is absolutely brilliant and may well have saved a few of us from a little embarrassment during proficiency checks and Flight Reviews.

Other Events that might be of interest:

HARS TARMAC WEEKENDS Friday, Saturday and Sunday 11-13 AUG 2023, (Shell Harbour – Wollongong), 8-10 SEP 2023, 13-15 OCT 2023, 10-12 NOV 2023 and 8-10 DEC2023.

(Highly recommended)

TEMORA MUSEUM Showcase Days Sat 16 SEP 2023, Sat 21 OCT 2023 Temora NSW

AAAA National Fly-in Fri 01-Sun 03 SEP 2023 Temora NSW

AIRSHOWS DOWNUNDER Fri 01-Sun 03 MAR2024 Shellharbour Airport NSW.

WARBIRDS OVER SCONE Sat 23-Sun 24 MAR 2024 Scone NSW

ALDINGA AIR SHOW Sun 7 APR 2024 Aldinga SA

FLYIN' FOR FUN Fri 12-Sat 14 APR 2024 Parkes NSW

NHILL AIRSHOW Sat 24 APR 2024 Nhill Aviation Heritage Centre, Nhill VIC

CENTRAL COAST AIRSHOW Warnervale NSW some time in 2024 TBA

AUSTRALIAN AIR RACE September 2024

SBAS – The latest

So, are we any closer to SBAS and proper 3D GPS approaches?

https://www.ga.gov.au/news/australia-and-new-zealand-sign-major-contract-with-inmarsat-for-new-southpan-satellite-service

Here's a couple of snippets from the spin in that link…

'Every major industry across Australia and New Zealand, from transport and construction to resources and agriculture, will gain positioning and navigation benefits from the Southern Positioning Augmentation Network's (SouthPAN) new satellite service.'

'These satellites will also be a critical part of a safety-of-life certified SouthPAN for aviation and other applications, scheduled for 2028. These services will be accessed or used by end users engaged in operations where life could be at risk, like landing an aircraft at an airport.'

'Todd McDonell, President, Inmarsat Global Government said "SouthPAN represents extraordinary potential for the region. It can save lives by enabling precision safety tracking, help farmers improve productivity through automated device tracking, or even support transport management systems of the future. We have a long history providing services for Governments in the moments that matter most, and we are delighted that our Inmarsat-8 satellites will continue that legacy well into the 2040's.'

Owen has kindly supplied the following update of where we're at…. (Don't get too excited.)

'The Southpan Safety of Life service will be using Inmarsat - https://www.ga.gov.au/news/australia-and-new-zealand-sign-major-contract-with-inmarsat-for-new-southpan-satellite-service. This isn't any major change of direction - the satellites were always going to require an experienced satellite operator. Whilst the SouthPAN ground stations will provide the corrections, the actual monitoring and precise manoeuvring of a GEO is a different and critical set of skills.

Inmarsat provided two Inmarsat III for WAAS initially, and then Inmarsat 4F-3 until late 2017. Australia used Inmarsat 4F-1 for the SBAS test-bed from 2017 to 2020, and more recently for the SouthPan open services. The European EGNOS currently uses two Inmarsat-3 satellites.

It was a competitive tender, and the only likely viable players would have been Inmarsat, Intelsat, Eutelsat or Boeing (SES).

The satellites are "dedicated" in the sense that without the SouthPAN SBAS, there would be no business case for any satellite operator to build and launch them: they must be maintained in precise orbits to achieve a geostationary service and "remain on-station", over an earth position specified by SouthPAN, to very tight tolerances and they must meet the SouthPAN availability and continuity performance requirements for an ICAO SBAS.

This does not preclude the satellite operator using the platform for other services, which is why they are described by Inmarsat as "L-band" rather than "SBAS" satellites. There would be a range of civil and military data services which the new Inmarsat I-8 satellites can provide. Aircraft communications is almost certainly one such. Inmarsat has

considerable experience with SBAS including with FAA WAAS and European EGNOS.

Besides Inmarsat, Intelsat, Eutelsat or Boeing (SES), the only other choice would have been for Australia to follow the Indian Space Research Organisation's lead and do it all ourselves. However, our space industry has little remaining experience with MEO and GEOs, even less with L-band, and would have had a hard time selling capacity for other payloads or services, at risk of failure or delay.

What was news was the choice by Inmarsat of its new I-8 satellites built by Swissto12, which has ESA technology links. If the claim that they will be several times smaller than existing GEOs is true (and there is no reason to believe it isn't, as Inmarsat has vast experience with software-defined radio transponders and Swissto12's small-GEO HummingSat has already been sold to Intelsat), then the launch risk, cost and complexity should be commensurately less too. However, as they must be placed in geostationary orbits (GEOs), they will still need suitable mid-earth orbit altitudes (MEO) and that requires highly precise launch and orbit guidance and manoeuvrability. So the 2026 date makes sense.

One would expect GEOs launched in 2026 to operate well up to 2040, but GEOs are necessarily susceptible to control loss issues and expend fuel to remain in the precise contracted orbits. To me, though, there is nothing at present to question the decision and plenty to commend it.'

Ed: It is so difficult to feel optimistic about any of this. An early proposal had this all up and running by 2015. The fact is, Australia still lacks essential infrastructure that was up and running decades ago in other parts of the world. Hence we've missed out on what should have been an essential aviation safety enhancement and economic development in regional areas. Possibly, two air accidents involving the loss of 20 lives, one involving one of Australia's worst ever air accidents, might have had a different outcome if state of the art instrument approach technology had been available to the pilots. Instead they were left to find their way through the scud the inevitable conclusions of 'pilot error' from the authorities involved. They were lower than they should have been when they collided with terrain. Why after hundreds of millions of taxpayers dollars put aside several years ago to address this, do we still not have the satellite technology to avoid this? It seems the program has been beset with changes of direction resulting from 'unique' Australian technical challenges, false starts and poorly managed project drift. Many of us started flying 2D GPS non precision approaches back in the nineties. And weren't they wonderful compared to those nasty old NDB's and VOR's? Of course, the Americans were in charge of procuring and operating the satellites or we might not have had even that by now!) 2D GPS approaches have an Achilles heel. It is too easy to go down too early with resulting collisions with terrain. CFIT accidents, like Lockhart River, We were promised 3D vertical guidance just around the corner and the problem would be solved. Maybe it was in the US but to this day, GA in Australia is left with basically, for the majority of locations, the same technology we had back then. Many of us will probably be too old to fly at all by the time proper satellite based vertical guidance happens in Australia, at the rate this has progressed so far.

There's also this:
https://www.amsa.gov.au/safety-navigation/navigation-systems/satellite-based-augmentation-system-sbas which states***: 'A Satellite-Based Augmentation System (SBAS) is now available in the Australia and New Zealand region. AMSA has issued a marine notice, providing information on the new system. The new SBAS is named the Southern Positioning Augmentation Network or SouthPAN.***

Sorry, that one is for your boat. Later in there we read:

'Australia and New Zealand are working towards a full Open Services capability and International Civil Aviation Organization (ICAO) certified Safety-Of-Life Services by 2028. The latter will primarily be for the aviation sector in the region.'

Meanwhile we see Airservices publishing LNAV/VNAV (but obviously not LPV using SBAS/WAAS) approaches at many airports around Australia. Are many of us actually equipped to fly these approaches?) Possibly not? The best relevant equipment some might have is baroVNAV where height above the ground is determined barometrically at known GPS positions. Some suggest that these approaches are for the most part, next to useless. The minimas are barely any different to our 2D LNAV approaches and many (most?) navigators don't have them in their datbases anyway. Not that we will find that terribly inconvenient as they don't have much to offer over and above a standard 1990's style 2D LNAV, (or whatever they were called back then.) Some of us have +V and some appear to be able to couple the

+V glidepath to their autopilots. The only fly in the ointment being that +V is 'advisory' meaning that +V approaches are legally 2D only and therefore we cannot descend below the 2D LNAV minima. The following was found on the questions section of a well-known pilot's forum, which seems to explain some of the reasons why Garmin boxes do what they do, or don't do.

(Ed disclaimer: Apologies if this is from one of their uninformed trolls but it sounds reasonable (?))

The question asked was 'Why won't the autopilot capture and fly the LNAV/VNAV approach?' The answer:

"Because unless you have a certified Baro-VNAV system, you aren't flying an LNAV/VNAV approach. As has been indicated already, you are flying an LNAV +V approach.

I'll try and explain simply why you are getting advisory and not guidance. So procedures are coded in ARINC424, which includes altitudes at certain fixes. The Garmin boxes do know what altitudes to display as they fly the approach. The problem is that, without a certified BaroVNAV system, the Garmin only knows its height reference to the WGS 84 ellipsoid and not AMSL. The difference between these two datums varies across the country but generally the WGS84 ellipsoid is ~70m below AMSL in the SW of Aus and ~70m above in the NE . If you want to nerd out you can read more about this here, which explains the rough idea as it applies to GDA20 https://www.icsm.gov.au/upgrades-aus...ference-system

So in a nutshell, the Garmin navigator (on its own) doesn't use AMSL as its reference datum for altimetry. The difference between WGS84 ellipsod and AMSL can be calculated, and I am aware that Garmin use a model to do these calculations on the fly. This eliminates this error, however this functionality is not part of the altimetry certification of the navigator and so can only be used as advisory. This is why most people are not observing ~150ft errors when using these systems.

The introduction of an SBAS system will also remove the altimetry errors, and as SBAS a certified system you will be able to fly an LNAV/VNAV as guidance (and coupled). Further the WGS84 ellipsod - AMSL difference can be hard coded for the threshold you are flying the approach to and a geometric 3d vertical path can be generated. These types of approaches, will be known as LPV.'

Roll on 2028 then! Although that might be optimistic at the rate were going but who knows? Some of us might still be young enough to use it.

Here is Chris Koppel in his Ovation showing how the Garmin WAAS boxes use SBAS in the US, with a Gotcha…

https://www.youtube.com/watch?v=dQZRh8oocjw

Mooneys for sale everywhere

A quick look at the Mooney market in Australia… the best kept secret?

You've probably seen massively inflated post Covid asking prices for most new and used single engine aircraft, especially Brand X Cessna and Cirrus which have used asking prices of anything up to $2 million. (Yes, you read that right $2m).

Despite some claiming that the market is collapsing and we'll soon see massive price drops all over the world, we haven't seen much evidence of that. (yet). An aircraft is a substantial investment for most of us and owners are understandably keen to keep track of values and the state of the market. Many aircraft are now several decades old but unlike most cars their values have increased several fold over the years and it's not unusual for owners to retain their investments for the long term. Folks here are probably interested in what is happening to the Mooney brand in Australia.

In general, a Mooney is an acquired taste and as such may be more of a boutique buy with perhaps a lower demand than the brand X's. There are quite a number of used Mooneys for sale in Australia right now. Planesales.com.au offers 13 with prices varying from $140,000 to $590,000 (but GST status is sometimes unclear, mostly it seems 10% GST has to be added to the advertised prices.)

Aviation Trader/Controller offer 6 aircraft, some of which are obviously also offered on Planesales,

with prices ranging from $270,000 to $649,000 including GST. The purpose here is NOT to compare prices between aircraft. Some of these planes are in 'original' condition, others have avionics upgrades and recent paint, interiors, engines and propellers that could add literally hundreds of thousands of dollars and so there are enormous differences in prices for similar models of similar years.

There doesn't appear to be much on offer older than a J model right now but for those at the entry level of the market might look out for an earlier C, D or E model that might be had for less than $100K and offer a great alternative to a 172. Much faster and more economical, probably for a lower acquisition price. There does not appear to be much of a 172 of virtually any age available under $100K these days – and some of them are really awful.

A new 182 delivered to Australia is likely to be well north of $1,000,000 these days and you'll need to get in the queue. But $649,000 for one of the latest Mooney's in Australia might seem quite a lot. But is it? The most expensive 2022 Cirrus offered on Controller is currently US$1,285,000 (approx.. $1,950,000 AUD). Don't forget you need to add delivery costs to Australia and registration, which might add another $100,000 and then add GST onto the whole lot. In comparison, there's a gorgeous 2019 Ovation for US$825,000 (approx. $1,250,000 AUD) and a couple of others like it for even less. Who'd buy a late Cirrus when you could get one of those beauties for much less? Well, lots or people apparently - but they really don't make much sense. The Mooney is faster, arguably cheaper to maintain and more economical, with virtually identical engine and avionics. The marketing folks at Cirrus seem to have made an awful lot of that parachute! Mooney are not alone in losing out to that piece of marketing genius. Even Cessna became a victim and had to drop their fine Corvalis/TTX as Cirrus dominated.

Whist asking prices for most aircraft have increased quite dramatically, Mooney's are not the easiest to sell, especially against Cirrus and even 172/182's. It's hard to know if anything like these prices are being achieved. Certainly it seems some aircraft appear to have been offered for some time. However, before we rush out and advertise our planes at bargain higher prices, the 13 currently for sale on Planesales is quite a few for Australia, probably about 10% of the Aussie fleet (see John's 2021 fleet update below) and its likely even more are for sale unadvertised if the right buyer knocks on the door.

But before some go banging on about folks asking far too much for their Mooneys, let's say hypothetically that a hot air balloon lands on our pride and joy ☺ (it is possible see this: https://www.youtube.com/shorts/ogtjJP9ji4w). Do you have enough insurance to replace your pride and joy? Some of us may not be able to replace our planes, particularly if we have to go to the US to find a replacement. However, Mooneys are clearly one of the best kept secrets and an incredible bargain at all levels of the market. It is hard for a Mooniac to see why anyone would buy a characterless overpriced brand X where there is a much lower priced, similar spec'd Mooney available!

Aircraft offered on Planesales:

Year	Model	Total time	Price (AUD)
1980	M20K	3246	$255,000 GST?
1979	M20J	5300	$30,000 1/5 Share
2008	M20R	630	$590,000 +GST
2005	M20R	1492	$345,000 GST?
1976	M20J	4180	$140,000 GST?
1982	M20J	4148	$270,000 incl. GST
1980	M20J	1837	$170(K?) plus GST
1968	Mark 22	1500	$200,000 GST?
1988	M20J	5073	$190,000 plus GST
2008	M20R	1100	$490,000 no GST
1981	M20R	4010	$170(K?) plus GST
2008	M20TN	1300	POA

The Aviation Trader/Controller offer 6 Australian based aircraft:

Year	Model	Total time	Price (AUD)
2005	M20R GX	684	$649,000 incl. GST
2008	M20R	630	$649,000 incl. GST
1999	M20R	900	$352,000 incl. GST
1982	M20J	4148	$270,000 incl. GST
1979	M20J	5345	Call
1978	M20J	23642	Call

A few Youtube links:

Who says a Mooney can't get into tight, rough strips?

https://youtu.be/XyEIMDgDYWs

Thinking of going electric? Interesting E Prop

https://youtu.be/2EACB8-3wDE

How to get an Ovation lower cowl off and on – unassisted.

https://youtu.be/msGRa1YePZk

$8000 Mooney

https://youtu.be/7TVruR6r388

B52 undercarriage maintenance outsourced to ALDI

https://youtu.be/UH9X1ymHXjw

The Fastest Certified Single Engined Aircraft: The Mooney Acclaim S.

Test Flight Kindly provided by Phillip Reiss from his days as AOPA Director

Flight Evaluation Mooney Acclaim

Mooney have long been regarded as the benchmark for speed and efficiency in light single engine aircraft - from their earliest aircraft with simple systems (Johnson Bar gear retraction system for example) they have always delivered outstanding performance from minimal power. In the new Mooney Acclaim, the systems have become more sophisticated (you no longer need a strong right arm to retract the gear) with Garmin G1000 Integrated Avionics System, PFD (Primary Flight Display) MFD (Multi Function Display), completing the package.

Mooney performance and efficiency is still setting the benchmark. With 280 HP turbo normalised power available from a Continental TCM TSIO-550-G (twin turbo w/dual intercoolers), the Acclaim has significantly less power but is considerably faster than its competitors. Mooney have de-rated the big Continental, which normally delivers 300 + HP, restricting RPM to 2500 and max continuous power to 280 HP, with cruise power of 262 HP available right up to 25,000'.

Roy Lopresti is credited with developing the Mooney's aerodynamics – innovative design has always been a feature of the Mooney. The forward canted tail is a distinctive and signature feature - the entire empennage doubles as a trimming system, engineered to rotate fore and aft in flight, claimed to improve handling and enhance performance.

Hamish Ramsay the Australian Mooney dealer had agreed to an AOPA flight evaluation in Sydney but a busy sales tour organised for N1035S, with Susan Harrison from Mooney Airplane Company International Sales and demonstration Pilot Corbin Hallaran, meant we would have to fit in with a tight schedule. My time slot inclusive of ground and airtime became squeezed into a little over one hour, due to a sales demonstration in Canberra for that afternoon.

My initial flight out of Bankstown to the training area, restricted to 4500ft, was never going to reveal the full potential of the Mooney Acclaim. This is an aircraft designed to go places fast and at altitude - at 20,000ft it is in its element. A quick, 45 minute punt around the training area watching out for other aircraft, whilst becoming familiar with the systems and layout, was not a fair evaluation of this aircraft.

We decided to do the evaluation in two parts, the second part on their return from Perth after completing the sales tour. I would meet them in Wangaratta, Hamish's base, Ramsay Aviation Services and spend an afternoon flying the Acclaim in its true element at 25,000ft.

Corbin conducted me through a thorough pre-flight prior to my flight out of Bankstown, along the way pointing out features of the design and structure not readily apparent to the casual eye - such as the NASCAR-style hand welded chromoly steel roll cage forming a protective passenger cabin structure and Amsafe inflatable seat restraint system (inflatable air bags incorporated in the seat belts). A one piece, wrap round wing skin over a single piece carry through tip to tip wing spar forms the laminar flow wing forward swept wing rated to exceed 9 Gs.

Standard fuel capacity in the wet wings is 102 USG (optional 130 USG tanks are available). Also standard are the speed brakes, an essential aid for descent with power to avoid shock cooling the engine.

I was immediately impressed with the high standard of finish, both external and internal. The Scimitar three bladed propeller, and enlarged Lopresti round engine inlets enhance the performance look of the aircraft. Mooney have increased the cabin size along with large windows to give the aircraft a spacious feel inside and provide a comfortable environment for longer flights, despite the modest external dimensions.

Control operation is via rods rather than cables for more precise handling (more of that later in the evaluation flights). With so much performance and IFR capability dependent on the Garmin G1000 system, electrical redundancy is always a concern. Mooney have taken this concern on board with dual alternators and dual 28 V 11 amp/hour batteries. The main alternator, located at the front of the engine, is a 100 amp unit, with a standby 20 amp alternator located at the rear of the engine. In the event of a main alternator failure,selecting the standby alternator sheds all non-essential loads, powering all essential equipment comprising the G1000 system, PFD and MFD along with the AHARS and ADC (air data computer), Com 1, Nav 1, GPS 1, transponder, audio panel, engine instruments and panel lighting and standby instruments.

Our first flight to the training area was an opportunity to assess the general handling. Engine start was normal and, with the idle set at 960 RPM, I was amazed at the smoothness of this engine - there was absolutely minimal vibration. The cowl shake normal associated with most large piston singles was non-existent. During the flight I was impressed by this aspect, which adds considerably to passenger comfort. I found the aircraft easy to taxi with good visibility and engine controls via vernier allowing precise power setting.

The take off was smooth accelerating through 80 kts before retracting gear. Retraction speed limitation is 106 kts and extension speed limitation is 140 kts - however you can operate up to 164 kts once the gear is extended.

I chose on this flight to hand fly the aircraft - I was busy enough the autopilot evaluation could wait. The Garmin G1000 PFD is intuitive and the presentation of data logical. Being used to glass cockpits I had no trouble flying the PFD. Though the system does appear daunting initially, adequate flight training would enable most pilots to master the Garmin G1000. This is the area where most training time would be required for an initial endorsement.

The Acclaim accelerates quickly and with several aircraft in the training area a lot of time was spent looking out for traffic. Fortunately the Acclaim has excellent visibility. With time constraints in mind and the knowledge that a more in depth evaluation was available in two weeks time, I concentrated on general handling and subjective analysis rather than running a test card style flight. The Acclaim has well harmonised responsive controls and feels solid punching through turbulence. Roll response is smooth and good for this type of aircraft.

Handling is certainly not in the aerobatic league - but that is not what this aircraft is all about. It perfectly meets the criteria of being stable, comfortable and able to cover large distances quickly. This smoothness, precise and harmonised control feel is greatly enhanced by the push pull rod

control system. With 75% power set at 4500ft the Acclaim settled at 185 kts IAS for 192 kts TAS.

Mindful of the busy training area, I slowed for some low speed flight handling. The control response was fairly consistent throughout the speed range - naturally stiffening up at the higher speeds, but not unduly so, indicating good aerodynamic design. Not wanting to waste too much time, I decided one stall would suffice and chose a worst case, scenario. Configuring the aircraft for landing with gear down, full flap and approach power set, the stall break came at 56 kts, a clean break with no roll off - though I do feel the stall could become interesting should you allow the aircraft to become unbalanced, or through rough handling induce dynamic stall. This is the case with most laminar flow airfoils. Lack of time and courage precluded exploring this option.

Corbin talked me through the approach and landing at Bankstown, which was smooth and uneventful, thank you Corbin. Had my flight evaluation concluded at this point, it would have been a disservice to the Mooney Acclaim, and other than quoting the flight manual and glossy sales brochure, I would not have been able to present a flight evaluation of any value. The second flight was essential to really explore the true potential of this aircraft. Flying down to Wangaratta in my Twin Comanche, I reflected on my earlier flight in the Acclaim, checking my notes and priorities. There was no need for general handling evaluation. This flight would be made on the basis of how an owner would utilise the aircraft on a business or pleasure trip. I would create the same environment in which most purchasers of this aircraft would operate.

Ramsay Aviation at Wangaratta, are an accredited service centre for Mooney aircraft as well as being Australian dealer. Meeting Hamish, Susan and Corbin once again at Hamish's facility, we discussed the planned flight profile. Corbin and I would fly out of Wangaratta enroute to a point just north of Narrandera, climbing to 25,000ft, spend some time at cruise, then return to Wangaratta, recording cruise and climb performance along the way while getting a feel for comfort levels and checking out the navigation and autopilot systems. Planned flight duration of one hour would be sufficient to complete the exercise.

Take off power of 33.5' MP and 2500 RPM had us off the ground in just under 1500ft. With gear retracted and 120 kts cruise climb speed established, the initial rate of climb settled at 1250 fpm. We reached 17,000ft in 14.5 minutes and the climb rate was consistent at 1150 fpm all the way up to 25,000ft, which we reached in just under 22 minutes. Fuel burn during climb was 40 US/GPH for an average TAS of 180 kts.

Oxygen masks are a requirement for flight above FL 180. From FL 110 up to FL 180 cannulas oxygen can be used. Being used to flying in pressurised aircraft, at these levels, I initially found the mask a distraction, having to fiddle with the headset boom mike which has to be placed over a hole in the mask for communication. Once again the aircraft felt rock solid at these altitudes and I could not fault the handling. The Garmin autopilot is excellent, holding climb speed and levelling at the selected altitude. The controls for the autopilot are arranged in a vertical array on the left side of the MFD, with the audio panel a vertical module between the PFD and MFD, both close to hand and intuitive to operate.

The panel layout is clean and uncluttered. One criticism is the location of the standby flight instruments on the extreme right hand side of the panel. Should both glass displays fail (highly unlikely I know) then flying by reference to instruments on the far side of the panel would make the job far more difficult. I would prefer a location either below the PFD or on the lower panel between the PFD and MFD. Panel structure no doubt precludes these locations.

The Garmin displays are crystal clear and sunlight readable, providing complete situational awareness. The Garmin G1000 is now becoming standard fit on a number of new aircraft - the versatility and capability that this brings to GA flight for pilots trained to get the best out of the system is immeasurable. Settling down in cruise at 25,000ft, I set power to 75%. After a minute or two the airspeed stabilised at 234 kts for a 21 US/GPH fuel burn, TIT (Turbine Inlet Temperature) was 1650 degrees Fahrenheit. Throughout the flight cylinder head temperatures remained between 350 to 360 degrees Fahrenheit, a testament to well designed engine installation.

This cruise TAS is within three knots of Mooney's book figure of 237 kts. Considering the above ISA temperatures, I am sure on a cooler day the book figures would have been met. With the engine set lean of peak for range, our TAS was still 226 kts but fuel burn came down to 18 US/GPH - an eight knots sacrifice for a three GPH decrease in fuel burn - well worth considering at today's fuel prices.

I found the cabin environment to be comfortable, visibility excellent and what little turbulence we flew through had little effect on the aircraft - once again that solid stable ride further contributing to comfort levels. We turned just north of Narrandera for our return leg, completing our cruise work passing over the top and were cleared by ATC for descent, back in to Wangaratta. Operating in the flight levels requires planning for descent, particularly in a turbocharged aircraft. Mindful of not shock cooling

the engine and keeping power reduction minimal, the speed brakes are essential to enable a clean aircraft such as the Mooney Acclaim to descend under power. Descending from 25,000ft to circuit altitude at 700 FPM would require 35 minutes. Our ground speed with the tailwind component was 240 kts with power reduction being limited by shock cooling considerations. We would need 140 nm for our descent. This is where speed brakes proved their worth, enabling us to maintain power, slow down and descend. Passenger ear considerations were not a concern so our descent was made at 1000FPM - our eardrums having already been wrecked years ago were used to it.

We were less than 100 nm from Wangaratta so with the compliance of ATC a diversion off track enabled us to meet our descent profile. I could have used a much higher rate of descent, but I wanted to maintain a normal profile for the exercise. There is very little trim change with speed brakes and handling is unchanged from normal. The speed brakes are activated by a press switch on the left side of the control yoke - easy to operate and very effective.

The Acclaim landing gear is all electric operation. With gear down indication on the panel and the mechanical football indicator on the floor, there should never be any doubt as to whether your landing gear is up or down. Back up manual extension, located between the front seats, is by clutch to disengage the electric motor and ratchet for extension. Entering the circuit area, slowing to 140 kts for gear extension, followed by 10 degrees of flap at 110 kts, I felt very comfortable with the aircraft. High performance not withstanding, this aircraft is docile to handle in the circuit area, responsive and confidence inspiring.

Corbin once again coached me through the circuit procedure, 100 kts downwind, 80kts on base 75 kts on final and 70 kts over the fence, with full flap (35 degrees) selected on downwind. The Acclaim is an aircraft that responds well to accurate flying - nail the speeds (easily fine tuned with the vernier throttle) and you will be rewarded with a good approach and landing. The technique that works best is to stabilise your speed and descent rate, trim back during the landing and simply hold the trim button on the top of the yoke back, just prior to touch down with little or no flare. I was rewarded with smooth landings on both occasions that I flew the aircraft - a good coach in the right seat of course made all the difference.

Range and payload are important considerations for any aircraft, the old conundrum – a four place aircraft can either carry fuel for max range and fewer passengers, or fill the seats and accept reduced range. The Acclaim is no different in this regard but - because of the speed advantage of the Acclaim - a fuel stop is not such a great penalty in overall trip time. Corbin Hallaran and Victor Rimkus flew the Acclaim from Perth to Adelaide with one stop at Forrest, (Victor is an Airline Pilot, very experienced Mooney owner and Australian Demonstration Pilot for Mooney). Standard payload being 1015 lbs, with full fuel 102 USG they had 400 lbs available for pilot, passenger and baggage (two people).

The standard aircraft is well equipped for IFR. Adding options such as TKS and air-conditioning adds weight penalising payload/range. When considering options a purchaser needs to carefully weigh up his aircraft's intended use, trip length and number of passengers normally carried. This applies to all aircraft.

The Acclaim has good tolerance for random cabin loading and it would be very difficult to load the aircraft outside the envelope, unlike many popular four-place aircraft. Mooney lengthened the cabin about 18 inches when they built the Ovation, which has the same airframe, to accommodate the larger engine and to ensure weight and balance remained benign.

Subjective analysis:

Spending a total of two hours in the aircraft over two trips barely scratched the surface in exploring its full capabilities, but I was able to evaluate the aircraft in terms of its potential use. The brochure states Mooney make the worlds fastest piston aircraft. I know of no other certified single piston engine aircraft that can yet match the Acclaim for speed. The Acclaim is faster than most twin-engine aircraft with only the Aerostar in the piston class matching its performance. Without the complexity and cost of pressurisation, the Acclaim enables flight in the high teens, low twenties altitudes. The benefits are speed and economy and the ability to get above most of the weather (but not all of it). The downside is the need to wear an oxygen mask. A more comfortable mask, perhaps incorporating a boom mike, would be worth considering if that option was available.

Structural integrity, quality work and finish, along with comfort and good handling are a major plus for the Acclaim. This is an aircraft that should hold its value well giving many years of good service. Mooney is extending its three-year warranty on new aircraft to cover up to 1000 hours – up from 600. Mooney announced at Fun and Sun speed enhancements for the Acclaim type S, which will boost cruise speed to 242 kts. The enhancement kit, a new propeller and cowling, will be made available as a retrofit for all Acclaims. The Acclaim meets its design criteria - as a stable, fast, go

places aircraft, business trip or pleasure this aircraft will not disappoint.

Specifications: are available on Mooney's web site www.mooney.com

Price: with TKS known Ice Protection and selected options US $ 667,000.00

Does not include delivery, Aus certification – estimate only US $ 20,000.00

Total estimated price GST not included = US $ 687,000.00

* Phillip Reiss is a highly experienced corporate, charter, demonstration and training pilot with more than 19,000 hours, including more than 16,000 hours on turboprop and jet time.

His experience includes –

* Flight Instruction and Charter

* Chief pilot, aviation manager, Swan Brewery King Air, Learjets 24D and 35A.

* Learjet project manager, then sales and operations manager Pacific Aviation (previous Stillwell), ferry flights delivering Learjets from USA.

*16 years Westfield chief pilot, director of aviation, Learjets, Hawker 700, Challenger 601, Boeing 727 (supervised modifications for Corporate use including re-engine, Winglets, EFISand FMS systems).

*Test flying on the Boeing for certification of the winglets and 42,000' approval (required a stall regime and slam engine accelerations and high speed flight to test warning systems and handling)

* Holds test flight approval for the A37B Dragonfly. Did the test flying for the first aircraft at Scone and the first flight of the second one out of Bankstown.

* Holds USA ATP and Australian ATP and Command Instrument Rating

From The Mooney Flyer

The Mooney Flyer is a monthly on-line newsletter published by Phil Corman. It always contains a range of useful and interesting articles and can be accessed free of charge at http://themooneyflyer.com/. The contents of recent issues are listed below and AMPA members are encouraged to read them.

From the July issue:

Welcome to the July Edition of THE MOONEY FLYER.

Go to: https://TheMooneyFlyer.com to download and read your PDF and/or FlipBook version.

Here is a brief article from Richard Simile that missed our deadline, but was too good not to share with you.

Aircraft Dormancy

Aircraft Dormancy has been an issue recently with some aircraft that I've taken on to sell after the owners have had either medical problems or are too old to be able to acquire insurance. They don't want to give up on flying and giving the airplane up is like GIVING IN!! I get it but given the LONG list of squawks I have seen, I would highly recommend that these owners either have someone fly them in the airplane frequently so that the airplane can stay moving and the engine can evaporate the moisture in it. In general, airplanes are made to be exercised regularly. Doing so will prevent the significant squawks that occur when an aircraft sits up for a significant amount of time. Dealing with this as an aircraft salesman is a pain in the neck and so is giving the owners continuous bad news with yet another thing going wrong! The list keeps growing on airplanes like this until it is a very expensive proposition in the end. DON'T LET THEM JUST SIT THERE!!! Airplanes are built to be flown and you can reduce your maintenance cost tremendously by flying them regularly until you decide to sell them. If you can't fly them regularly or can't find someone to fly them regularly, I highly advise that you sell the aircraft while it's still within its exercise window before certain squawks take place that can be very costly. If you'd like to discuss this further, please call me and I will give you some further input personally. 602 884-2111

In this Edition:

Plus all of our regular features including Ask The Top Gun, Have You Heard, Upcoming Mooney Events, Mooney CFIs, Product Reviews and more

Fly Fast, Fly Safe

Phil & Jim

Mooney Fleet in Australia – 2021

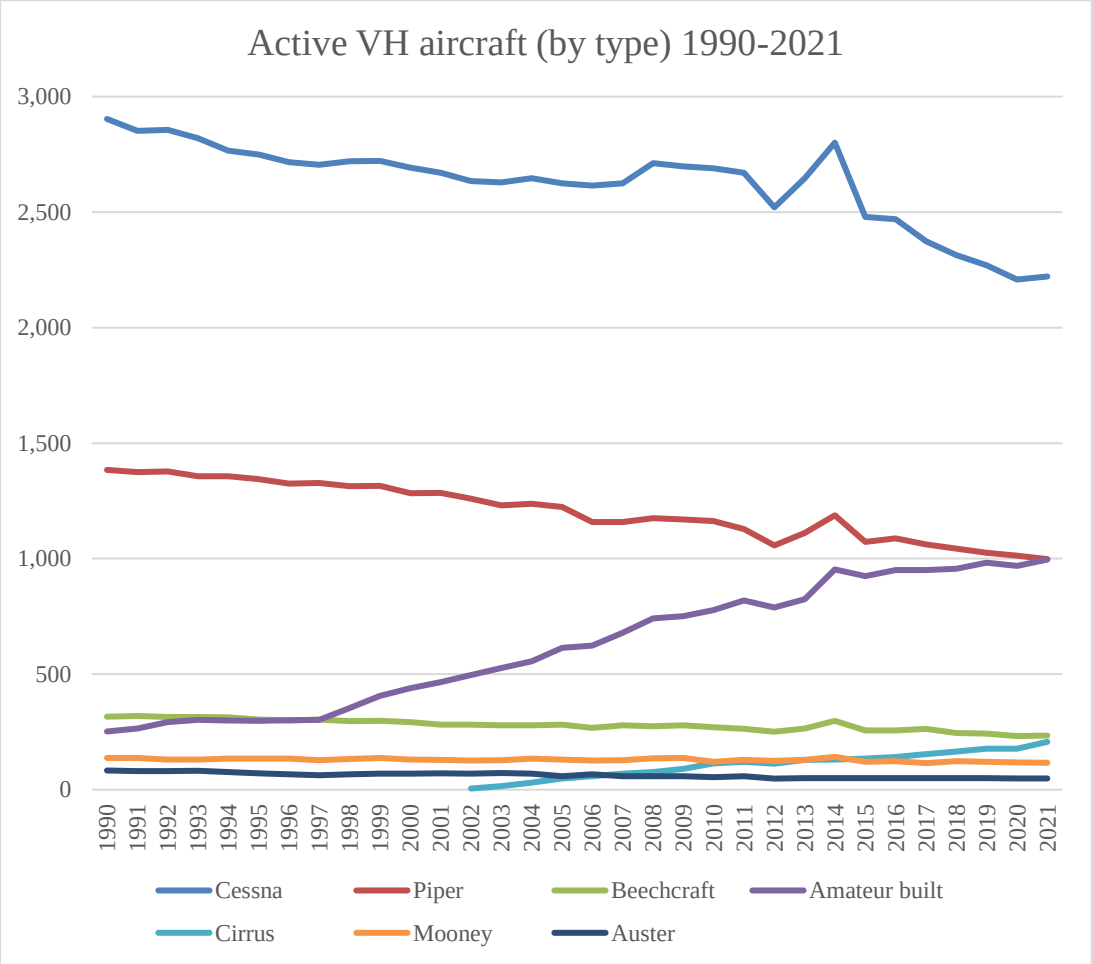
Annual update from John Hillard

Since 2018, the newsletter has included an annual update of the size and utilization of the Mooney fleet in Australia since 1980. This analysis is based on data from the Bureau of Infrastructure, Transport and Regional Economics (BITRE) who ask aircraft owners each year to report whether their aircraft are active and, if so, what hours and number of landings they have done. The data for 2021 are available and have now been included.

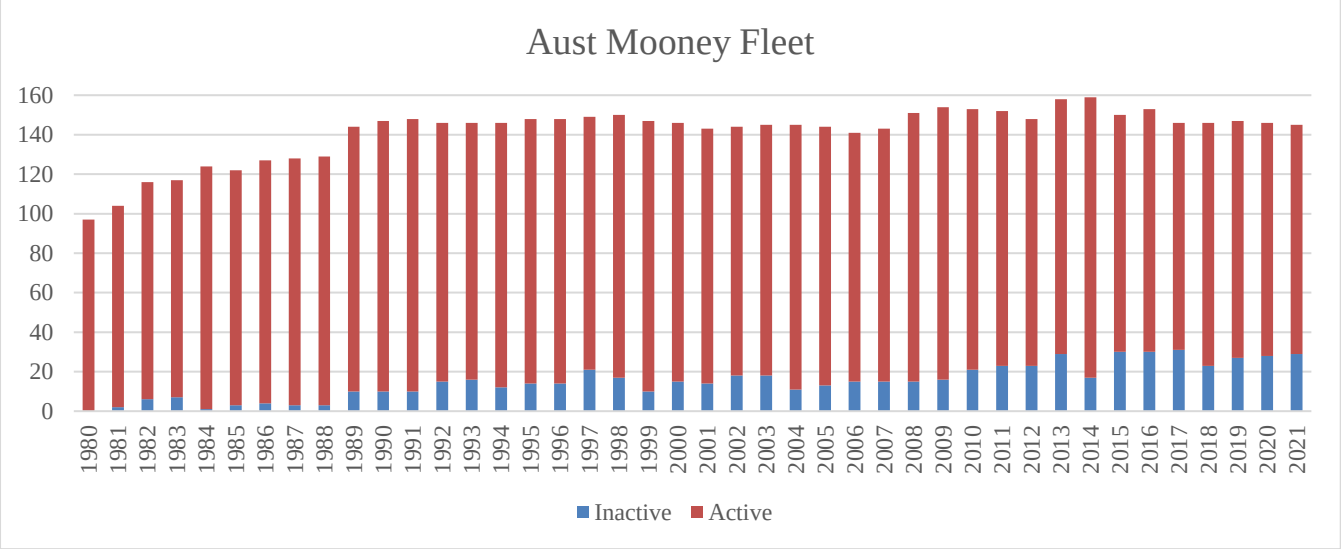
2021 was the second year where aircraft utilisation was affected by COVID restrictions. Regular Public Transport (RPT) aircraft flew 19% more hours in 2021 compared with 2020 but this represented only a partial recovery from the 66% decline in 2020 vs 2019. VH registered General Aviation aircraft recorded about the same total hours in 2021 vs 2020 after a 8% decline in 2020 vs 2019.

The long-term trends for VH registered General Aviation aircraft continued on much the same trajectory as in previous years:

- The fleet size remained at about 9,000 aircraft but the number of active aircraft was about 6,500. 28% of the nominal fleet was inactive (i.e. did not fly any hours in 2021) which was about the same as in 2020;
- For most aircraft types, the size of the active fleet has been in a gradual decline. Compared with the average of 2006-10, the active Mooney fleet in 2021 has declined by about 11%, but the number of active Piper, Beechcraft and Cessna aircraft has declined by 14%, 15% and 17% respectively. The only types that grew in numbers were Cirrus and Amateur-built.



- The average age of the fleet (all types) increased from 37.8 to 38.5 years;
- The average GA aircraft flew 121 hours per annum in 2021 compared with 123 hours in 2020 and 133 hours in 2019; and
- Between 2015 and 2021, the fleet size has remained about the same but the uses have changed. Training and agriculture now account for almost half of all hours flown compared with 40% in 2015. Private and business aviation is now 25% of hours flown vs 30% in 2015. Total training hours dropped almost 25% between 2020 and 2021 so the growth of training and agriculture's share of total GA activity is expected to continue as training activity ramps up again after the lifting of COVID restrictions.



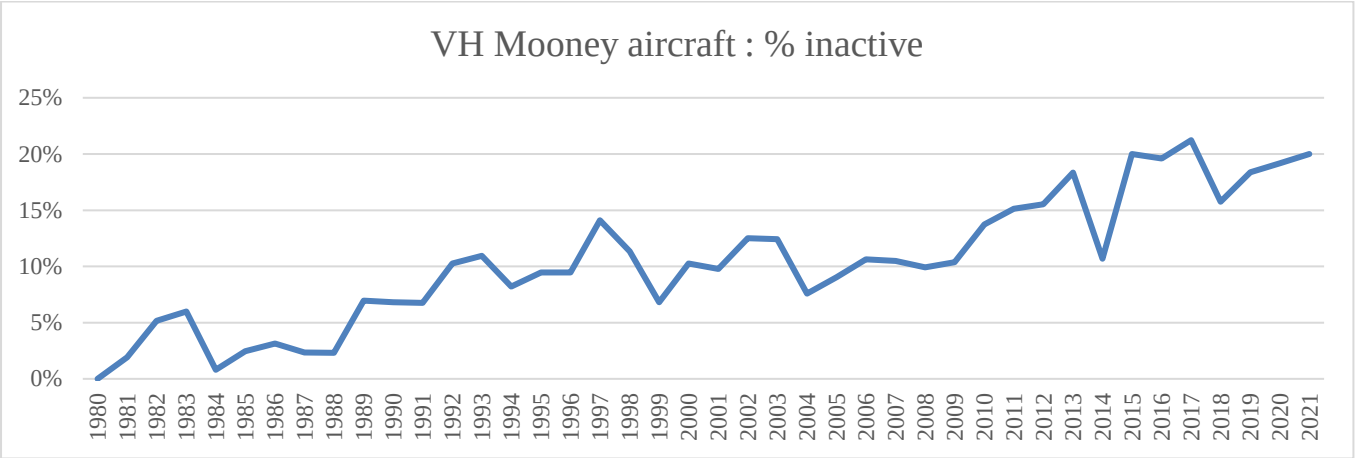
The Mooney fleet in Australia has fluctuated between 145 and 155 aircraft since the 1990s. If you search the CASA Aircraft Register now, you'll get a total of 154 Mooney aircraft. This is more than the 145 aircraft that were reported to BITRE at the end of 2021. There reasons for this difference are:

- the BITRE survey has a response rate of about 75% so estimates are used where responses have not been received;
- BITRE adjust the fleet numbers immediately if a response is received from the survey indicating that an aircraft has been destroyed or scrapped. But such aircraft might remain in the Aircraft Register for a while until CASA have been able to confirm that the aircraft has been de-registered; and
- if BITRE are told that an owner died during the year and that the aircraft is to be sold, then BITRE will then delete that aircraft from the fleet given that many aircraft never fly again after their owners die. This does create some volatility in the fleet numbers because some of the aircraft that BITRE assume are "dead" were really only "sleeping" and will pop up again in the numbers again when transferred to a new owner.

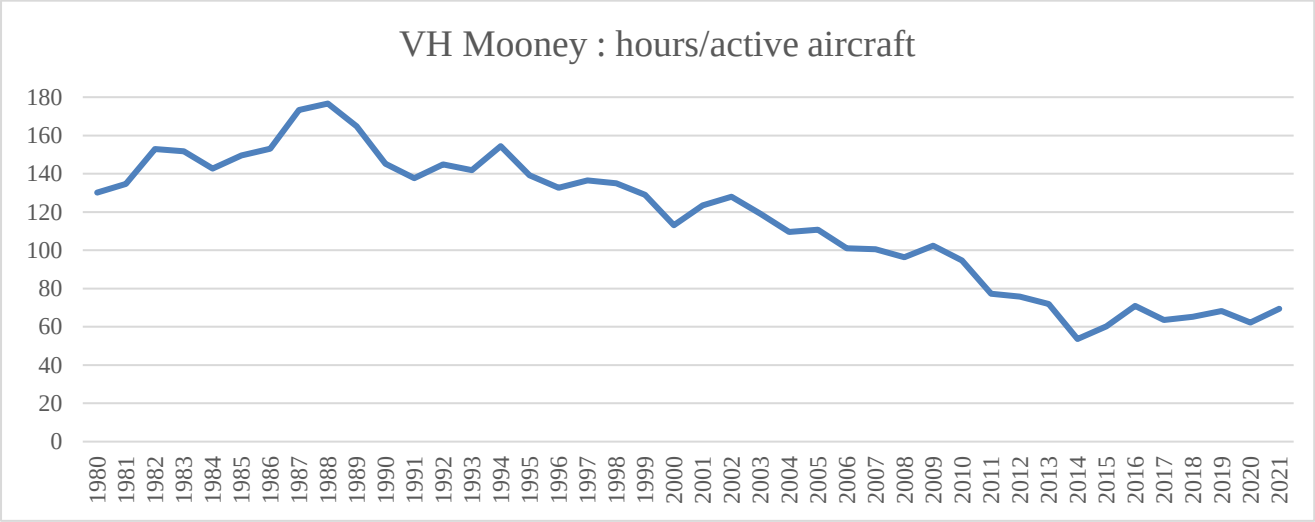
The BITRE survey is important in that it tells us how many of the Mooneys in Australia are actually active (i.e. recording flight hours within the year). In 2021, the number of active Mooney aircraft reduced by 2 aircraft to 116. The number of inactive aircraft has steadily increased over the years and has been 18-21% of the Mooney fleet in recent years:

Some of these aircraft will have been inactive in any particular year while awaiting repairs or sale but many are unlikely to ever fly again due to their being past the point of economic repair.

The average age of the Mooney fleet in Australia now exceeds 40 years and, while we cannot be certain (as the data is not collected), it is likely that a higher proportion of older aircraft will be inactive than newer aircraft.

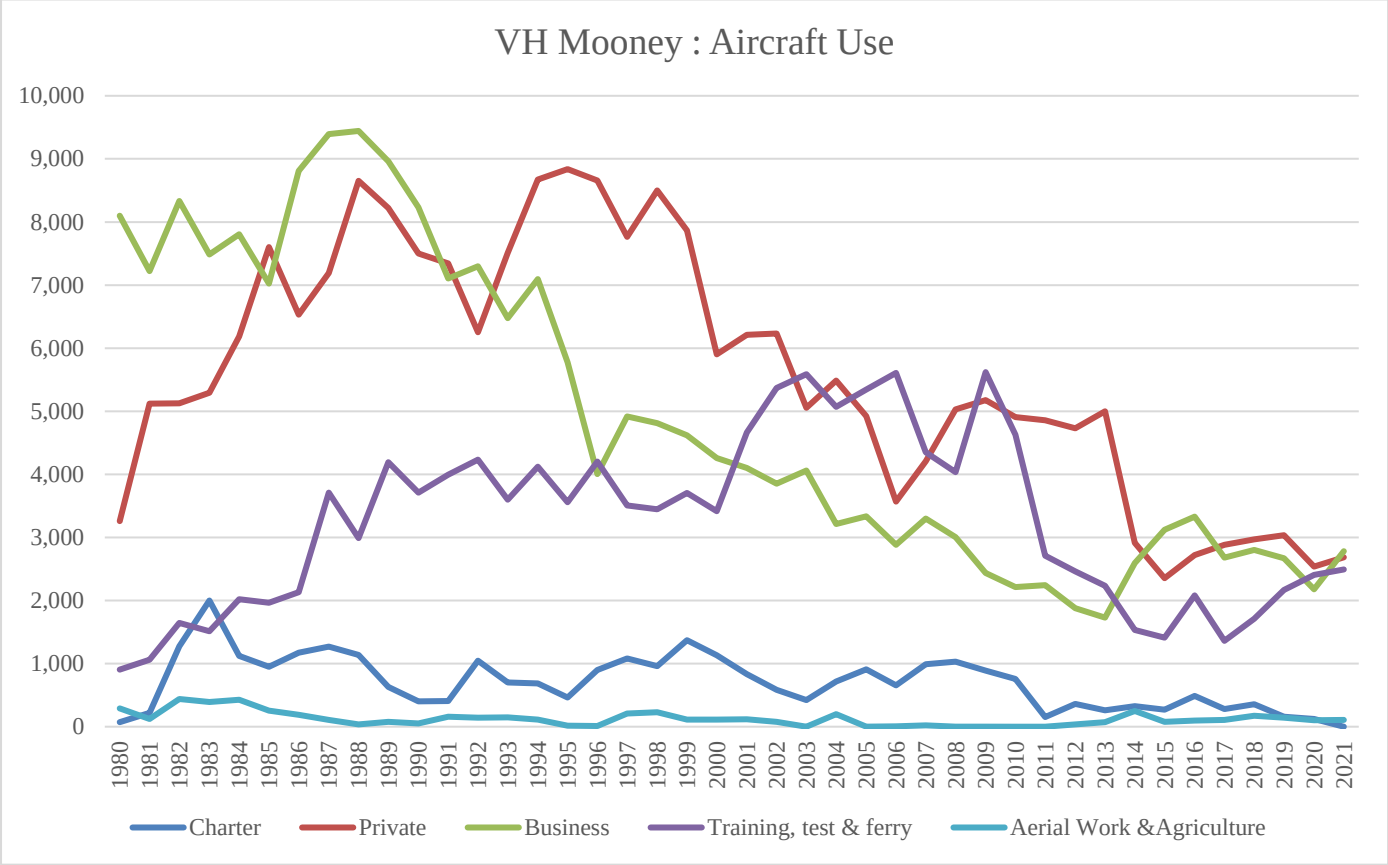


While 20% of the Mooney fleet was inactive in 2021, the proportion was higher for many other aircraft types: 33% of Maules, 49% of Victas, 46% of De Havillands and 61% of Austers were inactive in 2021.



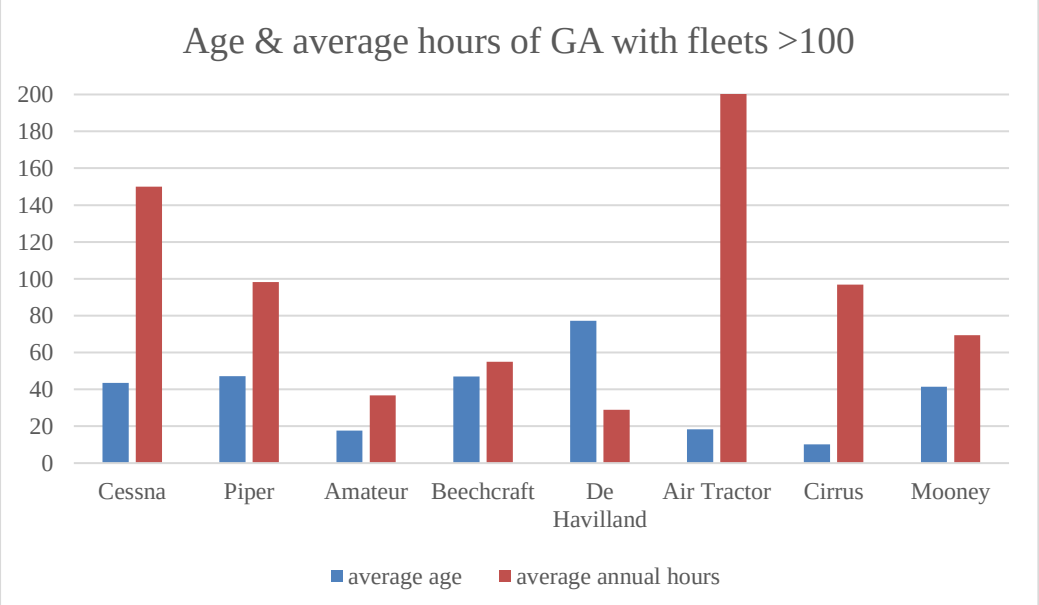
The average hours per active Mooney increased to 69 hours in 2021 compared with 62 hours in 2020. The drop in 2014 to 54 hours appears to be a statistical aberration as there was an unexplained drop in the number of inactive aircraft in that year. The average hours per active aircraft appears to have stabilized at around 60-70 hours in the past five years.

The reasons for the long-term decline in total hours flown is evident from the graph below. The main cause of the steady decline in hours flown has been reduced private and business use. Training use (presumably largely attributable to the M20Js of the Royal Aero Club of WA) had accounted for a significant proportion of total hours throughout the period but have declined steeply in the past ten years. Total charter hours had been in steady decline and, in 2021, there were zero hours recorded. Despite an increase in recent years, total training hours in 2021 amounted to only about 55% of the 1990-2010 average. Despite steep declines from their peaks in the 1990s, private and business use still accounts for about two thirds of the hours flown in Australian Mooneys.



While the focus in this article has been on the Mooney aircraft fleet, there are some interesting trends for other types in Australia:

- The GA types with the highest annual hours are those that are used in agriculture (e.g. Air Tractor, Ayres, Pacific Aerospace), training (e.g. Cessna, Piper and Diamond) and air ambulance/charter (e.g. Pilatus).



While Cessna and Piper aircraft comprise about half the total GA fleet, more than a quarter of them were inactive in 2021. While private and business use of Cessna and Piper aircraft has been flat to declining, there has been a significant increase in their use for training in

recent years. So, even though the active fleet is 10% smaller than in 2015, the average hours per active Cessna has increased from 135 in 2015 to 150 hours in 2021;

- Cirrus aircraft flew an average of 97 hours in 2021 and amateur built aircraft averaged only 37 hours which is surprisingly low given their average fleet ages of 10 and 18 years respectively;
- Beechcraft have similar uses to Mooney aircraft (predominantly private and business use but also some training and ambulance use) and averaged only 55 hours per active aircraft in 2021. Also, 27% of the Beechcraft fleet are inactive compared with 20% of Mooneys;
- the Air Tractor fleet averaged 423 hours per active aircraft compared with 302 hours in 2020 and the Ayres fleet that increased to 422 hours compared with 246 hours in 2020. The average hours per active aircraft has more than doubled between 2018 and 2021 due to a massive increase in fire suppression and agricultural work;
- Pilatus and Diamond aircraft that fly high annual hours in ambulance and training tasks respectively; and
- Many other common types (e.g. Stinson, Yakovlev, Auster, Victa, Yak, Nanchang, Aerostar, Fuji, Pitts) that average only 20-30 hours per annum and other types that average even less.

While the focus here has been on VH registered aircraft, the decline in that fleet has to be seen in the context of the growing numbers of amateur built and RAAUS aircraft. The amateur built fleet grew from 138 (in 1980) to 996 (in 2021) and figures from RAAUS show that their (3 axis) recreational aircraft fleet has grown to about 3,200 aircraft. So, the decline in the number of GA aircraft has been more than offset by the increase in RAAUS and amateur built. This trend has almost certainly been driven by the increasing cost of maintaining an VH registered airplane and the lower training and maintenance costs of RAAUS and amateur aircraft. While some people in amateur/RAAUS are as safety conscious as anyone in GA, these aircraft do have much higher accident rates than VH aircraft. ATSB studies (2013 and 2020) show:

- "Amateur-built aircraft had an accident rate three times higher than comparable factory-built certified aircraft …The fatal and serious injury accident rate was over five times higher in amateur-built aircraft"
- Recreational aircraft have accident/fatal rates (per million flying hours) three to four times that of GA.

About a decade ago, CASA became convinced that ageing GA aircraft represented a threat to flight safety … despite there being no real evidence of this. The most significant product of their crusade occurred in 2014 when CASA made it mandatory for owners of VH registered Cessna aircraft to implement the Cessna Supplementary Inspection Document (SIDs). Cessna tried to have this made mandatory in the USA, but the FAA explicitly rejected it and it remained only a Service Bulletin (SB). So, what did seven years of mandatory SIDs achieve in Australia? It certainly resulted in the scrapping of a significant number of aircraft as the active VH fleet of Cessna aircraft was 10% smaller in 2021 than it was in 2015.

But what was the effect of SIDs on aviation safety? At best, nothing, since there is no evidence that accident rates for Cessna aircraft are any different now than they were a decade ago. At worst, there will have been a negative impact because this program will have encouraged some pilots to move instead to (relatively less safe) amateur/RAAUS aircraft.

What is notable from these statistics is that the 116 active Mooneys in 2021 represents a 11% decline (from the average of 2006-10). Over the same period, the active fleets of Beechcraft, Piper and Cessna aircraft have decreased by 15, 14 and 17% respectively. It is not clear why proportionally fewer Mooney aircraft have become inactive over the past decade compared with other types. A possible explanation is that Mooney systems – in particular the pushrod-based flight control system and the rubber shock absorbing undercarriage – are inherently more robust that other types. This is true provided that those systems are suitably maintained and, in particular, that the flight control system has been regularly lubricated and the discs replaced where necessary. If not, then deferred maintenance can result in some parts needing to be replaced that are very expensive and/or not readily available. If other aspects of maintenance have also been deferred like corrosion, then there is a risk that, before long, the owner will face a bill to get it airworthy that will exceed the market value.

New parts and equipment for sale

There's a new and extensive list of Mooney parts, avionics, electrical equipment and assorted other items on the web site.

AA80-001 intercom
Altitude Encoder
Annunciator
Castleberry 28V emergency power unit
Champion M3100 impulse coupling
Electric A/H
Fine wire spark plugs
GDC31 roll steering unit
GPS Annunciator
KAP150 Autopilot
KG258 A/H
King KG-107 Directional Gyro
King KG258 Attitude Indicator
King Ki525i HSI
King KX-155 NAV COM
KMA24 audio panel
KN64 DME
Light control box
MCcauly propellor governor
Magnaflite starter
Main wheel covers
Nav/com and ADF
Radio blower
Remote Annunciator Control Unit
Slick magneto
Stall & Gear warning
Strobe generators
Terra altitude encoder
Trim jack screw
Turn Co-ordinator
Voltage Regulator
WX11 Stormscope

For details, prices and who to contact, go to the CLASSIFIEDS page.

Maintenance Matters

FAA AD: 2023-09-09

The FAA is adopting a new airworthiness directive (AD) for turbocharged, reciprocating engine-powered airplanes and helicopters and turbocharged, reciprocating engines with a certain v-band coupling installed. This AD was prompted by multiple failures of spot-welded, multi-segment v-band couplings at the tailpipe to the turbocharger exhaust housing flange.

Models:

1. Small Airplane| Mooney International Corporation| M20J
2. Small Airplane| Mooney International Corporation| M20K
3. Small Airplane| Mooney International Corporation| M20M
4. Small Airplane| Mooney International Corporation| M20TN
5. Small Airplane| Mooney International Corporation| M20V

This list is far from extensive and is only an extract.. Please check the actual AD for definitive information. (Despite the above statement, the AD does not appear top affect only turbocharged models.)

Mooney special tools

AMPA has purchased a number of Mooney specific tools that are available for loan to members. The tools that we have available include the aileron, elevator and rudder travel boards for all Mooney models, over-centre tools for the nose and main landing gear, and tools to replace the landing gear donuts.

The equipment is owned by AMPA but is stored by Smartair in Albury; Smartair also manage the loan of the tools to members.

The tools are available to AMPA members only. There is no charge for their use if returned in good order within the specified time but a late fee will be charged for every day of late return; the maximum late fee will equal the replacement cost of the equipment. Members must agree not to make copies (or allow copies to be made), to pay freight both ways, in advance, and to ship the tools back to Smartair after a maximum of 5 working days from receipt.

The full terms and conditions of use are available on the web site.

To borrow any of the above equipment, contact Pieter Mol at Smartair in Albury by telephone (02 6021 2929) or email (pieter.mol@smartair.com.au).

The AMPA tools are:

P/N 030003-200	Aileron/flap travel board
P/N 030005-100	Rudder travel board
P/N 030004-100	Elevator travel board (M20C, D, E, F, G, J)
P/N 030004-503	Elevator travel board (M20K, L, M, R, S)
P/N 030012-100	MLG spring installation tool
P/N 030011-001	MLG shock disc tool
P/N 030038-501	MLG disc changer tool
P/N 030035-503	Rudder spring tool

P/N 030011-100	GSE MLG biscuit changer
P/N 030008-100	Nose gear over-centre tool