

Submission of John Raby OAM

ATSB Report 2017- 069
Collision with terrain involving SOCATA TB-10 Tobago, VH-YTM

Introduction:

The most important aim of accident and incident investigation conducted by an International Civil Aviation Organisation, (ICAO) state must always be the prevention of a situation where accidents of the type being studied are repeated. There must therefore be a sense of tragic failure for safety investigators world wide when particular types of occurrences continue to recur and form such a large proportion of fatal aircraft accidents.

Perhaps it was this overriding sense of failure which lead the Australian Transport Safety Bureau, (ATSB), to depart from best practice and try so desperately to lay the causal factors at the door of a non aviation organisation such as the Angel Flight charity. To manipulate the statistical data in the way they have in this report must be seen as a desperate attempt to lay blame rather than to advance the search for answers which could lead to an improvement in the accident record and save lives.

The Report:

This seeming deliberate attempt to paint a very negative picture of Community Service Flights, (CSF) is highlighted by the inclusion in the report of an incident involving a CSF flight under the general heading of related occurrences.

How an incident involving a failure to adhere to an air traffic clearance became associated with a discussion of Visual Flight Rules, (VFR) flights continuing into Instrument Metrological Conditions, (IMC) is a mystery. This flawed approach is then repeated in the later analysis of incident data which has no relevance to the important issues surrounding this and other related accidents..

The most significant failures of the ATSB process shown in this report is to place too much reliance on flawed statistical analysis of manipulated data and to have ignored the very real concerns this and similar accidents and incidents should have raised as to the quality and completeness of private pilot training and education.

The Issues:

There appears to be a consistent trend of a lack of proper preflight preparation and reasonable decision making in this category of accident and incident.

At the outset it should have been acknowledged in the report that the activity, that is private flying over longer distances, does not pose a significant risk to the population as a whole. When compared to road transport it is a very safe activity indulged in by a very small minority of the population. Even in a country as vast and as well suited to aviation as Australia. It is this very low exposure to risk which makes every general aviation accident of such interest.

The ATSB should know and acknowledge that using the statistical methods it has with such a tiny sample base is full of problems. Having thankfully suffered only two accidents since the inception of the charity some sixteen years ago and having facilitated over forty seven thousand flights the service the charity facilitates should rightly be seen as a real success and celebrated rather than castigated.

The real value the ATSB could have added to the discussion of this type of accident would have been a much deeper analysis of the factors which lead normally sane people to deliberately expose themselves and others to the very real hazards of their reckless decision making. This issue is not an easy one to come to terms with because it involves normally rational people acting outside the square. All the written warnings, well meaning studies of the human factors and technical developments in aircraft equipment have failed in the end to turn a go decision into a no go.

The poor decision making and lack of skill involved in this fatal accident and the other, yes there have only been two, fatal accidents to aircraft flying Angel Flight charity flights has been well documented. The causal factors are not however unique to Community Service Flights, (CSF).

Just for a moment look back on the period since the first fatal accident to an aircraft involved in CSF. There have been to my knowledge at least another six similar fatal accidents to general aviation aircraft in Australia which have been the subject of ATSB reports.

- 1) 15 August 2011 Piper PA28-180 31 kilometres North of Horsham Victoria (CSF)
- 2) 7 November 2015 Airbus Helicopters EC135TI Cooranbong N.S.W. (Private)
- 3) 29 January 2016 Piper PA28-235 33 kilometres South East of Avalon Victoria (Private)
- 4) 7 April 2016 Robertson Helicopter R22 BETA (Private)
- 5) 16 June 2017 Cessna 172 North West of Ballina N.S.W. (Private)
- 6) 28 June 2017 Socata TB10 Mt. Gambier South Australia. (CSF)
- 7) 4 February 2019 Pilatus Britten Norman BN-2A-20 Tasmania (Charter)

Another accident in the United States has chilling similarities to the Mt. Gambier accident.

- 8) 24 December 2017 Cessna C340 Bartow Florida USA. (Private)

Note: The above list is from personal knowledge and therefore not exhaustive and does not include several serious non fatal incidents in Australia.

Reading the ATSB and NTSB reports of these accidents reveals similar human frailties leading to tragedy. That is a single minded focus on completing the task despite all indications pointing to challenges well beyond the capabilities of the pilots.

Importantly although the single minded focus was identical the factors underlying the tragically poor decision making were different. For example:

A desire to assist others in need.

To reach a holiday destination.

To complete planned flight which had been much delayed in instrument flight conditions.

To meet a maintenance requirement within the regulations.

To complete a flight which if not undertaken would result in stranded passengers.

These reports are a very good indication as to why the attempt by the ATSB in the reference report to place such weight on the fact that the Mt. Gambier accident occurred to a charity flight is so unreasonable.

The report does regurgitate some of the old standard academic reports on human factors but the sad fact is these reports whilst illuminating some of the human failings and limitations still do nothing of a practical nature to turn things around or even lower the number of events.

There are issues which could possibly be more closely examined:

Are some inexperienced and non qualified pilots gaining false confidence from the wide spread use of “home” flight simulators?

As is well explained in the report the only practical way of exposing pilots to all of the dangerous and misleading body sensations associated with flight by reference to instruments alone is in an aircraft.

Should there be less reliance placed on the use of simulators when training and testing inexperienced pilots?

Flight simulators are very important devices for more advanced training and examining of already experienced pilots. However they have very real limitations in training pilots who have not been exposed to real world flight sensations. Even pilots with many thousands of hours of actual instrument flying experience occasionally suffer from false illusions. They survive because they are able to recognise the sensation and rely on instrument indications alone.

Are pilots trained and then qualified in aircraft only fitted with new generation flight displays able to form a complete “mind” picture of their spatial position and flight path trends?

The inability of the flight crew of Air France flight 447 to safely control their aircraft by reference to the basic standby flight instruments has never really been addressed effectively.

Does the syllabus and practical training for the Private Pilots Licence adequately prepare pilots for the particular practices which are necessary for the safe completion of longer travel flights?

In a recent opinion The European Aviation Safety Authority, (EASA) addresses the issue of expanding Instrument Flight Rules, (IFR) training for general aviation pilots. Importantly in my opinion it addresses the very different challengers involved in longer travel flights.

The opinion highlights the difficulty in reliably completing a long distance flight in Visual Meteorological Conditions, (VMC) and the danger of changing weather conditions causing a VFR flight to stray into Instrument Meteorological Conditions, (IMC). Often with tragic results.

Ironically, as the EASA opinion highlights, if a long flight is to be planned in strictly VMC it can often be more challenging and involve more contingency provisions than if the same flight had been conducted to the requirements of IFR. This is not to say VFR flying is inherently unsafe but rather travel flights conducted strictly to the VFR can be problematic and if conducted professionally and safely will often result in a diversion or risk not being completed at all. It is in the latter circumstance that the poor decision making can enter the equation with sometimes tragic results.

Quality and value of ATSB reports.

As stated earlier the real value in the aircraft accident and incident investigation and report process is the educational aspect for others involved in the industry.

Report AO-2017-061 reinforces the difficulties of planning and executing VFR travel flights.

In this report there is a detailed analysis of the weather reports and forecasts which were relevant to and should have formed a critical part of the pilot's preparation for the planned flight.

Under the heading, *Decision to depart Southport*, at page 13 of the report is the following passage.

*Neither the Area 20 forecast nor the Ballina Aerodrome Forecast (TAF) **precluded** a visual flight rules (VFR) flight from Southport to Ballina on the day of the accident. (My highlighting)*

And then:

Both forecasts, however, indicated the possibility of encountering areas of fog, cloud and rain, in which the visibility would reduce below that required for VFR flight. Additionally, the Ballina TAF intermittent (INTER) conditions indicated that for multiple periods of up to 30 minutes duration, the visibility at the aerodrome would be below that required for landing under the VFR.

The actual forecasts for this flight included the following significant weather prediction:

Fog, mist and showers of rain with visibility forecast to be 300 meters in fog, 2,000 meters in mist and 4,000 meters in showers of rain.

The visibility required for VFR flight is 5,000 meters.

For an official accident report to have considered all of the circumstances and then in light of the forecasts to say that they did not preclude visual flight beggars belief.

Pilots are often criticised for having a seeming morose fascination with accident reports. The reasons for this heightened interest is so that lessons in the reports can be applied to arm one against making similar mistakes. Imagine the inexperienced pilot trying to fathom how the flight described in report AO-2017-061 could have been safely completed in VMC.

Why was the pilot so focused on the task of delivering the aircraft to Ballina?

To quote the ATSB report:

The reason for the flight on 16 June 2017 was to deliver the aircraft to a maintenance facility, as the aircraft's maintenance release was due to expire the following day. The pilot initially had the aircraft maintenance booked for Tuesday 13 June 2017. The pilot then rescheduled the booking twice that week based on the forecast weather conditions. The final booking was scheduled for Friday 16 June 2017. During the course of that week, the pilot had downloaded weather forecasts through his National Aeronautical Information Processing System (NAIPS) account a number of times. Additionally, the pilot had been in contact with the maintenance provider in Ballina to check the weather conditions and reschedule the bookings. The last call the pilot made to the maintenance provider was on Wednesday 14 June 2017. During that call, the maintenance provider told the pilot he could get a special flight permit to allow him to fly the aircraft to Ballina after the expiration of the maintenance release.

To obtain a special flight permit, (SFP) the pilot would need to have applied to the CASA. The CASA process is detailed in their manuals as including the following:

The delegate approving a SFP:

*Creates a file for the particular aircraft.
Raises a cost estimate.*

Records the following:

Registration mark

Aircraft serial number

Details of the registered operator

Details of the applicant if different to the operator

Authorised person's unique job number

Date the application was received.

Prior to continuing with the application ensure the payment has been received in full.

The cost can range from \$100 to \$190 per hour of delegate time. All to move a small Cessna to its maintenance base a few days after the due date due to poor weather conditions on the chosen day. Perhaps the urgency the pilot felt on the tragic day was influenced by a complex and costly process. We will never know.

What we do know is that the ATSB considers operational pressures of this type to be a factor in many accidents and incidents involving poor decision making.

In this particular case the ATSB made no formal safety recommendation.

Suggested Safety Recommendation:

In a publication titled "For Safety's Sake Don't Push It" The ATSB recently addressed the major issue of VFR flights continuing into IMC and acknowledged the true magnitude of the problem.

The following paragraph from the publication illustrates the distortion in the statistical data in the report into the Mount Gambier accident and the single minded focus the ATSB has had on CSF.

ATSB records show 101 occurrences of VFR pilots inadvertently flying into IMC in Australian airspace in the ten years from 1 July 2009 to 30 June 2019. Nine of these occurrences resulted in accidents, resulting in 21 deaths.

Ten per year or nearly one a month and twenty one fatalities in ten years!

Given the proven lack of effectiveness of the large volume of academic studies and subsequent educational programs it is suggested the ATSB could have spent their time more productively in considering the overall training of, in particular, private pilots. In particular it could have addressed the current Australian syllabus and examining process for the issue of private unrestricted privileges.

This study could have considered the work being done in Europe by EASA mentioned above.

The reality is that most private aircraft suitable for use in longer travel flights meet the equipment requirements for IFR flight. It is the human element which is the critical flight risk and this is primarily due to a lack of understanding of the challenges and a lack of piloting skill.

In my opinion there is sufficient evidence to indicate that more **in aircraft** exposure to IMC either real or simulated and the consequential control and human performance challenges would better equip pilots. More emphasis should also be placed on the operational challenges posed by planning longer travel flights under the VFR.

Summary:

In my view the ATSB has for reasons known only to itself decided to create doubt in the community as to the value and safety of community service flights. To do this it has used a tiny part of the data base which is not statistically significant in a very biased and selective manner.

It has done itself the industry and the community a disservice and missed an opportunity to add value to the consideration of the real challengers of conducting travel flights to the VFR. The truth is we are continuing to licence pilots both commercial and private who make fatally poor decisions regarding weather in particular and their own skills and capabilities in general.

The report should be withdrawn and the task given to a truly independent body or group who could honestly search for practical actions which could assist in reducing these type of aviation accidents.

A truly complete and unbiased investigative process could lead to really worthwhile and life saving recommendations and findings.

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