



# Missing aircraft, VH-WRT, GA-8 Airvan, Buckingham Bay, NT. 16 Oct 2008

The Australian Transport Safety Bureau (ATSB) is an operationally independent multi-modal Bureau within the Australian Government Department of Infrastructure, Transport, Regional Development and Local Government.

The ATSB is responsible for investigating accidents and other transport safety matters involving civil aviation, marine and rail operations in Australia that fall within Commonwealth jurisdiction.

The ATSB performs its functions in accordance with the provisions of the *Transport Safety Investigation Act 2003* and, where applicable, relevant international agreements.

ATSB investigations are independent of regulatory, operator or other external bodies. It is not the object of an investigation to determine blame or liability.

© Commonwealth of Australia 2008

This work is copyright. In the interests of enhancing the value of the information contained in this publication you may copy, download, display, print, reproduce and distribute this material in unaltered form (retaining this notice). However, copyright in the material obtained from non-Commonwealth agencies, private individuals or organisations, belongs to those agencies, individuals or organisations. Where you want to use their material you will need to contact them directly.

Subject to the provisions of the *Copyright Act 1968*, you must not make any other use of the material in this publication unless you have the permission of the Australian Transport Safety Bureau.

Please direct requests for further information or authorisation to:

Commonwealth Copyright  
 Administration, Copyright Law Branch  
 Attorney-General's Department  
 Robert Garran Offices  
 National Circuit  
 BARTON ACT 2600

[www.ag.gov.au/cca](http://www.ag.gov.au/cca)

Australian Transport Safety Bureau  
 PO Box 967, Civic Square ACT 2608  
 Australia  
 1800 020 616  
[www.atsb.gov.au](http://www.atsb.gov.au)

Released in accordance  
 with section 25 of the *Transport  
 Safety Investigation Act 2003*

INFRA-08361

## Abstract

On the morning of 16 October 2008, a Gippsland Aeronautics GA-8 Airvan, registered VH-WRT, being operated on a freight charter flight, was reported missing near Elcho Island, NT. Subsequently, items of wreckage from the aircraft were found in Buckingham Bay. The pilot, who was the sole occupant of the aircraft, was assumed to be fatally injured.

## FACTUAL INFORMATION

*The information contained in this preliminary report is derived from the initial investigation of the occurrence. Readers are cautioned that there is the possibility that new evidence may become available that alters the circumstances as depicted in the report.*

## History of flight

On 16 October 2008, the pilot of a Gippsland Aeronautics GA-8 Airvan aircraft, registered VH-WRT, was conducting a freight charter flight from Elcho Island, NT, under the visual flight rules. The aircraft, carrying a cargo consisting mainly of fuel in 20 L jerry cans, left Elcho Island Aerodrome between 0900 and 1000 Central Standard Time<sup>1</sup>. The planned flight was to four communities: MataMata (MTM), Muthamul (MUH), Nyinyikay (YAY), and Rurruwuy (RUR) (Figures 1 and 2).

Figure 1: General area of the intended flights



Figure 2: Location of communities



The pilot's intended first port of call and the initial track flown are both unknown. To reach these communities from Elcho Island, the pilot would have had to fly east from Elcho Island across Buckingham Bay, the Flinders Peninsula, and Arnhem Bay. In addition, the operator's procedures required pilots flying over water to remain within gliding distance of land and to cross Buckingham Bay at 4,500 ft or above when flying east.

At approximately 1330, a member of the community at Rurruwuy rang the operator's Elcho Island office because the aircraft had not arrived

1 The 24-hour clock is used in this report. Central Standard Time (CST) was Coordinated Universal Time (UTC) + 9.5 hours.

as expected. It was realised that the aircraft was by then overdue at Elcho Island as well and a search for the aircraft was initiated.

On 17 October 2008, items of wreckage were found in the south-western part of Buckingham Bay (Figure 3).

The weather on the morning of the accident was reported to have been fine. The maximum temperature that day in Nhulunbuy (Gove), approximately 130 km east of Elcho Island, was 30 °C.

**Figure 3: South-western part of Buckingham Bay**



### Pilot information

The pilot held a Commercial Pilot (Aeroplane) Licence, issued in June 2005. His Class 1 Medical Certificate was valid until February 2009.

On the basis of his flying logbook and the operator's records, the pilot had approximately 1,300 hours flight time, of which approximately 300 hours were in the GA-8 Airvan.

The pilot had been based at Elcho Island since April 2008. During that time, he had conducted passenger and freight charter flights in both the GA-8 Airvan and Cessna 206, and had flown regularly to the communities of MataMata, Muthamul, Nyinyikay, and Rurruwuy.

The pilot was free of duty on 13 and 14 October 2008. On 15 October 2008, the day before the accident, he was on duty for 10 hours, of which 3.8 were flight hours.

### Aircraft information

The aircraft was manufactured in Australia in February 2001. It was powered by a Lycoming IO-540-K1AS engine and fitted with a Hartzell constant-speed, two-bladed propeller. The aircraft was first registered in Australia on 9 February 2001, and was registered to the current owner on 15 May 2006. It had accumulated approximately 4,755.7 hours in service. The most recent maintenance was a 'Check 3'<sup>2</sup> conducted on 30 September 2008 at 4,705.6 hours in service. An inspection of the horizontal stabiliser, as required by Airworthiness Directive AD/GA8/5, was also carried out at the time and no defects were found.

The aircraft was last refuelled during the afternoon of 15 October 2008.

### Wreckage and accident site information

Items of wreckage were recovered from the south-western part of Buckingham Bay by parties from Elcho Island and by the Australian Customs Vessel 'Roebuck Bay'. This included the left main wheel, the nose wheel, nineteen 20 L jerry cans, six seat bases, one seat back, and miscellaneous cargo, including school stationery (Figures 4 to 6).

**Figure 4: Left main wheel**



<sup>2</sup> A 'Check 3' inspection, conducted every 200 flight hours, comprises an inspection of the engine, fuselage structure, landing gear, electrical system, and instruments.

Figure 5: Nose wheel



Figure 6: 20 L jerry cans



Fracture of the left main landing gear wheel (Figure 4) had occurred transversely through the welded transition between the stub axle and landing gear leg. The fracture surfaces were typical of a ductile shear mechanism, and their form was consistent with failure occurring under bending overstress conditions. The nose wheel yoke had separated from the oleo at the bolted connection between the two components. Both the left main wheel and the nose wheel components showed significant levels of corrosion and associated metal-loss that attested to their period of immersion in salt water.

Around half of the 20 L jerry cans recovered had ruptured in a manner consistent with their exposure to the abrupt hydraulic pressure effects created within the internal liquid, as the aircraft impacted the water (Figure 6).

### Marine search information

A target on the sea bed located by parties from Elcho Island using a side-scan sonar on the

western side of Buckingham Bay, just south of the direct track between Elcho Island Airport and MataMata, was at first thought to be the aircraft. NT Police divers searched this area, but found nothing at that site.

Subsequently, a systematic 6-day search was conducted by the NT Police and the Australian Transport Safety Bureau (ATSB) in the area around the suspected target mentioned above, as well as in the area west of the northern end of the Flinders Peninsula, and across Buckingham Bay along the possible outbound and return tracks it was believed the pilot would have been most likely to take (Figures 7 and 8).

Figure 7: Location of wreckage recovered and sighted, and a possible wreck target

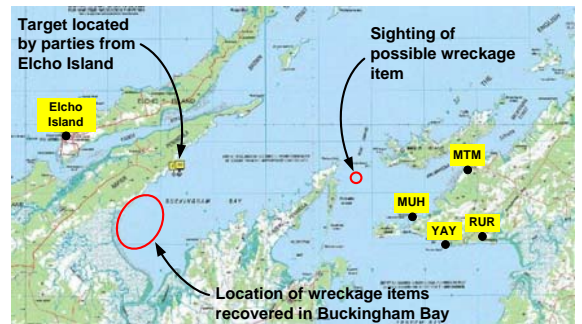
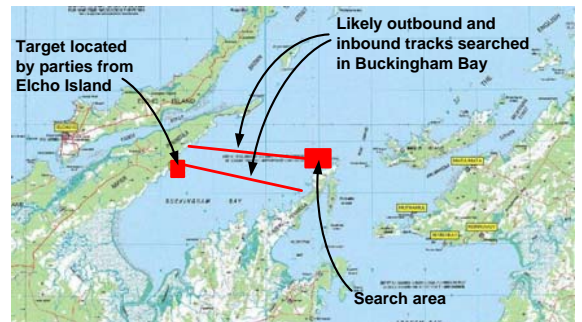


Figure 8: Location of NT Police and ATSB search effort



Despite the use of side-scan sonar, a Remotely Operated Underwater Vehicle (ROV), and police divers, the wreckage of VH-WRT was not located.

### FURTHER INVESTIGATION

The investigation is continuing and will include a review of:

- the aircraft's maintenance history
- the operator's policies and operating procedures
- the pilot's flying history.