

# **Aviation Safety Investigation Report 198201401**

**Bushby Mustang**

**3 July 1982**

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**Occurrence Number:** 198201401  
**Location:** Near Luddenham NSW  
**Date:** 3 July 1982  
**Highest Injury Level:** Fatal  
**Injuries:**

**Occurrence Type:** Accident  
**Time:** 1443

	Fatal	Serious	Minor	None
Crew	1	0	0	0
Ground	0	0	2	-
Passenger	1	0	0	0
<b>Total</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>

**Aircraft Details:** Bushby Mustang  
**Registration:** VH-MZO  
**Serial Number:**  
**Operation Type:** Pleasure  
**Damage Level:** Destroyed  
**Departure Point:** Bankstown NSW  
**Departure Time:** 1443  
**Destination:** Bankstown NSW

**Approved for Release:** 19th April, 1984

#### **Circumstances:**

The aircraft had been constructed by the pilot in his engineering workshop from plans supplied by the designer, Bushby Aircraft Incorporated of Minooka, Illinois, USA. During some stages of the construction the pilot had been assisted by Mr R.S. Howarth. The first flight of the aircraft had been achieved on 5 April 1982 and by the day of the accident some 50 hours had been flown, with Mr Waggott being the pilot on each occasion. The only known problems of significance that had been encountered during this period was wind noise and rattling associated, apparently, with the canopy. On 3 July 1982 the pilot had been carrying out adjustments to the wing root fillets, again apparently to reduce wind noise. The pilot was then joined by Mr Howarth and after boarding the aircraft the pilot advised Bankstown Tower that they would be proceeding to the Bankstown training area. The aircraft was cleared for take-off and the response to that clearance at 1433 was the last recorded transmission from the aircraft. The aircraft is not known to have been seen by any other persons until about 1508 when ground witnesses observed it about two and a half kilometres south-east of Luddenham, heading in a south-westerly direction. The witnesses reported that the engine noise sounded uneven and that the aircraft was rolling to the right. Other witnesses further along the flight path observed what they referred to as "confetti" floating down from the aircraft. It crossed the Luddenham - Bringelly road and as it passed over Vicary's Winery pieces of plexiglass, the cockpit canopy and the occupants headsets, glasses and caps fell to the ground. The aircraft continued in a south-westerly heading, descending toward open country in substantially a level attitude, then rolled to the right and impacted the ground in an inverted attitude near a house. Inspection of the wreckage found no defect or malfunction that would have affected the safety of the operation existed, except that the canopy had become detached in flight. Examination of the canopy revealed that it had not been manufactured in accordance with the aircraft designers plan. Different specification material had been used in the frame of the canopy and this had in turn been reduced in strength by the drilling of holes to allow the access to the nuts of the plexiglass attachment screws. The attachment of the canopy

keeper brackets was also altered so that only one screw, instead of the designers intended three, held brackets to the roller assembly. Also the canopy latch mechanism had been altered so that it did not provide positive restraint in a vertical direction. The aircraft designer indicated that the loss of the canopy in flight should not have affected the pilot's ability to safely control the aircraft. Marks on the occupants headsets showed that they had been struck by the canopy, and it was considered probable that the occupants had been incapacitated as the canopy detached. ((1))

**Significant Factors:**

1. The canopy had not been constructed in accordance with the designers specifications. The reason the pilot chose to modify the design could not be determined.
2. The canopy became detached in flight.
3. As the canopy separated from the aircraft it struck and probably incapacitated the occupants, resulting in an uncontrolled collision with the ground.