



AIRCRAFT ACCIDENT INVESTIGATION SUMMARY REPORT

Reference No.

SI/762/1023

Publication of this report is authorised by the Secretary under the provisions of Air Navigation Regulations 283 (1)

1. LOCATION OF OCCURRENCE

32 kilometres east-south-east of Scone, New South Wales	Height a.m.s.l. 3300 feet	Date 13.5.76	Time (Local) 1620 hours	Zone EST
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2. THE AIRCRAFT

Make and Model Beech A23A 'Musketeer'	Registration VH-MJA	Certificate of Airworthiness Valid from 17.9.68 to 16.9.77
Certificate of Registration issued to G. Philpott, 23 Huntingdale Avenue, Miranda, New South Wales.	Operator W. L. Mills, 21 Murray Island, Sylvania Waters, New South Wales.	Degree of damage to aircraft Destroyed
		Other property damaged Nil
Defects discovered Failure of one propeller blade due to the initiation and growth of a fatigue crack followed by overload. Although the point of origin of the fatigue crack was obliterated by impact damage it is likely that corrosion pitting on the front face of the blade contributed to the crack initiation.		

3. THE FLIGHT

Last or intended departure point Sydney Harbour	Time of departure 1419 hours	Next point of intended landing Bankstown	Purpose of flight Travel	Class of operation Private
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4. THE CREW

	Status	Age	Class of licence	Hours on type	Total hours	Degree of injury
Walter Lewis MILLS	Pilot	55	Private	76	1250	Fatal

5. OTHER PERSONS (All passengers and persons injured on ground)

Name	Status	Degree of injury	Name	Status	Degree of injury

6. RELEVANT EVENTS

The pilot held a Class Three instrument rating and the aircraft was equipped for flight under the instrument flight rules (IFR). The flight plan submitted by the pilot indicated IFR category for the flight but, when south of Taree, the aircraft would be operated under visual flight rules (VFR) procedures and proceed coastal. At 1532 hours the pilot established communication with Sydney and reported over Taree. After being advised that a VFR clearance through the Williamtown Control Zone would not be available because of heavy rain, the pilot obtained a clearance to proceed IFR via Craven and Singleton at an altitude of 7000 feet. At 1605 hours he reported his position as Craven. Ten minutes later he transmitted a 'Mayday' call and advised 'I've lost my prop' and a few seconds later 'I've lost my engine'. He advised that he was flying in cloud at a speed of 70 knots. Weather information was passed to him by the pilot of another aircraft in the area and at 1618 hours he advised that he was at 4000 feet and 'I can just see the tree tops now'. At 1619 hours he advised 'I'm pretty close to the trees now' and at 1619.08 hours he transmitted the call sign of his aircraft. No further communications were received.

The aircraft crashed in densely timbered mountainous terrain on a steeply sloping ridge. Detailed examination of the wreckage revealed that about one half of one of the two propeller blades had separated from the aircraft in flight. As a result of the vibration which then occurred, the engine mountings had fractured and the dislodged engine had been cradled within the cowling at the time of impact. VH-MJA was fitted with a Continental IO-346 engine together with a Sensenich 74DC fixed pitch metal propeller. At the time of the accident it was mandatory for all types of Sensenich fixed pitch metal propellers to be reconditioned at intervals not exceeding 2000 hours and the propeller fitted to VH-MJA had last been reconditioned 1281 operating hours prior to the accident. The manufacturer recommended a time between reconditioning of 500 hours for propellers associated with this specific propeller/engine combination. The propeller repair manual of the manufacturer states that, whenever possible, propellers should be re-anodised following reconditioning but this was not mandatory and had not been done at the last reconditioning. Airworthiness Directives subsequently issued require propellers of this type to be reconditioned and re-anodised at intervals not exceeding 1000 hours and this requirement has been endorsed by the manufacturer.

7. OPINION AS TO CAUSE

The cause of the accident was a total loss of propulsive power, resulting from in-flight separation of a substantial portion of one propeller blade, in a position from which a successful forced landing could not be carried out. It is probable that the specified period between reconditioning of the propeller and the reconditioning procedures did not provide adequate protection against the development of fatigue cracking.

Approved for
publication(I. M. Leslie)
Delegate of the SecretaryDate
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