

**Aviation Safety Investigation Report  
199501985**

**Cessna Aircraft Company  
Cutlass  
Swearingen Aviation Corp  
Metro 2**

**28 June 1995**

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According to the pilot, the forecast cloud tops were 7000 ft. He initially climbed to 8,000 ft but, to remain clear of cloud before reaching Wee Jasper, he climbed firstly to 10,000 ft and then to 11,500 ft. Rather than continue climbing to 12,000 ft (without oxygen) to avoid cloud, he elected to divert from Popla to Wagga and descend to the lowest safe altitude of 4,500 ft. During the descent, the airframe and the propeller accumulated a lot of ice. Widespread icing conditions were also reported in the Wagga area above 5,000 ft.

When the pilot of VH-LDK requested a clearance to Wagga from flight service, he was advised twice to remain outside controlled airspace (OCTA) and he acknowledged those instructions. When VH-LDK was transferred to Wagga tower frequency, 37 nm east of Wagga, the tower controller also instructed the pilot to remain OCTA. However, the aircraft proceeded towards Wagga entering controlled airspace (CTA) and the Wagga control zone (CTR) until Wagga tower became aware of its position when it was 13 miles from the aerodrome. There is no radar at Wagga.

According to the pilot, he had advised Melbourne Flight Service of the icing problems but he did not advise Wagga Tower. After the incident, he remembered that he had been instructed to remain OCTA.

During the descent, the diversion and the penetration of CTA/ CTR, the aircraft was in cloud. The pilot advised that he became so preoccupied with the severe inflight icing problems that he thought that Wagga Tower had issued an onwards clearance. The problems included engine vibrations, never before experienced by the pilot, as the propeller shed ice.

At the time of the penetration VH-WGV, a regular public transport aircraft was conducting an instrument approach at Wagga. On recognition of the potential conflict, the controller instructed VH-WGV to climb to 5,500 and enter the holding pattern. It was estimated that the separation reduced to 500 ft vertical and 5 to 8 miles head on.

### Significant Factors

The following factors were considered relevant to the development of the incident:

1. The pilot encountered more cloud than forecast.
  2. The aircraft was not de-icing equipped.
  3. The pilot elected to continue rather than turn back.
  4. The aircraft accumulated ice on the airframe and the propeller.
  5. The pilot became preoccupied with the icing problem which included vibration as the propeller shed ice.
  6. While preoccupied with the icing problem the pilot erroneously thought that a clearance had been issued to proceed to Wagga.
  7. Without radar coverage at Wagga, the tower controller was unaware of the penetration until the pilot made a radio transmission 13 miles from Wagga.
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