

**Aviation Safety Investigation Report
198802376**

Mooney 20J

25 June 1988

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NOTE: All air safety occurrences reported to the ATSB are categorised and recorded. For a detailed explanation on Category definitions please refer to the ATSB website at www.atsb.gov.au.

Occurrence Number: 198802376
Location: 14 km NE Calga NSW
Date: 25 June 1988
Highest Injury Level: Nil
Injuries:

Occurrence Type: Accident
Time: 1328

	Fatal	Serious	Minor	None
Crew	0	0	1	1
Ground	0	0	0	-
Passenger	0	0	0	1
Total	0	0	0	2

Aircraft Details: Mooney 20J
Registration: VH-KEC
Serial Number: 24-1266
Operation Type: Private
Damage Level: Substantial
Departure Point: Bankstown NSW
Departure Time: 1308
Destination: Archerfield Qld

Approved for Release: 8 September 1988

Circumstances:

The aircraft was on the first flight since the completion of a 100 hourly maintenance inspection. The pilot reported that the engine oil pressure decreased to an unsafe level, 16 minutes into the flight, so he carried out a precautionary landing on a short disused strip. Towards the end of the landing roll, the pilot attempted to groundloop the aircraft to avoid rolling off the end of the strip. During the groundloop, the right main gear collapsed and the rear fuselage was distorted. The investigation revealed that one of the nuts securing the vacuum pump was loose and the gasket had failed. The loose nut had allowed engine oil under pressure, from an adjacent oil gallery, to force past the gasket and pump overboard. The vacuum pump had been fitted during the last maintenance inspection and a gasket of incorrect material had been fitted. The current Visual Terminal Chart for the area shows an aerodrome landmark at the location of the incident. This strip did not meet the Authorised Landing Area standards and the identifier on the chart clearly indicated that the status and serviceability of the strip were unknown. The surface condition and length of the strip were unsuitable for a safe precautionary landing, but the pilot had no means of ascertaining this prior to touchdown. The presence of the symbol on the map may have suggested to the pilot that there was no need to look for a more suitable landing area.

Significant Factors:

It was considered that the following factors were relevant to the development of the accident

1. Maintenance personnel had used unsatisfactory gasket material, and had not adequately secured the vacuum pump.
2. Engine oil was lost overboard, leading to low oil pressure.

3. The strip selected by the pilot was unsuitable for a safe landing. The pilot had no method of determining the serviceability of the strip prior to the attempted landing.

Reccomendations:

It is recommended that the Civil Aviation Authority publish material to remind all pilots that the broken circle aerodrome identifier is an aerodrome landmark only. The status and serviceability of the aerodrome or strip so marked is unknown. It is further recommended that the Civil Aviation Authority gives consideration to publishing the relevant legend of symbols on Visual Terminal Charts, rather than on a separate sheet, in order to increase pilot awareness of the meaning of the various symbols.