

**Aviation Safety Investigation Report
198702393**

Mooney M20J

11 March 1987

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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: 198702393
Location: Bankstown NSW
Date: 11 March 1987
Highest Injury Level: Nil
Injuries:

Occurrence Type: Accident

Time: 1800 approx

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

Aircraft Details: Mooney M20J
Registration: VH-UDD
Serial Number:
Operation Type: Aerial Work (Instructional Check)
Damage Level: Substantial
Departure Point: Hoxton Park NSW
Departure Time: 1800 approx
Destination: Hoxton Park NSW

Approved for Release: December 3rd 1987

Circumstances:

As part of a refresher check on the aircraft, the instructor required the pilot to use the manual system for lowering the landing gear. After turning the crank handle the recommended number of turns the gear down light did not illuminate. The pilot continued to rotate the crank handle a few more turns and a loud bang was heard, following which there was little resistance to crank handle movement. However, the gear down light still did not illuminate although the visual gear position indicator in the cockpit did indicate that the gear was in the down position. The gear actuator circuit breaker was reset and the gear selected up; the gear did not retract but the gear unsafe light illuminated. All further attempts to obtain a gear down light were unsuccessful. Observations made from another aircraft and by persons on the ground indicated that the gear was down and locked. The aircraft was diverted to Bankstown and the gear collapsed immediately after touchdown. A fault in the gear indicating system prevented illumination of the gear down light when the gear reached the down and locked position on the initial manual extension. When the crank handle was wound further, an overload failure of the actuator housing occurred. The gear was unlocked when the up selection was made but the damaged actuator prevented either retraction or safe extension. The actuator has a vital function in retaining the gear in the down and locked position as it pre-loads the landing gear braces in an overcentre position. Once the actuator was damaged, gear collapse on landing was inevitable.