

**Aircraft type and registration:** Miles M100 Student G-MIOO (light single engined fixed wing aircraft)

**Year of Manufacture:** 1957

**Date and time (GMT):** 24 August 1985 at 1443 hrs

**Location:** Duxford Airfield, Cambridge

**Type of flight:** Private (pleasure)

**Persons on board:** Crew — 1                      Passengers — None

**Injuries:** Crew — Minor                      Passengers — N/A

**Nature of damage:** Substantial damage to nose and cockpit section. Left hand wing cover stressed and left hand tail surfaces damaged. Right wing torn off.

**Commander's Licence:** Airline Transport Pilot's Licence

**Commander's Age:** 43 years

**Commander's Total Flying Experience:** 12,000 hours (of which about 20 hours were on type)

**Information Source:** Aircraft Accident Report form submitted by the pilot.

The aircraft was a prototype that had recently been refurbished. During the morning of 24 August 1985 the pilot had flown the aircraft in company with the test pilot who had been involved in its development flying. The test pilot had assessed the handling characteristics as being substantially the same as he had found them originally. At 1443 hours GMT the pilot, now solo, began his take-off on runway 24. He reports a normal spool up of the engine and acceleration of the aircraft. Shortly after becoming airborne he selected the landing gear up. At a height of less than 50 feet the engine failed and ran down. The pilot selected the landing gear down whilst maintaining the aircraft attitude and allowing the slight sink to develop.

The aircraft struck the grass area beyond the threshold of runway 06 in a slight nose down and right banked attitude. The right hand wing was torn off and the aircraft continued to ground loop. It stopped facing the direction from which it had come and between the extended lines of the concrete and grass runways.

There was a small post crash fire which was quickly extinguished by the airfield fire service who arrived at the scene within two minutes, having been alerted by the AFISO. It is believed that the engine continued to rotate for a short while after the impact.

The pilot was restrained by his shoulder harness but was rendered unconscious by a blow near his left eye caused by a cockpit accelerometer that had become detached from the instrument panel.

Initial examination of the engine and wreckage revealed that the engine had suffered a failure of the turbine disc. The turbine blades had been reduced by about one third of their length

having been subjected to excessive temperature. Furthermore, the engine intake ducting on top of the fuselage and behind the cockpit had collapsed. It was not possible to determine whether this had occurred prior to the impact or if it was caused during impact. In either instance it would have resulted in the engine being overfuelled thus causing high temperatures in the turbine area.