No: 11/84 **Ref: EW/C884/01**

Aircraft type and registration:	Piper PA18 Super Cub G-BHUF (light single-engined, fixed wing aircraft)
Year of Manufacture:	1979
Date and time (GMT):	21 August 1984 at 1215 hrs
Location:	Dunstable Downs, Bedfordshire
Type of flight:	Glider towing
Persons on board:	Crew — 1 Passengers — Nil
Injuries:	Crew — 1 (fatal) Passengers — N/A
Nature of damage:	Aircraft destroyed by impact and fire
Commander's Licence:	Private Pilot's Licence
Commander's Age:	50 years
Commander's total flying experience:	309 hours (of which 216 were on type)
Information Source:	AIB Field Investigation.

The aircraft took off towards Dunstable Downs towing a Schleicher ASK18 glider. The wind was from the south-east, blowing off the Downs at 15 to 18 kts, gusting to 22 kts. There was broken thermal activity, and there was turbulence in the lee of the Downs. Shortly after take-off, the combination completed a 90° turn to the right. Eye witnesses then saw the glider climb to an unusually high position behind the tug, and the tail of the tug was seen to rise. The tug then pitched down very quickly, dived steeply to the ground from about 200 feet and caught fire. The glider made a successful emergency landing close to the point where the combination had taken off. After the accident, the tow rope was found to have parted some 30 metres (99 feet) behind the tug. The tug end of the rope was found at the point of impact and the glider end, 9 metres (30 feet) from the point of impact.

The glider pilot described how the tow had been normal until the combination had completed the 90° turn, when severe turbulence was encountered. He was unsure of whether his glider was carried upwards or the tug was dropped, but he found himself in a high position relative to the tug, which was lost to view below the nose of his glider. Before he had time to release the tow rope he felt a sharp tug and realised that his glider had separated from the tug. He had no recollection of releasing the tow rope.

Examination of the aircraft wreckage and the engine did not reveal any evidence of a pre-impact failure. The aerotow rope failure was caused by an overload in tension and it was observed that no weak link was fitted. The remains of the rope were tested and the breaking strain was found to be approximately 1228 lbs.

There was no evidence of any medical condition of the pilot that could have contributed to the accident.

Six previous accidents have been reported in the last 12 years when an upward pull from a glider tow rope had pitched down the nose of the towing aircraft. Two of these accidents were fatal to the tug pilot and one to the glider pilot. There is evidence that other similar incidents have occurred, but these have been at heights sufficient for the tug to recover from the upset without damage. Following the two previous fatal accidents in 1978, the British Gliding Association introduced certain recommended practices for gliding clubs concerning a lower tow position, a minimum length of 45.7 metres (150 feet) for tow ropes and the easy accessibility of glider release handles in towing aircraft. Written procedures for tug pilots at the London Gliding Club include a warning that the glider release handle must be pulled if the glider prevents control of the tug.