

ACCIDENT

Aircraft Type and Registration:	Miles M65 Gemini 1A, G-AKHP	
No & Type of Engines:	2 Blackburn Cirrus Minor II piston engines	
Year of Manufacture:	1947	
Date & Time (UTC):	30 July 2007 at 1703 hrs	
Location:	Shoreham Airfield, Sussex	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - 1
Injuries:	Crew - None	Passengers - None
Nature of Damage:	Damage to rudder of adjacent aircraft	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	N/K	
Commander's Flying Experience:	2,000 hours (of which 0 were on type) Last 90 days - Nil Last 28 days - Nil	
Information Source:	Aircraft Accident Report Form submitted by the pilot and additional AAIB inquiries	

Synopsis

Whilst taxiing away from the fuel pumps, the wheel brakes became ineffective. In an attempt to stop the aircraft using the parking brake lever, the lever failed. Despite shutting down both engines, the aircraft rolled forward and collided with the tail of a parked Tiger Moth, causing damage to its rudder.

Circumstances of the accident

The aircraft had recently been acquired by the owner. His intention was to conduct a familiarisation flight from Shoreham to Little Staughton with a passenger, who had approximately 20 hours experience on type.

After starting the engines the aircraft was taxied to the

fuel pumps. Brake operation was normal during the taxi and held the aircraft with the engines running whilst waiting for another aircraft to complete refuelling. It then pulled forward and the engines were shut down as the aircraft was parked by the fuel pumps.

After refuelling, the engines were restarted, the brakes were released and the aircraft started to roll forward. At this point the pilot attempted to turn the aircraft to the right but found that it would not respond either to differential braking inputs or to the parking brake lever on the instrument panel. In the attempt to stop the aircraft, the lever fractured at its base and bent backwards. The pilot stopped the engines by switching off both magnetos, but

the aircraft continued to roll at a slow walking pace until it struck the tail of a Tiger Moth aircraft that was parked close to the taxiway. The Gemini was undamaged, but minor damage was caused to the Tiger Moth's rudder.

The Gemini aircraft is equipped with cable operated drum brakes; pulling the ratcheted parking brake lever applies the brakes to both main wheels, but via a mixing unit that also enables the brakes to be applied differentially using the rudder pedals. The owner of the aircraft initiated an investigation of the braking system after the incident

but found no failed component other than the operating lever. However, he considered that this failed as a result of excessive force applied during his increasingly frantic efforts to halt the aircraft.

The brake system rigging procedure is somewhat complex and the nature of the design is such, in the opinion of the owner, that a small rigging error can result in a disproportionate loss of braking effectiveness. After re-rigging the system, the brakes operated satisfactorily.