

ACCIDENT

Aircraft Type and Registration:	i) Scheibe SF27 glider, HGM ii) Schleicher ASW 19B glider, GDP
Serial Number:	i) 6017 ii) 19285
No & type of Engines:	i) None ii) None
Year of Manufacture:	i) 1965 ii) 1979
Date & Time (UTC):	2 October 2006 at 1515 hrs
Location:	Sutton Bank, North Yorkshire
Type of Flight:	i) Private ii) Private
Persons on Board:	i) Crew - 1 Passengers - None ii) Crew - 1 Passengers - None
Injuries:	i) Minor Passengers - N/A ii) Fatal Passengers - N/A
Nature of Damage:	i) Aircraft destroyed ii) Aircraft destroyed
Commander's Licence:	i) BGA Gliding Certificate ii) BGA Gliding Certificate
Commander's Age:	i) 50 years ii) 48 years
Commander's Flying Experience:	i) 733 hours Last 90 days – 20 hours Last 28 days – 5 hours ii) 280 hours Last 90 days – 10 hours Last 28 days – 1 hour
Information Source:	AAIB Field Investigation with BGA assistance

This bulletin contains facts which have been determined up to the time of issue. This information is published to inform the aviation industry and the public of the general circumstances of accidents and must necessarily be regarded as tentative and subject to alteration or correction if additional evidence becomes available.

History of the flight

The aircraft were both soaring in the vicinity of Sutton Bank, at a height above the airfield of about 1,500 ft, near to the base of cloud. The surviving (SF27) pilot recalled suddenly seeing the other aircraft coming towards him, very close, and attempted to manoeuvre to avoid collision. However, the two aircraft collided almost head on, each aircraft's canopy being severely damaged by the other aircraft's wing. The SF27 wing structure separated from the fuselage; one wing of the ASW 19B separated approximately half-way along its span. The ASW 19B and its pilot fell to the ground. The SF27 canopy and canopy frame were severely damaged in the collision, and the pilot abandoned the aircraft through a hole in the canopy. He deployed his parachute successfully, and landed safely amongst trees. His minor injuries were sustained in the collision and subsequent parachute landing.

ASW 19B canopy design

The clear canopy of the ASW 19B, and its glass-reinforced plastic (GRP) frame, are attached to the fuselage at the forward end by a pivoted lifting arm. Normal access to the cockpit is achieved by lifting the rear of the canopy. The canopy is locked in the closed position by two steel pins, in the rear of the canopy frame, which locate into recesses in the canopy surround. These pins are operated by push rods and levers on either side of the canopy frame. In an emergency the canopy may be jettisoned by pulling a knob on the instrument panel glare shield; this releases the forward edge of the canopy from the lifting arm. The process is completed by disengaging both of the rear locking pins, allowing the canopy to separate from the glider, although it may be possible for the canopy to be jettisoned without the rear pins being disengaged.

Initial investigation

A section of canopy of the ASW 19B was found at the top of Sutton Bank, and the rest of the canopy was found in close proximity to the glider's fuselage, some 500 m away. Examination of the glider confirmed that the jettison procedure had been initiated, but not completed, before impact with the ground. The forward section of the canopy frame had been released from the lifting arm prior to ground impact, but the canopy locking pins were in the 'LOCKED' position.

The ASW 19B pilot's harness had been unfastened prior to impact. It is unclear whether the pilot had exited his aircraft; his body was found close to the remains of his aircraft. He had sustained fatal impact injuries. His parachute had not been operated.

The investigation identified that this ASW 19B, GDP, had been fitted with electronic equipment, including a logger, GPS, and palmtop computer. These had been attached to the glare shield and canopy frame and were connected to other systems in the glider by a series of electric cables. These cables were secured to the canopy frame and to the structure behind the instrument panel with cable ties. Had the jettison sequence been completed, it is probable that the wiring to the components installed on the canopy frame and glare shield would have prevented the canopy from being successfully jettisoned, and the pilot would not have been able to leave the glider.

Previous Safety Action by the BGA

On a number of occasions, the BGA has reminded pilots of the need to ensure that nothing interferes with the correct operation of canopy jettison systems. This has included technical documentation and an article in the BGA's own '*Sailplane and Gliding*' magazine.

Safety Recommendations

AAIB discussion with experienced glider pilots and members of the BGA suggested that similar modifications may have been made to other gliders. Therefore, the following Safety Recommendations are made:

Safety Recommendation 2006-127

The British Gliding Association should advise glider pilots to incorporate, into their pre-flight checks, a check to ensure that no modifications have been made which would prevent the canopy being jettisoned in emergency.

Safety Recommendation 2006-128

The British Gliding Association should remind its inspectors of the provisions of BGA Glider Maintenance Schedule Task 8, specifically with regard to ensuring that any canopy may be fully jettisoned without restriction.