

**ACCIDENT**

<b>Aircraft Type and Registration:</b>	Grob G103 Twin Astir II, G-CKRH	
<b>No &amp; Type of Engines:</b>	No engines	
<b>Year of Manufacture:</b>	1981 (Serial no: 3596)	
<b>Date &amp; Time (UTC):</b>	15 October 2022 at 1217 hrs	
<b>Location:</b>	Seighford Airfield, Staffordshire	
<b>Type of Flight:</b>	Private	
<b>Persons on Board:</b>	Crew - 1	Passengers - None
<b>Injuries:</b>	Crew - 1 (Serious)	Passengers - N/A
<b>Nature of Damage:</b>	Fin detached from fuselage, damage to nose and forward cockpit	
<b>Commander's Licence:</b>	Sailplane Pilot Licence	
<b>Commander's Age:</b>	60 years	
<b>Commander's Flying Experience:</b>	181 hours (of which 45 were on type) Last 90 days - 9 hours Last 28 days - 1 hour	
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the pilot	

**Synopsis**

Shortly after the pilot abandoned a winch launch he reported suffering an impairment which prevented him from controlling the glider's flight path. The glider struck the ground in a series of heavy impacts, in which the pilot sustained a serious back injury and the glider was significantly damaged. The cause of the pilot's impairment was not established.

**History of the flight**

The pilot was flying the glider solo from the front seat. The winch launch began normally with the glider pitching into a nose-up attitude, however at approximately 200 ft agl the pilot heard a "loud bang" and assumed that the winch cable's weak link had broken. He lowered the nose and, observing dust from the cockpit floor rising into his vision due to the negative 'g', considered that his pitch-down was excessive. The winch cable released from the belly hook. The pilot recalled then becoming impaired, although he remained conscious throughout the remainder of the flight. The glider was observed to oscillate in pitch, with the airbrakes retracted, before it then struck the ground in a level attitude. The glider's speed was such that it then bounced into the air, followed by two further ground impacts during which the fin and tailplane broke away from the fuselage at the base of the fin. The pilot was seriously injured, sustaining compression fractures to two vertebrae in his spine.

## Aircraft information

The glider and winch equipment were examined after the accident. The glider's flying controls were observed to have been properly connected prior to the accident. The glider had recently been refurbished with new energy-absorbing seat cushions and seat harnesses, which remained intact. The winch cable assembly was in good condition with the correct strength weak link fitted and this was intact, indicating that the cable had either back-released<sup>1</sup> from the belly hook or been released by the pilot.

## Other information

The pilot reported falling ill with flu-like symptoms on 7 October, remaining unwell for the next four days. He felt well on the day of the accident, without any loss of balance or dizziness. The accident flight was his first since his recent illness. He reported that the paramedics who provided treatment at the accident site noted that his blood oxygen level was low, and he was given breathing oxygen for the next two days during his initial recovery in hospital.

The CAA Medical Department commented to the AAIB that the short time duration and low level of negative 'g' during the abandoned winch launch was insufficient to cause incapacitation. As the pilot had not reported any loss of balance or dizziness, it was considered unlikely that his vestibular system had been affected by his recent illness. The cause of the pilot's impairment during the accident flight was not established.

## Analysis

The accident occurred because the pilot became briefly impaired following his decision to abandon the winch launch. The impairment prevented the pilot from successfully controlling the glider's pitch attitude and speed, or from opening the airbrakes, leading to a series of heavy ground impacts which caused a serious back injury. The reason for the pilot's brief impairment was not established.

The noise from the winch cable may have been caused by the cable's ring moving under load within the jaw of the hook as the glider climbed through the wind gradient during the launch, as no abnormality was identified in the cable assembly.

## Conclusion

The accident occurred after the pilot became briefly impaired following abandonment of a winch launch. The impairment prevented him from controlling the glider's flight path, leading to a series of heavy ground impacts. The reason for the impairment was not established.

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### Footnote

<sup>1</sup> Glider winch launch hooks are fitted with a back-release safety mechanism to ensure the release of a winch cable from the glider, without any pilot command, when a significant rearward load acts on the cable. In the event of an abandoned winch launch, aerodynamic drag acting on the cable assembly is sufficient to cause the cable to back-release from the glider.