

Investigation Report

The Investigation Report was written in accordance with para 18 Law Relating to the Investigation into Accidents and Incidents Associated with the Operation of Civil Aircraft stating facts only.

Identification

Type of Occurrence:	Accident
Date:	21 July 2015
Location:	Gardelegen Special Airfield
Aircraft:	Glider
Manufacturer / Model:	Scheibe Flugzeugbau / Bergfalke IV
Injuries to Persons:	Two persons severely injured
Damage:	Aircraft severely damaged
Other Damage:	None
Information Source:	Investigation by BFU external experts for field investigation
State File Number:	BFU 15-0914-CX

Factual Information

History of the Flight

Approximately at 1700 hrs¹, the Bergfalke was winch launched at Gardelegen Special Airfield on runway 27. The pilot stated that once the glider was in approximately 10 m he released the towline because the pull had weakened.

Witnesses stated that the Bergfalke touched down hard twice on the runway. It yawed by 180° and came to a stop opposite the take-off direction.

The glider was severely damaged and the occupants suffered severe injuries.

Personnel Information

The 39-year-old pilot was a Dutch citizen. Since 14 October 1999 he was holding a sailplane licence issued by the Royal Netherlands Aeronautical Association (Koninklijke Nederlandse Vereniging voor Luchtvaart, KNNvL) carrying the take-off types winch launching and aerotow.

His class 2 medical certificate was valid until 3 July 2016.

His flying experience was about 300 hours by 850 take-offs. He had flown 2:42 hours and conducted five take-offs with the Bergfalke IV. The last flight of 1:37 hours he had conducted the day before.

Aircraft Information

The Bergfalke IV is a tandem two-seater glider in cantilever midwing configuration and composite construction, and is equipped with a fixed main landing gear and a cruciform tail. It has a wing span of 16.60 m and each wing has an extendible speed brake.

The aircraft was manufactured in 1972 and had a total operating time of 4,012:36 hours and 21,275 cycles. The last Airworthiness Review Certificate (ARC) was issued on 14 July 2015. Since then one flight of 1:37 hours had been conducted the day before.

¹ All times local, unless otherwise stated.

The aircraft had a Great Britain certificate of registration and was operated by a private owner.

Meteorological Information

The weather station at Hanover Airport (EDDV), about 130 km west, reported at 1520 UTC: Wind 290° with 18 kt, gusts of 25 kt, visibility of more than 10 km, and barometric air pressure (QNH) of 1,013 hPa.

The weather station at Berlin-Tegel Airport (EDDT), about 130 km east, reported at 1520 UTC: Wind 280° with 9 kt, visibility of more than 10 km, and QNH of 1,011 hPa.

Witnesses at Gardelegen Special Airfield reported wind 260° with 10 - 15 kt, and visibility of more than 10 km.

Aerodrome Information

Aerodrome elevation of Gardelegen Special Airfield (EDOC) is 230 ft (79 m). The special airfield is located about two kilometres west of Gardelegen city in Sachsen-Anhalt (Saxony-Anhalt).

It has one grass strip of 550 m length and 40 m width. Take-off and landing directions are 090°/270°. It is certified for airplanes with a Maximum Take-off Mass (MTOM) of up to 2 t + AN2, motor gliders, gliders, microlight airplanes, helicopters, balloons, and parachutes.

Wreckage and Impact Information

The accident site was located approximately 400 m from the launch site. The glider stood on the runway pointing in the opposite landing direction.

The bottom side of the front fuselage was bent inward up to the main wheel.



Damaged bottom fuselage

Photo: BFU

Both wings showed cracks of approximately 10 cm in length on the outer rim of the speed brake box. They were running approximately parallel to the aircraft longitudinal axis.

Except for these damages the aircraft seemed to be undamaged.

Further investigation revealed damages on the elevator control rods and the flap control which were attributed to the hard landing.

A ground mark was attributed to the ground impact of the aircraft.

Findings on the Launch Winch

The examination of the winch determined that one loop of the towline used before had slipped over the side of the cable drum. All cable drums were driven by one axis which the towline had blocked. The towline consisted of Ultra-High Molecular Weight Polyethylene (UHMWPE) fibres (Dyneema).

The two linked rings, the trace, and the weak link of the towline did not show any damage.

Additional Information

The club of the accident pilot was the guest club and conducted an airmen camp at Gardelegen Special Airfield. Therefore the guest club had transported the airplanes and winch to Gardelegen.

The launch winch had been manufactured by Busio, The Netherlands, which was mounted on a self-propelled lorry carriage.

The model used had six cable drums mounted next to each other on one axis.



Six cable drum launch winch Busio

Photo: BFU

Investigator in charge: Stefan Maser

Field investigation: Friedrich W. Kühne

Braunschweig, 12 October 2015

This investigation was conducted in accordance with the regulation (EU) No. 996/2010 of the European Parliament and of the Council of 20 October 2010 on the investigation and prevention of accidents and incidents in civil aviation and the Federal German Law relating to the investigation of accidents and incidents associated with the operation of civil aircraft (Flugunfall-Untersuchungs-Gesetz - FIUUG) of 26 August 1998.

According to the law the sole objective of the investigation shall be the prevention of future accidents and incidents. It is not the purpose of this activity to assign blame or liability or to establish claims.

Published by:

German Federal Bureau of
Aircraft Accident Investigation

Hermann-Blenk-Str. 16
38108 Braunschweig

Phone ++49 531 3548-0
Fax ++49 531 3548-246

Mail box@bfu-web.de
Internet www.bfu-web.de