



**Havarikommisjonen**  
Accident Investigation Board Denmark

**Summary 2021-170**



**Accident to OY-TFX (Grob G102 Club Astir III b) at Toelloese (EKTO) on 29-5-2021.**

**ISSUED OCTOBER 2021**

# INTRODUCTION

This summary reflects the opinion of the Danish Accident Investigation Board regarding the circumstances of the occurrence and its causes and consequences.

In accordance with the provisions of EU Regulation 996/2010, the Danish Air Navigation Act and pursuant to Annex 13 of the International Civil Aviation Convention, the safety investigation is of an exclusively technical and operational nature, and its objective is not the assignment of blame or liability.

The safety investigation was carried out without having necessarily used legal evidence procedures and with no other basic aim than preventing future accidents and serious incidents.

Consequently, any use of this summary for purposes other than preventing future accidents and serious incidents may lead to erroneous or misleading interpretations.

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**GENERAL**

State file number:	2021-171
UTC date:	29-5-2021
UTC time:	14:31
Occurrence class:	Accident
Location:	Toelloese (EKTO)
Injury level:	Fatal
Aircraft registration:	OY-TFX
Aircraft make/model:	Grob G102 Club Astir III b
Current flight rules:	Visual Flight Rules (VFR)
Operation type:	Private
Flight phase:	Approach
Aircraft category:	Glider
Last departure point:	Toelloese (EKTO)
Planned destination:	Toelloese (EKTO)
Aircraft damage:	Destroyed

**SYNOPSIS****Notification**

All time references in this bulletin are Coordinated Universal Time (UTC).

The Danish Police notified the Aviation Unit of the Danish Accident Investigation Board (AIB) of the accident on 29-5-2021 at 14:41 hours (hrs).

The Danish AIB notified the Danish Civil Aviation and Railway Authority (DCARA), the German Federal Bureau of Aircraft Accident Investigation (BFU), the European Aviation Safety Agency (EASA), and the Directorate-General for Mobility and Transport (DG MOVE) on 30-5-2021 at 13:00 hrs.

The BFU accredited a non-travelling representative to the AIB safety investigation.

**Summary**

Deviations from standards and procedures combined with a turn into tailwind at low altitude and at a low airspeed led to an unrecoverable spin.

This accident occurred in daylight and under Visual Meteorological Conditions (VMC).

## FACTUAL INFORMATION

### History of flight

The accident occurred during approach to runway 27 at Toelloese (EKTO).

Several witnesses observed the sequence of events.

At the briefing and before the flights of the day, involved personnel agreed that the para- and hanggliders used the northern part, and the gliders used the southern part of the runway.

Later that morning, the pilot arrived at the glider field and participated in the daily on ground duties.

Before the intended flight in the afternoon, the pilot performed a daily inspection of the glider. A person present at the glider field assisted the pilot in performing the flight control check. The flight control check did not give rise to remarks.

A student pilot under supervision of a flight instructor acted as wingtip holder.

During the pre-flight preparation, the flight instructor noticed that the pilot performed a cockpit check.

It was the perception of the flight instructor that the physical points of the cockpit check did not give rise to remarks.

The take-off roll went as expected. However, witnesses observed that the initial climb was excessively steep (in a cavalier manner).

Immediately, the launch wire went loose, and the winch stopped. Witnesses assumed that the launch weak link had broken.

The pilot lowered the nose of the glider allowing the airspeed to build up to a safe value.

Witnesses expected the glider to land straight ahead on the remaining available runway.

At a height above ground observed to be 70-70 meters (m), the glider turned northbound and continued the turn onto a right downwind leg to runway 27.

The glider continued on the downwind leg with an observed decreasing airspeed.

Turning for final approximately 30-40 m above ground at a low airspeed, witnesses observed a brief stall of the right wing. Subsequently, a full stall of the right wing resulted in a steep nose down attitude and an autorotation to the right.

At a nose down angle of approximately 30-40°, the glider impacted the ground.

Witnesses launched a rescue mission.

### Injuries to persons

<i>Injuries</i>	<i>Crew</i>	<i>Passengers</i>	<i>Others</i>
Fatal	1		
Serious			
Minor / None			

### Damage to aircraft

The ground impact destroyed the glider.



Photo 1. The wreckage in the farm field.

### Personal information

#### License and medical certificate

The pilot – male 70 years – was the holder of a European Union Sailplane Pilot License (SPL).

The medical certificate (Light Aircraft Pilot License (LAPL)) was valid until 5-7-2021.

The medical certificate held the lamination: “Correction for defective distant, intermediate and near vision (VML).”

#### Total flying experience

With reference to the logbook of the pilot.

	Latest 24 hours	Latest 90 days	Latest 12 months	Total
Hours, all types	0	00:06	00:17	279:47
Hours, this type	0	0	0	-
Number of landings	0	1	3	-

Flying experience the previous 24 months

With reference to the logbook of the pilot.

Date	Glider type	Flight time	Logbook notes
7-9-2019 (3 flights)	K13	00:52	
21-9-2019 (1 flight )	SF25	00:50	
30-10-2019 (3 flights)	SF25	01:27	
27-9-2020 (2 flights)	K13	00:11	“Recurrent flights” (+ signature and flight instructor number)
10-5-2021 (1 flight)	K13	00:06	“Check start 2021 everything ok” (+ signature)

AIB notes:

K13 was a glider. SF25 was a powered glider.

Neither the flight on 27-9-2020 nor the flight on 10-5-2021 were Proficiency Checks (PC) or training flights in accordance with Part-Sailplane Flight Crew Licensing (Part-SFCL).

Flying experience on single and dual seater gliders

With reference to the logbook of the pilot.

On 2-6-2002, the pilot completed his flight training on Grob G102 Club Astir III b (single seater).

In the period from 24-7-2017 until 10-5-2021, the pilot obtained flying experience (55 minutes) on Grob G-103A Twin II Acro (dual seater).

In the same period, the pilot logbook did not contain recorded flights on Grob G102 Club Astir III b. However, the pilot obtained flying experience (2 hours and 49 minutes) on Schleicher ASK 13 (dual seater).

Furthermore, in the same period the pilot obtained flying experience (4 hours and 2 minutes) on a motor glider.

Latest PC

With reference to the pilot logbook, the pilot performed his latest PC on 5-5-2019. The flying time was 36 minutes.

Training barometer

The Danish Gliding Federation (DSvu) developed a training barometer – [see appendix 1](#) (in Danish only).

**Aircraft information**General information

Manufacturer:	Grob-Werke GmbH
Type:	Grob G102 Club Astir III b
Serial number:	5503 Cb
Airworthiness review certificate:	Valid until 15-5-2022

Aircraft total flight hours:	952:33 (with reference to the glider technical logbook)
Latest maintenance and yearly inspection:	28-2-2021 (952 hours)
Next inspection:	28-2-2022 / 1052 hours

### **Meteorological information**

#### Aftercast valid for EKTO

Weather:	No significant.
Visibility:	More than 10 kilometres.
Clouds:	Sky clear.
Surface wind:	Average wind 330° 4-8 knots (kt) with fluctuations from 240° to 020° and 12 kt.
Other information:	Weak or no thermal and no turbulence.

### **Aerodrome information**

#### General information

Aerodrome Reference Point:	55 34 53N 011 45 36E
Elevation:	Approximately 36 m/118 feet
Runway directions:	09/27
Runway dimensions	950 m x 50 m
Runway surface:	Grass

### **Flight recorders**

There was not installed any recorders on board the glider.

A mounted video camera on an on-ground hang glider recorded parts of the sequence of events (downwind leg and turn to final).

The video was of good quality and useful to the safety investigation.

### **Wreckage and impact information**

[See appendix 2](#) (notes are in Danish).

### **Medical and pathological information**

Due to dizziness by head movement or change of body posture, the pilot on 10-5-2021 consulted an otologist. The otologist observed a left ear hearing impairment and referred the pilot to a MR-scanning. The MR-scanning awaited.

The pilot was not in contact with an aero-medical examiner.

## CONCLUSIONS

### Findings

1. The glider was airworthy.
2. The technical status of the glider had no influence on the sequence of events.
3. The mass and balance of the glider had no influence on the sequence of events.
4. The forecasted weather conditions were generally consistent with the actual weather.
5. With reference to the Part-SFCL recency requirements, the pilot was not properly licenced.
6. Due to dizziness by head movement or change of body posture, the pilot consulted an otologist. The otologist observed a left ear hearing impairment and referred the pilot to a MR-scanning.
7. The pilot did not consult an aero-medical examiner on his experienced dizziness by head movement or change of body posture.
8. A consultation at an aero-medical examiner would most likely have resulted in a suspension of the pilot's medical certificate.
9. The training and recency status of the pilot before departure was low.
10. The pilot logbook did not contain recorded flying experience on Grob G102 Club Astir III b within the previous 4 years.
11. Before departure, the pilot did a cockpit check.
12. The lowest QNH for the area was 1024 hPa.
13. By comparing the assumed QFE of 1020 hPa for EKTO and the actual altimeter setting of 1004 hPa, the pilot, while doing his cockpit check, may have missed the altimeter setting or may have misinterpreted the indication of the altimeter needle.
14. The glider-flying club most likely did not comply with the Part-SAO requirements on using written checklists on this glider type.
15. A too steep initial climb resulted in a broken launch weak link.
16. After establishment of an appropriate airspeed, the pilot at low altitude (below 100 m) decided to turn northbound instead of landing straight ahead on the remaining available runway in accordance with standard operating procedures.
17. The decision on turning northbound (north-westerly wind) did not comply with the aborted winch launch standard operating procedure on "flying out with the wind".
18. On a north-westerly course, the pilot did not land straight ahead or adjusted the landing traffic circuit.
19. The pilot decided to continue on the downwind leg for runway 27.
20. On the downwind leg in order not to lose altitude, the pilot unintentionally may have raised the nose of the glider causing a decrease of airspeed.
21. From a low altitude at a low airspeed, the pilot in an increased tailwind condition turned right base and intended final.
22. In order not to overshoot the final in an increased tailwind condition, the pilot might have increased the bank angle.
23. An increased bank angle in combination with a low airspeed likely resulted in a stall of the right wing and consequentially a spin.
24. From a low altitude, the spin was unrecoverable.
25. Due to the impact forces, the accident was not survivable.

**Factors**

1. With reference to the Part-SFCL recency requirements, the pilot was not properly licenced.
2. A consultation at an aero-medical examiner would most likely have resulted in a suspension of the pilot's medical certificate.
3. The training and recency status of the pilot before departure was low.
4. A too steep initial climb resulted in a broken launch weak link.
5. After establishment of an appropriate airspeed, the pilot at low altitude (below 100 m) decided to turn northbound instead of landing straight ahead on the remaining available runway in accordance with standard operating procedures.
6. On a north-westerly course, the pilot did not land straight ahead or adjusted the landing traffic circuit.
7. In order not to overshoot the final in an increased tailwind condition, the pilot might have increased the bank angle.
8. An increased bank angle in combination with a low airspeed likely resulted in a stall of the right wing and consequentially a spin.
9. From a low altitude, the spin was unrecoverable.

**SAFETY RECOMMENDATIONS**

The safety investigation did not result in the issue of safety recommendations.

APPENDIX 1

[Return to training barometer](#)

Appendix 1

# TRÆNINGSBAROMETER

**VEJLEDNING:**

Find din TRÆNINGSTILSTAND

Afsæt opnåede antal timer og starter for de sidste 12 måneder på barometrets skalaer. Aflæs herefter det råd der gælder for den farve, der er midt imellem start- og timetal

HVAD MED ERFARING ?

Al din erfaring udgør din totale flyvestatus og repræsenterer din ERFARING, men

TRÆNINGSTILSTANDEN er det vigtigste!

VANSKELIGE VEJRFORHOLD:  
Regnbyger  
Vind over 15 knob  
Sidevind ved start / landing

ER DU SIKKER TIL FLYVNING ??  
(ARE YOU FIT FOR FLYING)

**RØD - GUL - GRØN ?**

TIMER                      STARTER

**GRØNT OMRÅDE**  
DU ER I GOD FLYVETRÆNING MEN PAS PÅ !!

Erfaringer viser, at jo mere træning, des mere elementære bliver dine fejl !!

- snydt i indflyvning
- dårligt cockpitcheck
- ikke samlet fly
- uforberedt i afbrudt start

**HUSK:**  
Tyngdekraften virker også på dig !!

\*\*\*\*\*

**GULT OMRÅDE**  
DU ER IKKE SÅ GOD SOM DU TROER !!

Pas på ved særlige forhold. Det kan være anden plads, ikke fortrolig med flytype eller startmetode, afbrudt start.

Vis skærpet opmærksomhed i **VANSKELIGE VEJRFORHOLD**

\*\*\*\*\*

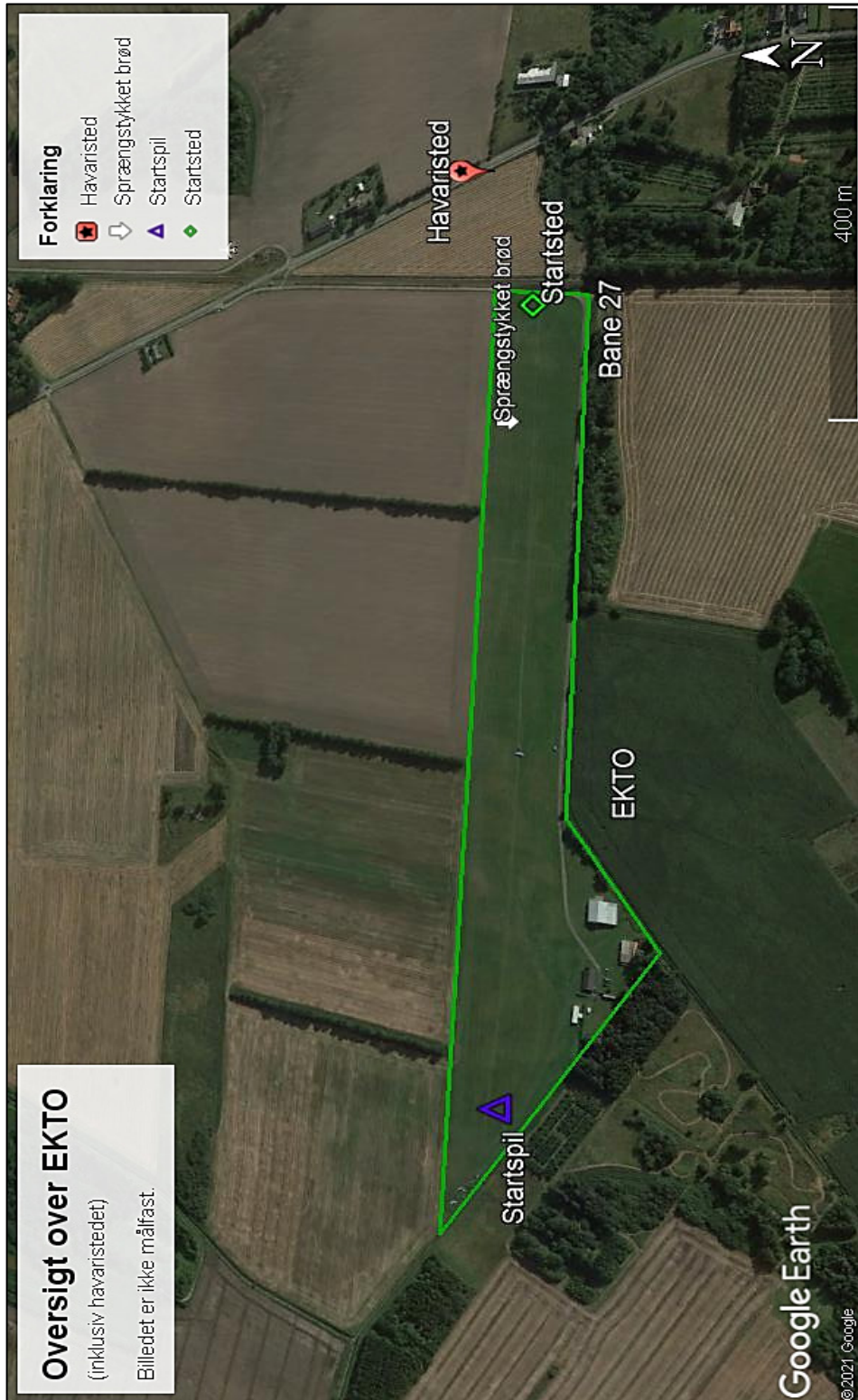
**RØDT OMRÅDE**  
DU ER RUSTEN !!

Du kan ikke klare anden flyveplads, flytype eller startmetode.

Hvis det er mere end 3 måneder siden du har fløjet eller  
Hvis der er **VANSKELIGE VEJRFORHOLD**  
**SÅ**  
**KONTAKT INSTRUKTØR !**

## APPENDIX 2

[Return to wreckage and impact information](#)



Appendix 2