

## Accident to the SCHLEICHER - KA6E registered F-CECS

on 7 July 2019

at Mont-Dauphin Saint-Crépin aerodrome (Hautes-Alpes)

<sup>(1)</sup> Unless otherwise stated, all times given in this report are in local time.

<b>Time</b>	Around 12:30 <sup>(1)</sup>
<b>Operator</b>	Club de vol à voile Guil et Durance
<b>Type of flight</b>	Local flight
<b>Persons on board</b>	Student pilot
<b>Consequences and damage</b>	Glider severely damaged
This is a courtesy translation by the BEA of the Final Report on the Safety Investigation published in June 2020. As accurate as the translation may be, the original text in French is the work of reference.	

## Instability in roll during winch take-off run, cable release, cartwheel, solo training flight

### 1 - HISTORY OF THE FLIGHT

*Note: the following information is based mainly on statements and video footage of the accident.*

The glider was lined up at the threshold of unpaved runway 16 at Mont Dauphin Saint-Crépin aerodrome and hooked to the cable for a winch launch.

In accordance with pre-take-off actions, the student pilot placed one hand on the yellow cable release handle. He signalled to the wing runner that he was ready and announced over the radio frequency that the cable was taut. The winch launch began. The wing runner released the left wing at the beginning of the take-off run.

The right wing dropped. The student pilot tried to maintain take-off alignment by using the rudder pedals and to level the wings by using the control stick. When this was not successful, he pulled on the cable release handle. This action had no effect, so he pulled on the cable release handle a second time and released the cable.

The glider pivoted around the right wing, which touched the ground, and lifted up about one metre. It then fell back on its nose and came to rest on the edge of the runway.

## 2 - ADDITIONAL INFORMATION

### 2.1 Meteorological information

The meteorological conditions recorded at 12:00 by Météo-France at Mont-Dauphin Saint-Crépin aerodrome were as follows: wind calm, visibility greater than 10 km, temperature 26°C.

The wind changed to a south-easterly direction between 12:00 and 13:00, gusting to an estimated 10 kt at the time of the accident. There may have been moderate thermodynamic turbulence on the ground.

### 2.2 Video recording

A video recording was made with a smartphone by a person present in the vicinity of the threshold of runway 16. This recording lasts twelve seconds. It shows the glider after the start of the take-off run, for the first three seconds and then from the sixth second onwards.

An analysis of this video brought to light the following:

- ❑ At the beginning of the video, the left aileron is lowered and the right raised. The glider tilts to the right. The ailerons are then brought back to the horizontal position, then the left aileron is raised and the right is lowered. The glider then veers from the runway centreline to the right. The right wing touches the ground and buckles, preventing the right aileron from being lowered. The ailerons are then brought back to the horizontal position. The cable is still taut.
- ❑ In the second part of the video, the glider is on the ground to the right of the runway centreline. It bounces slightly and then comes to a stop, with the right wing resting on the ground.

### 2.3 Student pilot information

The 16-year-old student pilot had logged 30 flight hours on a glider, including 12 hours in the previous seven days and 9 hours solo on the ASK13. This was his first flight on a single-seater. He had also logged 70 flight hours on microlights, including 4 hours of solo flights.

### 2.4 Statements

#### 2.4.1 Student pilot

The student pilot indicated that he had attended the instructor's briefing, which included an explanation of the specifics of the KA6. He had noted a wind coming from 15° to the right of the centreline at 10 kt.

He explained that he had had to pull on the handle twice because *"it didn't work"* the first time. He felt significant tension in the cable.

### 2.4.2 Instructor

The instructor indicated that, during the briefing, he had explained the differences between this glider and the other gliders on which the student pilot had flown. In particular, this type of glider is lighter and the winch launch is thus more dynamic. He had also mentioned the fact that the hook on this glider is slightly off-centre to the left, which always results in a slight yaw to the right. Finally, he had reminded the pilot to pull on the yellow handle in the event of a problem.

In hindsight, he felt that he should have warned the student pilot about the effort required to release the cable. The handle is usually actuated to attach the cable when there is no tension in it. However, when the winch is launched, the cable is at its maximum tension and the effort required to release the cable is greater.

The instructor reported that, as soon as the take-off run began, the right wing dropped. The student pilot applied control stick and rudder actions to correct this, but this was not sufficient.

The instructor indicated that the breeze was blowing along the centreline of the runway, with possibly some small side gusts.

### 2.4.3 Wing runner

The wing runner reported that he was holding the glider's wing with his hands. He explained that he did not follow the glider but instead released it immediately. In his opinion, for this type of glider, the winch launch is very fast and there was a risk of unbalancing the glider if he had followed it. He was very surprised because the wing dropped almost immediately and touched the ground.

He said there were a few small gusts of wind coming from the right.

## 3 - CONCLUSIONS

*The conclusions are solely based on the information which came to the knowledge of the BEA during the investigation. They are not intended to apportion blame or liability.*

### Scenario

The glider tilted to the right from the start of the take-off run. As soon as the student pilot noticed that the glider was tilting, he tried to counteract this movement with control stick and rudder inputs. Then, realising that he could not keep the wings level, he immediately pulled on the release handle, as recommended. This action was ineffective because he did not pull with sufficient force in respect of the cable tension. He pulled on the handle a second time and with greater force in order to release the cable. During this time, the glider pivoted around the wing while on the ground, lifted up about one metre and then fell back down.

<sup>(2)</sup> <https://www.securitedesvols.aero/initiatives/ffvp/videos>

<sup>(3)</sup> <https://www.securitedesvols.aero/>

<sup>(4)</sup> Fédération française de vol en planeur/French Gliding Federation.

## Safety lessons

An explanatory video<sup>(2)</sup> of the cartwheel phenomenon can be viewed on the light aircraft safety portal<sup>(3)</sup>.

The procedure for holding the yellow handle during the initial acceleration on take-off allowed the student pilot to react quickly and limit the consequences of the cartwheel.

This accident shows that a pilot may be surprised by the effort required to release the cable when the cable is under high tension. FFVP's Training and Safety Committee<sup>(4)</sup> is therefore considering including a drill on this issue in the next training programme.