

## Accident

<b>Aircraft Type and Registration:</b>	Rotorsport UK Cavalon, G-CLDV	
<b>No &amp; Type of Engines:</b>	1 Rotax 915 iS piston engine	
<b>Year of Manufacture:</b>	2019 (Serial no: RSUK/CVLN/032)	
<b>Date &amp; Time (UTC):</b>	16 January 2024 at 1019 hrs	
<b>Location:</b>	Field near Breedon Holt, Norfolk	
<b>Type of Flight:</b>	Training	
<b>Persons on Board:</b>	Crew - 2	Passengers - None
<b>Injuries:</b>	Crew - 1 (Serious) 1 (Minor)	Passengers - N/A
<b>Nature of Damage:</b>	Aircraft destroyed	
<b>Commander's Licence:</b>	Private Pilot's Licence	
<b>Commander's Age:</b>	65 years	
<b>Commander's Flying Experience:</b>	3,500 hours (of which 100 were on type) Last 90 days - 25 hours Last 28 days - 6 hours	
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the commander	

## Synopsis

The aircraft struck trees during an attempted go-around from a Practice Forced Landing (PFL). After striking the trees the aircraft fell to the ground and was extensively damaged. Both those on board were able to escape the aircraft, though the student suffered serious injuries. The instructor suffered minor injuries.

## History of the flight

The aircraft, a Rotorsport Cavalon (Figure 1) was being flown on a training sortie in preparation for the student's General Flying Test (GFT). The student had not flown for approximately six weeks but, although he was low on solo hours, rather than just do a circuit check the instructor decided to conduct a mock GFT. The student was briefed on the exercise profile and the instructor informed him he would say as little as possible, save to direct the next required element. The aircraft departed Felthorpe Airfield at 0945 hrs.



**Figure 1**  
Rotorsport Cavalon

After takeoff the aircraft departed the Felthorpe circuit to the north-west and climbed to approximately 2,000 ft amsl. The student completed various upper air manoeuvres to a standard the instructor described as “adequate to pass his test.” Then, over a clear area and at 2,000 ft amsl, the instructor directed the student to simulate an engine failure. The student established the aircraft in the descent at 70 mph, identified a suitable field for the PFL, indicated this field to the instructor and began his approach. The instructor noted that the student did not make a simulated distress call or simulate an engine restart procedure. The student recalled simulating the forced landing checklist actions. The speed reduced to 50 mph from the best descent speed of 65 to 70 mph, but the instructor considered this a normal way to reduce height during a PFL in a gyroplane.

At approximately 500 ft the instructor asked the student to confirm the field he had selected for the approach. The instructor believed the student was going to make a straight in approach to a field ahead, accepting a crosswind component. However, the student had actually planned to make an into-wind approach towards a different field and so commenced a 90° turn to the right. This turn was made with approximately 30° angle of bank (AOB) and commenced at approximately 400 ft agl. The turn took the flight path over a wood and, although the instructor assessed that in a real emergency the student would have reached his chosen field, he directed a go-around. At this point the airspeed was approximately 60 mph and the height 300ft agl.

The instructor stated that the student “pulled the stick hard back and applied partial power.” The standard go-around actions are to apply full power, correct any yaw, and pitch the aircraft to achieve 60 mph. The student recalled applying full power for the go-around. The instructor stated he applied full power and placed his hand on the control column to pitch down but could not recall if he was able to get the stick forward at all. He could not recall if he said “I have control.” The aircraft struck the edge of the trees and fell to ground (Figure 2).



**Figure 2**

Aircraft at accident site

The student turned off the master switch to shut the aircraft down. Though there was extensive damage, both occupants were able to vacate the aircraft. No MAYDAY call had been made and, as the aircraft was away from an airfield, the crew were uncertain if anyone was aware of the accident. The student had an accident warning app on his mobile phone, which was used to pass an exact location to the emergency services.

The first emergency responders reached the site approximately 15 minutes after the accident and both occupants were taken to hospital. The student suffered serious injuries.



He believed he was rendered unconscious during the accident and described his memory of events as “hazy.” The instructor suffered minor injuries and was released from hospital the day after the accident.

### **Recorded information**

No data was recovered from the aircraft but the aircraft flight path was partially recorded by a flight tracking application. The recording ceased at approximately 1,200 ft amsl and at a speed of 45 kt. The latter stages of the PFL and the attempted go-around were not recorded.

### **Analysis**

The aircraft was being flown on a simulated GFT for a student who had not flown for approximately six weeks. After a series of successful upper air exercises the instructor directed the student to simulate an engine failure and carry out a PFL. The student manoeuvred the aircraft to position for an approach into his chosen field and reduced speed to increase the rate of descent. When the instructor asked for confirmation of the field at approximately 500 ft agl it became evident that the pilots had misunderstood each other and their expectations of the intended field differed. The instructor was expecting an approach straight ahead, accepting a crosswind in the final stages, whereas the student planned to approach directly into the wind using a field to the right of the aircraft. The student commenced a turn at approximately 400 ft using 30° AOB, taking the aircraft over an area of woodland. Though the instructor judged that the student would have reached his intended field had the engine failure been genuine, concerned for the proximity of the trees the instructor directed a go-around at approximately 300 ft.

The recollections of actions taken for the commencement of the go-around differed. The student believed that he selected full power to establish the climb. The instructor stated that the student pulled back on the control column and applied only partial power. If the aircraft pitched up its speed would reduce and with only partial power the rate of descent would increase. The instructor recalled that he applied full power and tried to move the control column forward to reduce pitch attitude. He did not recall if this pitch change was successful.

The aircraft did not recover to the climb and struck the edge of the trees before falling to the ground. As the recollections of those on board differed and with no data retrieved from the aircraft, it was not possible to determine the cause of the aircraft striking the trees.

Despite the damage to the aircraft and the injuries to those on board, both were able to vacate the aircraft. A crash detection app on the student’s phone gave an accurate position of the accident site and this was passed to the emergency services facilitating an effective response.

### **Conclusion**

The aircraft struck trees during an attempted go-around from a PFL. A cause could not be positively determined.