

ACCIDENT

Aircraft Type and Registration:	Thruster T600N 450, G-CBIR	
No & Type of Engines:	1 Jabiru 2200A piston engine	
Year of Manufacture:	2002 (Serial no: 0022-T600N-061)	
Date & Time (UTC):	10 August 2022 at 1620 hrs	
Location:	Causeway Airfield, County Londonderry	
Type of Flight:	Private	
Persons on Board:	Crew - 2	Passengers - None
Injuries:	Crew - 1 (Minor) 1 (None)	Passengers - N/A
Nature of Damage:	Landing gear bent, pod damaged, propeller blade damaged	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	53 years	
Commander's Flying Experience:	3,510 hours (of which 120 were on type) Last 90 days - 26 hours Last 28 days - 12 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

Synopsis

The aircraft landed heavily when the student and instructor both made a nose-down pitch input on the single control stick following a simulated engine failure.

History of the flight

When the instructor closed the throttle while simulating an engine failure at about 200 ft after takeoff, the student pulled back on the single shared control stick, causing the aircraft to pitch up. The instructor declared, "I have control", took control, and advised the student that pulling back on the stick was not the correct response. The student, whose hand remained on the control stick, followed its movements while the instructor applied power and pitched nose down.

The instructor carried out a touch-and-go and climbed the aircraft to a height he considered sufficient to demonstrate the correct procedure of lowering the nose following a loss of engine power. As he reduced the power and started moving the stick forward, the student pulled back firmly, overriding the instructor's control input and causing the aircraft to pitch up. The instructor shouted "I have" [control] and when he pushed the stick forward, the student did likewise, causing a steep nose-down attitude.

Despite the resulting high rate of descent, it was necessary to maintain a nose down attitude to gain sufficient speed for the elevator authority required to flare. The aircraft landed heavily, causing failure of the main landing gear, and the aircraft became inverted when the nose wheel dug in. Fuel leaked from the tank vent. The instructor vacated the aircraft and assisted the student, and members of the flying club attended shortly afterwards.



Figure 1

Cockpit of G-CBIR (upright after recovery) showing single control stick

Instructor's comment

The instructor commented that he should have demonstrated the second recovery at a greater height or in circumstances where he could be sure the student would not intervene. He observed that regular practice handing over control would be useful, especially after a period of student solo flying, and to ensure that when an instructor advises "I have control", the student responds with "you have control".

BULLETIN ADDENDUM

Following publication an addendum¹ was released concerning this report.

The addendum was published in the March 2023 issue of the AAIB Bulletin.

Footnote

¹ <https://www.gov.uk/aaib-reports/aaib-investigation-to-thruster-t600n-450-g-cbir> [accessed March 2023].

BULLETIN ADDENDUM

Aircraft Type and Registration:	G-CBIR
Date & Time (UTC):	10 August 2022 at 1620 hrs
Location:	Causeway Airfield, County Londonderry
Information Source:	Aircraft Accident Report Form

AAIB Bulletin No 1/2023, page 38 and 39 refer

Since publication the following additional information has become available.

On landing after a flight in the local area the student assumed the flight was complete, but a circuit was then flown. After touchdown from this circuit the instructor applied takeoff power and the aircraft became airborne again.

Shortly after this takeoff the instructor closed the throttle and may have asked, “what are you going to do now?” or “what are you going to do if the engine fails?” The available evidence indicates that the speed at this point was between 50 and 55 kt and that the aircraft was between 100 ft and 200 ft above the ground. The stalling speed of the aircraft as loaded on this flight was reported to be approximately 44 kt. The student recalled that when the throttle was closed he felt that the aircraft had stalled and immediately pushed the stick forward. The aircraft landed heavily as described in Bulletin 1/2023, and the student required medical attention the following day.

The additional information indicates that it was not the original purpose of the flight to conduct circuits, that the intention to practice engine failures was not shared by both occupants, and that only one practice engine failure was conducted, not two as previously reported.

Where this information differs from that reported previously, it has not been established which is more accurate.

Comment

Whilst it is important to prepare students to cope with an unexpected loss of power, demonstrations or practice should be conducted when the aircraft has sufficient performance to enable a safe recovery. Bulletin 1/2023 records the instructor’s comments to this effect.