



## Cessation of investigation

The sole purpose of an investigation of an aircraft accident or serious incident is to prevent further accidents or serious incidents from occurring. It is expressly not the purpose of the safety investigation and this report to establish blame or determine liability.<sup>1</sup>

With regards to the present serious incident, the Swiss Transportation Safety Investigation Board opened an investigation on 4 January 2022; however, during the course of which, however, it became apparent during the course of the investigation that the cause was not technical in nature but rather operational. The preventive value of a further investigation is limited, which is why it is hereby closed.

The German version of this report is the original and is therefore authoritative.

**Place, Date, and Time:** Bern Airport (LSZB), Switzerland, 28 December 2021, 14:11 UTC

### Aircraft

**Registration:** G-XONE  
**Model:** Bombardier CL-600-2B16 (604 Variant) "Challenger 604"  
**Owner:** Gama Aviation Ltd., Farnborough, UK  
**Owner:** Gama Aviation Ltd., Farnborough, UK

**Crew:** 2

**Cabin crew:** None

**Passengers:** 6

### Flight

**Flight rules:** [IFR/VFR]Instrument Flight Rules (IFR)

**Type of operation:** Private

**Point of departure:** Farnborough Airport (EGLF)

**Point of landing:** Bern Airport (LSZB)

### Damage

**Crew:** None

**Passengers:** None

**Third:** None

**Aircraft:** None

**Ground:** None

<sup>1</sup> Article 3.1 of the 13<sup>th</sup> edition of annex 13, effective from 28 November 2024 to the Convention on International Civil Aviation of 7 December 1944 which came into force for Switzerland on 4 April 1947, as amended on 27 November 2025 (SR 0.748.0)

Article 24 of the Federal Act on Civil Aviation of 21 December 1948, as amended on 1 January 2026 (CAA, SR 748.0)

Article 1, point 1 of 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 repealing Directive 94/56/EC, which came into force for Switzerland on 1 February 2012 pursuant to a decision of the Joint Committee of the Swiss Confederation and the European Union (EU) and based on the agreement of 21 June 1999 on air transport between Switzerland and the EU (Air Transport Agreement)

Article 2, paragraph 1 of the Ordinance of 17 December 2014 on the Safety Investigation of Transportation Incidents, as amended on 1 January 2025 (OSITI, SR 742.161)

## Flight details

The twin-engine business jet “Challenger 604” with registration number G-XONE was en route from Farnborough (EGLF), United Kingdom, to Bern (LSZB) in the early afternoon of 28 December 2021. The pilots planned to perform an instrument approach to Runway 14 at Bern Airport<sup>2</sup>. A westerly wind was prevailing. According to the airport information “Charlie” received by the pilots, visibility was over 10 km and the base of the main cloud layer was at 7,500 ft above the airport elevation; at the ground, a wind of 16 kt was blowing from 240 degrees, varying between 190 and 290 degrees.

The crew selected a final approach speed corresponding to the reference speed of 123 kt, as the available runway length was short and the runway was wet. During the instrument approach, during which the aircraft was being flown manually, the pilots observed a crosswind of up to 50 kt and turbulence. They therefore decided to increase the approach speed by a few knots above the reference speed of 123 kt.

When the aircraft was at an altitude of approximately 1,000 ft above ground level, the air traffic controller reported a surface wind of 10 kt from 200 degrees to the pilots. The pilots then determined that the wind speed at their altitude was still 39 kt.

At an altitude of approximately 400 ft above ground level, the aircraft began to descend below the instrument approach glide path. Subsequently, the warning messages “*three hundred,*” “*sink rate, sink rate,*” “*two hundred,*” and “*glide slope, glide slope, glide slope*” sounded in the cockpit every second, sometimes overlapping. The airspeed varied between 118 kt and 135 kt during this phase.

At an altitude of approximately 100 ft above ground level, the stick shaker and stick pusher were activated<sup>3</sup>. As a result, the aircraft’s pitch angle decreased abruptly, and the aircraft descended suddenly at a high rate of descent and in a flight attitude unsuitable for touchdown toward the runway area located in front of the touchdown zone (see Figure 1). The pilots immediately pulled the control column back to the aft stop and increased engine power to maximum. The aircraft subsequently descended to an altitude of 4 ft above the runway and then transitioned into a climb.

The remainder of the go-around maneuver and the subsequent landing at the alternate airport Zurich (LSZH) proceeded without incident.



**Figure 1:** Video recording by a passerby of the G-XONE’s go-around over the area of Runway 14 located in front of the threshold (eleven individual frames taken one second apart, combined into a single image).

<sup>2</sup> The instrument approach to Runway 14 has an approach angle of 4°. For landings on Runway 14, the runway threshold is offset by 200 m.

<sup>3</sup> The stick shaker warns of a stall. The stick pusher moves the aircraft’s control columns forward to prevent a stall.

**Flight Planning**

The weather forecast for Bern Airport predicted intermittent gusty westerly winds (“*VRB02KT TEMPO 24012G27KT*”) and rain showers. For a landing on Runway 14 with no wind and a wet runway, a reference speed of 123 kt, a landing distance of 3,822 ft, and a minimum required runway length of 5,000 ft were calculated, given that the available runway length in Bern is 5,020 ft.

**Flight recorders and simulation model**

The aircraft was equipped with a Cockpit Voice Recorder (CVR) and a Flight Data Recorder (FDR), which could be analyzed (see Appendix). In addition, the aircraft manufacturer used the FDR data to simulate the flight and the activation of the stick pusher using a simulation model. No evidence of technical malfunctions or design flaws could be identified.

**Comparable incident**

Shortly after this incident, a similar incident involving a “Challenger 604” occurred on 31 January 2022, at London Stansted Airport (EGSS), in which the aircraft was severely damaged. The responsible British investigative authority, the Air Accidents Investigation Branch (AAIB), published a detailed investigation report on the matter (AAIB Bulletin: 1/2024, N999PX, AAIB-27993).

Bern, 9 March 2026

Appendix:

