

TSB identifies unstable approach as key factor in 2016 fatal accident of Mitsubishi MU-2 aircraft in Îles-de-la-Madeleine, Quebec

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MONTRÉAL, Jan. 10, 2018 /CNW/ - Today, the Transportation Safety Board of Canada (TSB) released its investigation report (**A16A0032**) into the March 2016 fatal collision with terrain of a Mitsubishi MU-2 twin-engine turboprop aircraft in Îles-de-la-Madeleine, Quebec. The report underlines the risks of continuing an **unstable approach** to a landing, which is on the TSB Watchlist of key safety issues that need to be addressed to make Canada's transportation system even safer.

On 29 March 2016, the MU-2 aircraft departed Montréal/Saint-Hubert Airport for Îles-de-la-Madeleine, Quebec, an approximate two-hour flight. On board were the pilot, a passenger-pilot, and five passengers. During the final approach, when the aircraft was 1.4 nautical miles west-southwest of the airport, it deviated south of the approach path. At approximately 1230 Atlantic Daylight Time, aircraft control was lost, resulting in the aircraft striking the ground in a near-level attitude. The aircraft was destroyed, and all occupants were fatally injured.

The MU-2 is a high-performance aircraft, which is especially challenging to fly at low airspeed, particularly during sudden applications of engine power. While in cruise flight, the pilot modified his approach plan by delaying the aircraft's initial descent. This placed the aircraft above the planned descent profile and compressed the time available for the pilot to complete the required checklist activities, while monitoring the aircraft's airspeed, altitude and rate of descent, thereby increasing the pilot's workload. Under these high workload conditions, the pilot likely did not recognize that a go-around was an option available to reduce his workload, and he continued with the unstable approach. During the final moments of the flight, a loss of control occurred when the pilot rapidly added

full power, at low airspeed and low altitude, which caused an aircraft upset and resulted in the aircraft sharply rolling to the right and descending rapidly. Although the pilot managed to level the wings, the aircraft was too low to recover before striking the ground.

"We have seen too many of these unstable approaches in the past lead to tragic accidents," said Kathy Fox, TSB Chair. "It is important that pilots consider conducting a go-around when an approach is unstable. We will continue to highlight the risks of unstable approaches until there is a reduction in the number of accidents in which approach stability was a causal or contributory factor."

Regulators, operators and aircraft manufacturers have defined stable-approach criteria, which pilots are trained to follow. Stable approaches make landings more consistent and predictable—giving pilots time to monitor key elements such as airspeed, altitude, rate of descent, and to complete checklists—thereby improving the likelihood of a safe landing.

In this investigation, a crucial source of information was the lightweight recorder that the pilot had developed and installed on board the aircraft, even though it was not required by regulation. The device provided investigators with highly valuable acceleration and GPS data as well as cockpit audio, allowing them to piece together a detailed history of the flight.

"The benefits of lightweight recorders are obvious: knowing what happened is the first step to understanding why. Although the TSB does not endorse any single product, it would be fair to say that the lightweight recorder on this aircraft can be viewed as an indication of the way forward" added Chair Fox.

See [investigation page](#), the [list of findings](#) and the [backgrounder](#).

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