



Date: October 27, 2024

To: Tim LeBaron [REDACTED]
Director, Office of Aviation Safety

Through: Kristi Dunks
Deputy Director for Regional Operations, Office of Aviation Safety
Noel Coleman, Chief, AS-70

From: David Bowling, Chief, Central Region

Subject: Request to change coding, analysis, probable cause and factual narrative of CEN21LA414

The subject report was released in August of 2023. A subsequent review of the investigation identified errors in the occurrence coding, analysis, factual report, and probable cause. Although we attributed the event to carburetor icing, the airplane was equipped with a fuel injected engine. I propose revising the defining event, deleting the last paragraph of the analysis and adding an additional sentence at the end of the second paragraph, deleting the last paragraph of the factual narrative, and changing the probable cause as follows.

Defining Event

Change from ~~Conductive to carburetor icing – Effect on Equipment~~ to Undetermined – undetermined.

Analysis

The flight instructor and student pilot were conducting a simulated off-field emergency landing as part of a pre-solo cross-country progress check. The flight instructor told the student pilot to break off the maneuver and apply engine power, but the airplane's engine did not respond when power was added. The flight instructor took control of the airplane and attempted to restart the engine with no success. He then declared an emergency and performed a 180° power-off turn to a field. During the touchdown, the airplane contacted a raised embankment, nosed over, and came to rest inverted. The airplane sustained substantial damage to both wings and the fuselage.

A postaccident examination of the airframe and engine showed no preaccident failures or malfunctions that would have precluded normal operation. As a result, the cause of the total loss of engine power could not be determined.

~~At the time of the accident, meteorological conditions were conducive to the formation of carburetor icing during glide and cruise power. Based upon the available information, it is likely that carburetor icing formed during the extended simulated emergency descent and resulted in the loss of engine power.~~

Probable Cause Statement

~~A loss of engine power due to the formation of carburetor icing for undetermined reasons.~~

Factual Report Narrative

On September 10, 2021, about 1100 central daylight time, a Cessna 172S airplane, N2099J, was substantially damaged when it was involved in an accident near LaSalle, Colorado. The flight instructor and the student pilot sustained minor injuries. The airplane was operated under the provisions of Title 14 Code of Federal Regulations Part 91 as an instructional flight.

The flight was intended as pre-solo cross-country progress check. The flight originated from Rocky Mountain Metropolitan Airport (BJC), Broomfield, Colorado. After 40 minutes of flight, the flight instructor told the student pilot to perform a touch-and-go landing at Greeley-Weld County Airport (GXY), Greeley Colorado, and then navigate back to BJC. After the touch-and-go landing at GXY, the flight instructor initiated a simulated high-oil-pressure and high temperature scenario as the airplane was in cruise flight at 7,500 ft mean sea level. The student pilot responded by initiating a return to GXY. During the return flight to GXY, the flight instructor reduced the engine power to 2,000 rpm and informed the student pilot that he had a simulated engine fire. The student pilot responded by reducing the engine power to idle and began a descent. Once the flight instructor announced that the simulated engine fire was out, the student pilot established a glide and chose a location for a simulated off-field emergency landing.

When the airplane was at an altitude of about 1,000 ft above ground level, the flight instructor determined that the student pilot would safely reach the intended landing location. The flight instructor then instructed the student pilot to apply power, commence a go-around, and fly back to BJC. When the student pilot applied power, the engine did not respond. The flight instructor took control of the airplane and attempted to restart the engine with no success. The flight instructor then declared an emergency and performed a 180° power-off turn to a different landing location than the student pilot had selected earlier. During the landing, the airplane contacted a raised embankment, nosed over, and came to rest inverted. The airplane sustained substantial damage to both wings and the fuselage.

A postaccident examination of the airframe showed no preaccident failures or malfunctions that would have precluded normal operation. Postaccident examination of the engine showed continuity throughout. Both magnetos produced spark. The fuel lines, fuel distribution manifold, airbox, and fuel pumps were intact. Fuel was observed in the manifold and lines. The spark plugs showed normal signatures. Throttle and mixture cables to the cockpit were connected. The propeller remained attached to the engine at the flange. The

spinner was crushed and broken in the aft direction. Both propeller blades were straight and showed little rotational damage.

~~At the time of the accident meteorological conditions were conducive for carburetor icing at glide and cruise power.~~

If approved, these changes will be reflected in the revised report when republished.