



Aviation Investigation Preliminary Report

Location:	Gulf of Mexico, GM	Accident Number:	ERA23FA174
Date & Time:	March 30, 2023, 18:15 Local	Registration:	N869AC
Aircraft:	Cessna 525B	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Executive/Corporate		

On March 30, 2023, about 1815 eastern daylight time, a Cessna 525B, N869AC, was substantially damaged when it was involved in an accident over the Gulf of Mexico. The airline transport pilot was not injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 corporate flight.

The flight originated at 1647 from Walnut Ridge Regional Airport (ARG), Walnut Ridge, Arkansas, and was destined for Page Field Airport (FMY), Fort Myers, Florida.

The pilot reported that while in a cruise descent at an altitude of about 30,000 ft, and about 1815, he felt two “big jolts.” He felt the airplane yaw, looked at the engine instruments, and noted no anomalies. After that, he looked out the left side window and noted that the left winglet had separated from the wing. He looked out the right side window and saw the right winglet. He elected to disconnect the autopilot, reduce engine power, and declare an emergency. The pilot performed an emergency landing at Tampa International Airport (TPA), Tampa, Florida, without issue. Furthermore, he stated that there were no flight control anomalies, but that there was some “binding” of the ailerons on final approach. He also added that he was in visual meteorological conditions at the time of the accident and the flight was “smooth” until the “big jolts.”

The airplane was equipped with Tamarack Active Technology Load Alleviation System (ATLAS) Winglets. The Tamarack ATLAS Winglet installation was completed on December 7, 2022. Then, in February 2023, the Tamarack Active Camber Surface (TACS) Control Unit (TCU)s were replaced as a result of fault alerts to the pilot during two separate flights. The pilot did not report any flight characteristics anomalies associated with the fault alerts. In each instance, the pilot opened and reset the circuit breaker to the system which cleared the faults, and subsequently landed the airplane without issue. There were no further anomalies reported after the TCUs were replaced.

Postaccident examination of the airplane revealed that the left wing extension and the left aileron were substantially damaged. The left wing extension, winglet, and TACS were all missing except for approximately 28 inches of the leading edge of the wing extension. The left aileron had an impact mark on the bottom side of the trailing outboard edge and was buckled and pressed up, with chipped paint.

The remaining components of the Tamarack ATLAS system were documented and examined on the airplane and no anomalies were noted. The ATLAS main circuit breaker was not found in the open position. A (functional) built-in-test of the ATLAS system was performed, and no anomalies were noted. Following the test, the left wing TACS bellcrank that remained on the left wing was between the stops in an approximately neutral position, and the right wing TACS was found in a neutral position.

The left TCU, right TCU, ATLAS Control Unit, Honeywell Enhanced Ground Proximity Warning System, and remaining wing extension structure were retained for further examination.

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N869AC
Model/Series:	525B	Aircraft Category:	Airplane
Amateur Built:			
Operator:		Operating Certificate(s) Held:	None
Operator Designator Code:			

Meteorological Information and Flight Plan

Conditions at Accident Site:	VMC	Condition of Light:	Day
Observation Facility, Elevation:	PIE,0 ft msl	Observation Time:	17:53 Local
Distance from Accident Site:	25 Nautical Miles	Temperature/Dew Point:	28°C /14°C
Lowest Cloud Condition:	Clear	Wind Speed/Gusts, Direction:	3 knots / , 10°
Lowest Ceiling:	None	Visibility:	10 miles
Altimeter Setting:	30.12 inches Hg	Type of Flight Plan Filed:	IFR
Departure Point:	Walnut Ridge, AR (ARG)	Destination:	Fort Myers, FL (FMY)

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	28.175447,-83.054322 (est)

Administrative Information

Investigator In Charge (IIC): Kemner, Heidi

Additional Participating Persons: Randy Ryhal; FAA/FSDO; Tampa, FL
Kurt Gibson; Textron Aviation; Wichita, KS
Haldan Gates; Tamarack Aerospace; Sandpoint, ID

Note: