

NATIONAL TRANSPORTATIONS SAFETY BOARD
Office of Aviation Safety
Washington, DC 20594

SUMMARY OF EXAMINATION

-- CEN21LA384 --

A. ACCIDENT

Location: Lansing, Michigan
Date: August 24, 2021
Time: 1858 eastern daylight time
Aircraft: Cirrus Design Corp. SF50 airplane, N1GG

B. PARTICIPANTS

Timothy Sorensen
Senior Aviation Accident Investigator
National Transportation Safety Board
Denver, Colorado

Brannon Mayer
Air Safety Investigator
Cirrus Aircraft
Duluth, Minnesota

C. ACCIDENT SUMMARY

On August 24, 2021, at 1858 eastern daylight time, a Cirrus Design Corp. SF50 “Vision Jet” airplane, N1GG, was destroyed when it was involved in an accident near Lansing, Michigan. The pilot and 3 passengers were not injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 business flight.

D. DETAILS OF EXAMINATION

The NTSB did not respond to the site at the time of the accident. FAA inspectors and a Cirrus Aircraft safety investigator were present on-scene.

An airframe examination was completed on March 30, 2022, at AMF Aviation, Springfield, Tennessee. The examination was conducted by the NTSB investigator-in-charge with direct assistance of a Cirrus Aircraft accident investigator.

Summary of Examination

E. SUMMARY OF EXAMINATION

Cirrus Design SF-50 (s/n 0202)

The airplane sustained damage consistent with the runway excursion and impact with the airport perimeter fence. Post-impact fire damage from the forward pressure bulkhead aft to the ruddervators consumed portions of the fuselage. The airplane was destroyed.

The forward airframe sustained minor impact damage. The Cirrus Airframe Parachute System (CAPS) appeared intact.¹ The lower fuselage exhibited upward crushing damage at and immediately aft of the forward pressure bulkhead. The nose landing gear had collapsed. The cockpit/cabin area was damaged due to the post-impact fire. The cockpit avionics were destroyed. The aft fuselage and empennage were consumed by the post-impact fire and destroyed. The left ruddervator was damaged consistent with the post-impact fire; the right ruddervator was consumed.

The left wing remained attached to the fuselage.² It exhibited leading edge impact damage and minor thermal damage due to the post-impact fire. The left aileron and flap remained attached to the wing. The flap appeared to be extended at 50% (15°). The left main landing gear assembly was fully extended and appeared undamaged. The tire remained inflated. The outboard portion of the tire exhibited greater wear relative to the inboard portion of the tire. The tire exhibited minor scuffing damage but appeared otherwise intact and serviceable. The right wing was consumed by the post-impact fire.

Portions of the flight controls were destroyed. However, the pilot and co-pilot side stick base components and rudder pedals remained. Side stick control continuity was confirmed between pilot and co-pilot sticks and to the center fuselage pitch and aileron push-pull tubes. Portions of the center and aft fuselage pitch bellcranks and push-pull tubes were separated consistent with impact forces and consumed consistent with the post-impact fire.

The rudder pedals exhibited fire damage but appeared otherwise intact. The pedals remained attached to the corresponding torque tube and bellcrank assembly. The yaw cables were attached to the bellcrank assembly and were continuous to the aft fuselage. One cable remained secured to the yaw cable sector. The sector was fractured and separated from the center pivot consistent with impact. The second yaw cable was separated from the sector. The swaged end fitting was securely attached to the cable.

The engine sustained damage consistent with the post-impact fire. It was not examined in more detail.

----- *end of summary* -----

¹ The CAPS was disarmed on-scene by the Cirrus investigator.

² The left wing was removed from the fuselage to facilitate recovery.