



AIRFRAME AND ENGINE EXAMINATION

NTSB ACCIDENT NUMBER: CEN20LA336

AIRCRAFT REGISTRATION: N949CG

OPERATOR: Individual

ACCIDENT LOCATION: Osage Beach, MO

Investigative Team:

NTSB IIC: Daniel Baker (Senior Air Safety Investigator) *

NTSB Investigator Overseeing Examination: Adam Gerhardt (Air Safety Investigator)

Cirrus: Brannon Mayer (Air Safety Investigator)

**Not on-site*

BRIEF NARRATIVE

On August 16, 2020, about 1320 central daylight time (CDT), a Cirrus SR22, N949CG, was destroyed when it was involved in an accident near Osage Beach, Missouri. The commercial pilot and passenger were fatally injured. The airplane was operated as a Title 14 Code of Federal Regulations (CFR) Part 91 personal flight.

DETAILS OF EXAMINATION

The NTSB and a Cirrus Party member examined the airplane on October 21 and 22, 2020 at AMF Aviation LLC., in Springfield, Tennessee. This report details the factual findings from the investigative activities. Photographs of the examination are on file.

AIRFRAME EXAMINATION

Fuselage

The fuselage was destroyed by impact forces and the post-impact fire. The left and right cabin doors were not observed. The baggage door was not observed.

Cockpit documentation was not possible due to the extensive thermal damage. Several components from the center console, including a Garmin 430, STEC 55X autopilot and the radio control head were observed in the recovered/examined wreckage. Those components exhibited extensive thermal damage. No NVM was recovered from the PFD or MFD.

The RDM, had been removed at the accident site and was shipped to the NTSB for data download.

Seats

Both crew seats were destroyed by the post-impact fire. One complete seat frame and one seat-back frame were observed in the recovered wreckage, however, due to the extensive thermal damage, identification of the right or left crew seat frame was not possible.

The rear passenger seats were not observed.

Wing

The wing was destroyed by impact forces and the post impact fire.

The left wingtip was not observed. The left aileron was separated from the wing. The left aileron exhibited impact and thermal damage. The left flap was separated from the wing and was fractured into two pieces. Both pieces of the left flap exhibited impact and thermal damage.

The right wingtip was separated from the wing. The right wingtip exhibited impact and thermal damage. The right aileron was separated from the wing. The right aileron exhibited impact and thermal damage. The right flap was separated from the wing and was fractured into two pieces. Both pieces of the right flap exhibited impact and thermal

damage. One separated fuel cap was observed in the recovered wreckage.

The center section of the left aileron control cable, approximately 5 feet in length, remained attached (with the ball swedge in place) to the left aileron actuation pulley. The right aileron control cable was not observed. The center aileron control cable was not observed. Aileron control cable continuity could not be confirmed.

The roll trim motor was not observed. The roll trim cartridge was not observed. The flap actuator was not observed.

Landing Gear

The nose landing gear was separated from the engine mount. The nose landing gear exhibited impact damage. The left main landing gear leg was separated from the wing. The left main landing gear exhibited impact and thermal damage. The left main landing gear wheel was separated from the gear leg.

The right main landing gear leg was separated from the wing. The right main landing gear exhibited impact and thermal damage. The right main landing gear wheel remained attached to the gear leg.

Empennage

The empennage exhibited impact and post impact fire damage. The horizontal stabilizer was separated from the fuselage. The horizontal stabilizer exhibited impact and thermal damage.

The right elevator was separated from the horizontal stabilizer. The right elevator was fractured into three pieces. The three pieces of the right elevator exhibited impact damage. The left elevator was separated from the horizontal stabilizer. The left elevator exhibited impact damage.

The vertical stabilizer was separated from the fuselage. The vertical stabilizer exhibited impact and thermal damage. The rudder was separated from the vertical stabilizer. The rudder exhibited impact and thermal damage. The pitch trim motor was not observed.

Two separated rudder control cables were observed in the recovered wreckage. The two separated rudder control cables measured approximately 6 feet in length from the forward attach fitting to just aft of the turnbuckle. The two rudder control cables exhibited impact and thermal damage. Due to the damage, rudder control cable continuity could not be confirmed.

The elevator control cables were not observed. Elevator control cable continuity could not be confirmed.

CAPS

The CAPS rocket motor was found expended at the accident site by the FAA. The parachute, which remained in a “packed” state, exhibited extensive thermal damage.

A review of the recovered CAPS components revealed that the CAPS enclosure cover was separated from the fuselage. The CAPS parachute was not extracted from the D-Bag.

The CAPS rocket motor, pick-up collar, lanyards, D-Bag, incremental bridal and Kevlar sheath remained attached to each other. The CAPS rocket motor, pick-up collar, lanyards, D-Bag, incremental bridal and Kevlar sheath exhibited thermal damage. The incremental bridal remained in its Kevlar sheath. Melted incremental bridal was noted at the open end of the Kevlar sheath. The incremental bridal was separated from the D-Bag.

The left front harness, right front harness, rear harness, and risers were not observed.

ENGINE EXAMINATION

The engine was stored in a recovery bag. The engine was previously examined by Federal Aviation Administration (FAA) inspectors. Several components of the engine had been disassembled and removed from the engine and were found loose and unmarked in the recovery bag. The engine exhibited significant impact and thermal damage across all sections of the engine.

A total of 8 unmarked spark plugs were located at the bottom of the recovery bag lying loose in the debris. The plugs exhibited varying degrees of combustion signatures and were photographed. 4 additional spark plugs were located in their respective cylinders; however, impact damage prevented the spark plugs from being removed.

The engine was not examined further, due to the previous examination performed by the FAA.

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