

National Transportation Safety Board

Office of Aviation Safety

Washington, DC 20594



WPR22FA331

INVESTIGATIVE SUPPLEMENTAL MATERIAL

ACCIDENT

Location: Wichita Falls, Texas
Date: August 20, 2022
Time: 1331 central daylight time
Airplane: Smyth Sidewinder TD

INVESTIGATIVE SUPPLEMENTAL MATERIAL

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PARTY MEMBERS

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HISTORY OF FLIGHT

On August 20, 2022, about 1331 central daylight time, a Smyth Sidewinder TD, N60JV, was substantially damaged when it was involved in an accident near Wichita Falls, Texas. The pilot was fatally injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

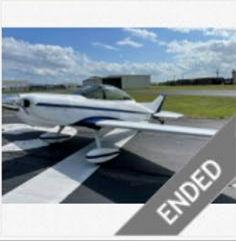
The airplane's previous owner stated that he sold the airplane to the pilot on the morning of the accident. The pilot's friend dropped him off in Wichita Falls around 0900 and he was planning to fly the airplane to his home airport in Arkansas. That morning the previous owner and pilot reviewed the maintenance logbooks, airplane characteristics, checklist, operational features of the Garmin 560 GPS, and examined the airframe and engine. After a thorough review, the pilot purchased the airplane. Thereafter, they started the engine and completed a run-up. The previous owner offered to stay in the airplane so the pilot could perform practice takeoffs-and-landings. The pilot declined and the previous owner exited the airplane.

The previous owner and numerous other people at the airport witnessed the airplane depart. They observed the airplane align with the runway centerline and begin to accelerate. The pilot appeared to be making a 3-point takeoff with all the landing gear remaining on the runway surface. The airplane then became airborne at a slow speed and began a left turn, climbing to about 50-75 feet above ground level (agl). The airplane assumed a nose-high attitude and the left turn tightened. The airplane impacted terrain adjacent to the runway and erupted into flames.

AIRPLANE INFORMATION

The airplane's third owner recently sold the airplane on the website platform, eBay.¹ The sale closed on June 08, 2022 and the buyer intended to pick up the airplane and pay for the remainder of the airplane on the day of the accident. The listed provided the following details about the airplane:

Sidewinder TD aircraft [See original listing](#)



Condition: **Used**

Ended: **Jun 08, 2022, 4:05PM**

Current bid: **US \$ [REDACTED]** **38 bids**

Shipping: Free Local Pickup

Located in: Iowa Park, Texas, United States

Seller: [REDACTED] ★ | [Seller's other items](#)

Smyth Sidewinder TD aircraft. This aircraft and engine has 475+ TT. Lycoming O - 320 (150hp) with Catto fixed pitch prop. VFR aircraft with GPS and autopilot. Has ADSB, transponder, radio and a full six pack. This aircraft is a 175mph aircraft with a 80 mph final approach speed. Empty wt 1084, Stall 63 mph, Climb 1500 ft/min. Fuel 42 gal w/ header tank. This is a great little aircraft but has some limitations. Pilot must be under 6 foot to be comfortable and of a smaller weight as the seats are made for up to 185LB pilot.(34 waist) This is a great traveling aircraft for a single pilot that will travel at 7 gph for 5 hrs. Just ask me questions and I will answer timely. Fly in and fly her home. This is a purchase and requires a deposit after auction. You will have 7 days to transfer funds. Aircraft located at F14 and in a hanger, can be stored for up to 45 days after sale but payment has to be made in 7 Days.



Figure 1: Advertisement for the Airplane

¹ https://www.ebay.com/itm/195101812302?mkcid=16&mkevt=1&mkrid=711-127632-2357-0&ssspo=Xv63vMBXTWS&sssrc=2349624&ssuid=C4g4n1tNSNe&var=&widget_ver=artemis&media=EMAIL

The airplane was involved in an accident on January 28, 2021 (GAA17CA127) where the prior owner was involved in a runway excursion.

According to a Sidewinder Program description, the tail and wings are similar and in some instances, identical to, the Thorpe T-18 and flies similar to that airplane. The stall speed is about 60 kts. The original airplane design was a tricycle arrangement so there weren't originally tailwheel steering connections at the rudder horn/torque tube. There was no evidence of a tailwheel variant supported by the original designer, but there are a number of Sidewinders converted to tailwheel. The drawings found of the original design were not consistent with the airplane construction, nor would that be required because it was an experimental airplane.

WRECKAGE AND IMPACT

The accident site was located in a fallow cotton-field adjacent to the runway. In character, the debris field was located on flat terrain with loose dirt and dry vegetation distributed over a 200 ft distance on a median magnetic bearing of about 95°. The main wreckage, consisting of the engine and the fuselage, came to rest inverted. The majority of the airframe was consumed by fire with the exception of the empennage and outboard right-wing. The airplane was situated with the fuselage on a magnetic bearing of about 37°.

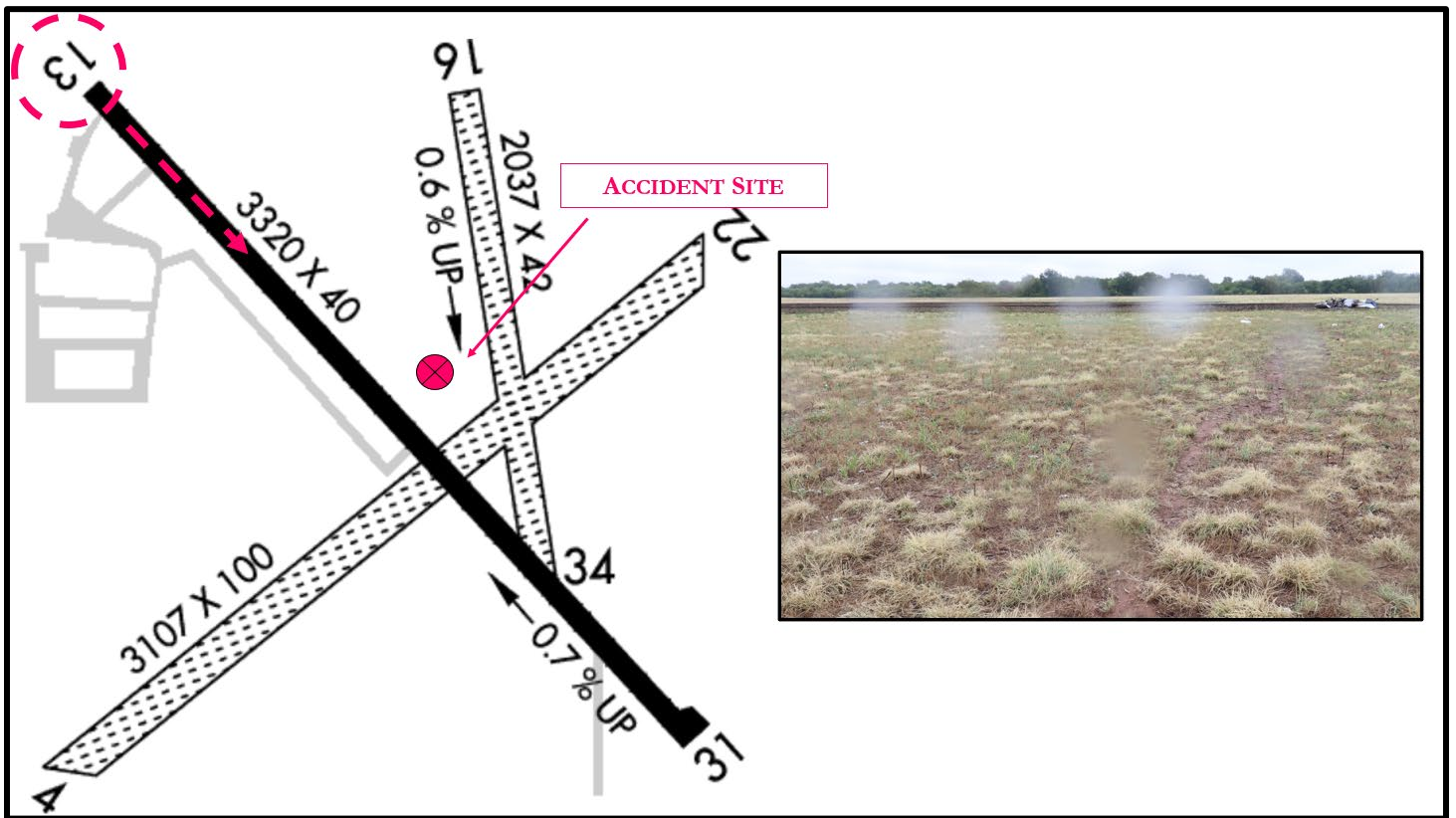


Figure 2: Accident Site in Reference to the Runway

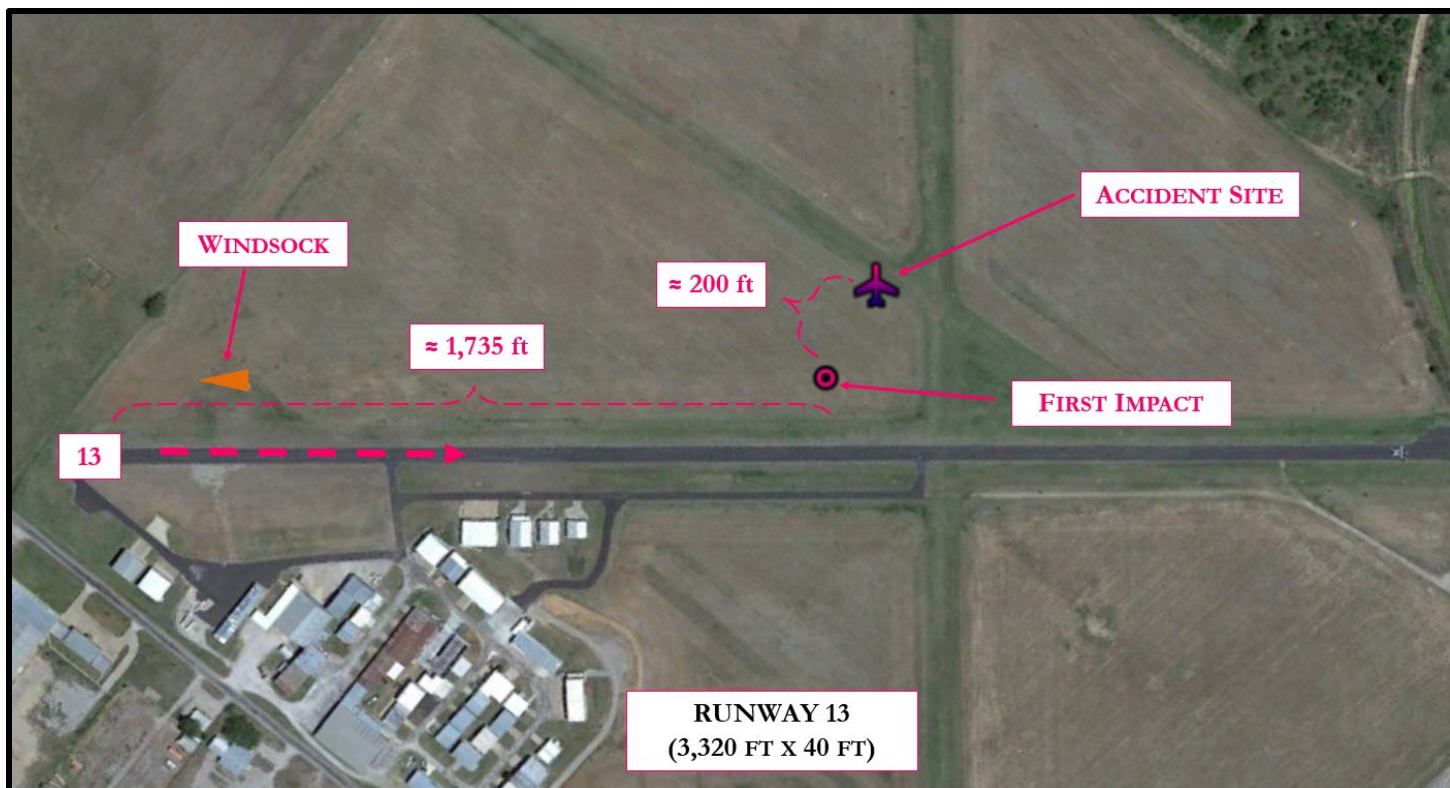


Figure 3: Runway Lengths and Distance of Accident Site

The first identified point of contact consisted of disrupted dirt and paint chips. An approximate 6-inch-wide ground scar from the initial impact was continuous for about 19 ft, consistent with the left wing dragging along the terrain. Thereafter, there was an approximate 14 ft path of disrupted dirt. The remaining 25 ft to the wreckage the disrupted dirt ended. In that debris field, there was part of the propeller, right wing tip, and numerous pieces of fragmented canopy.

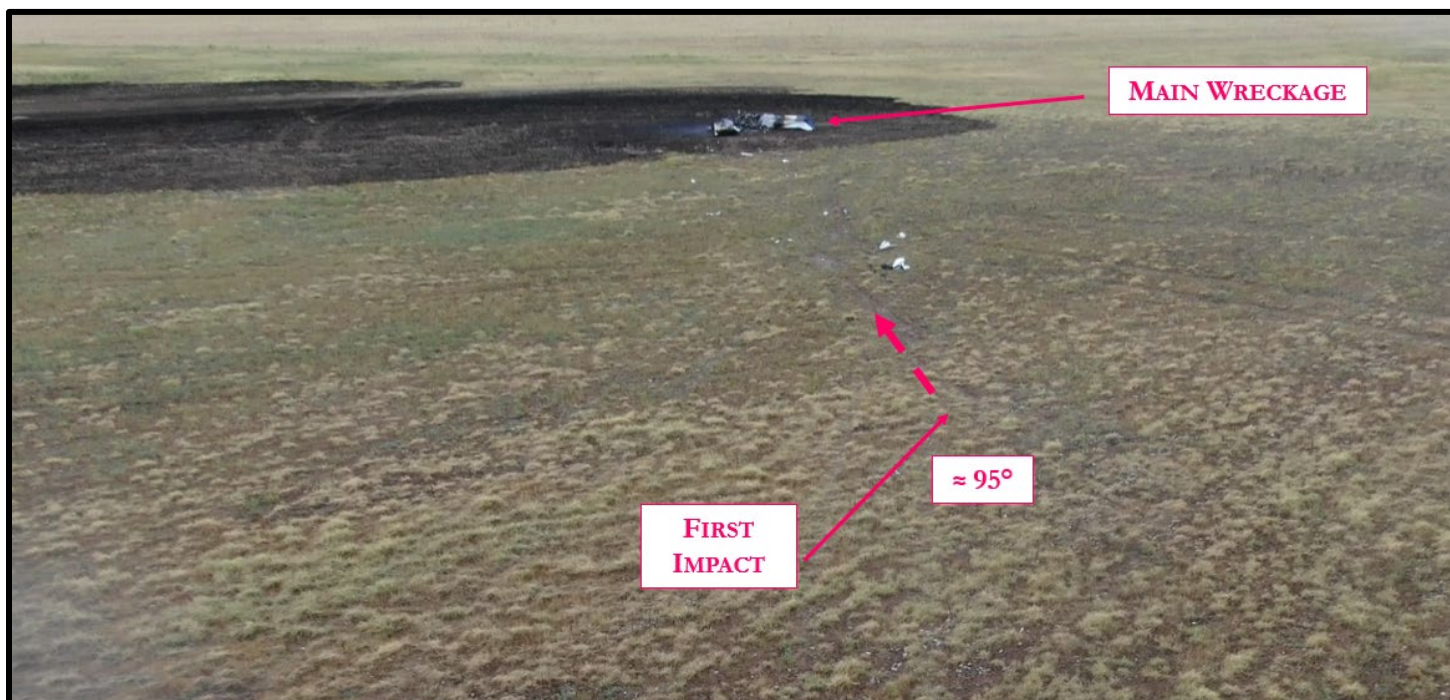


Figure 4: Accident Site Referencing Main Wreckage

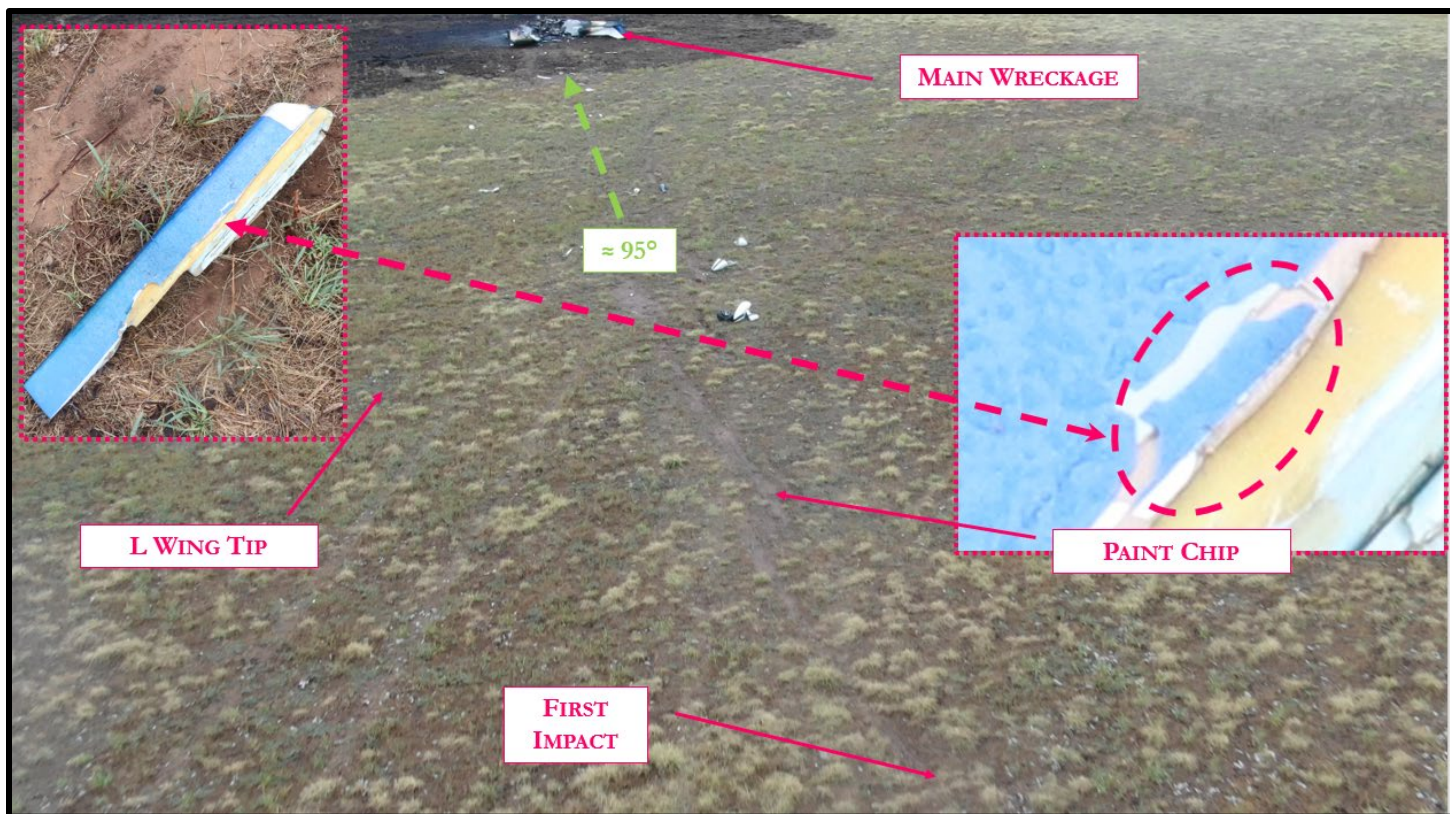


Figure 5: Left Wing Tip in Reference to the First Impact

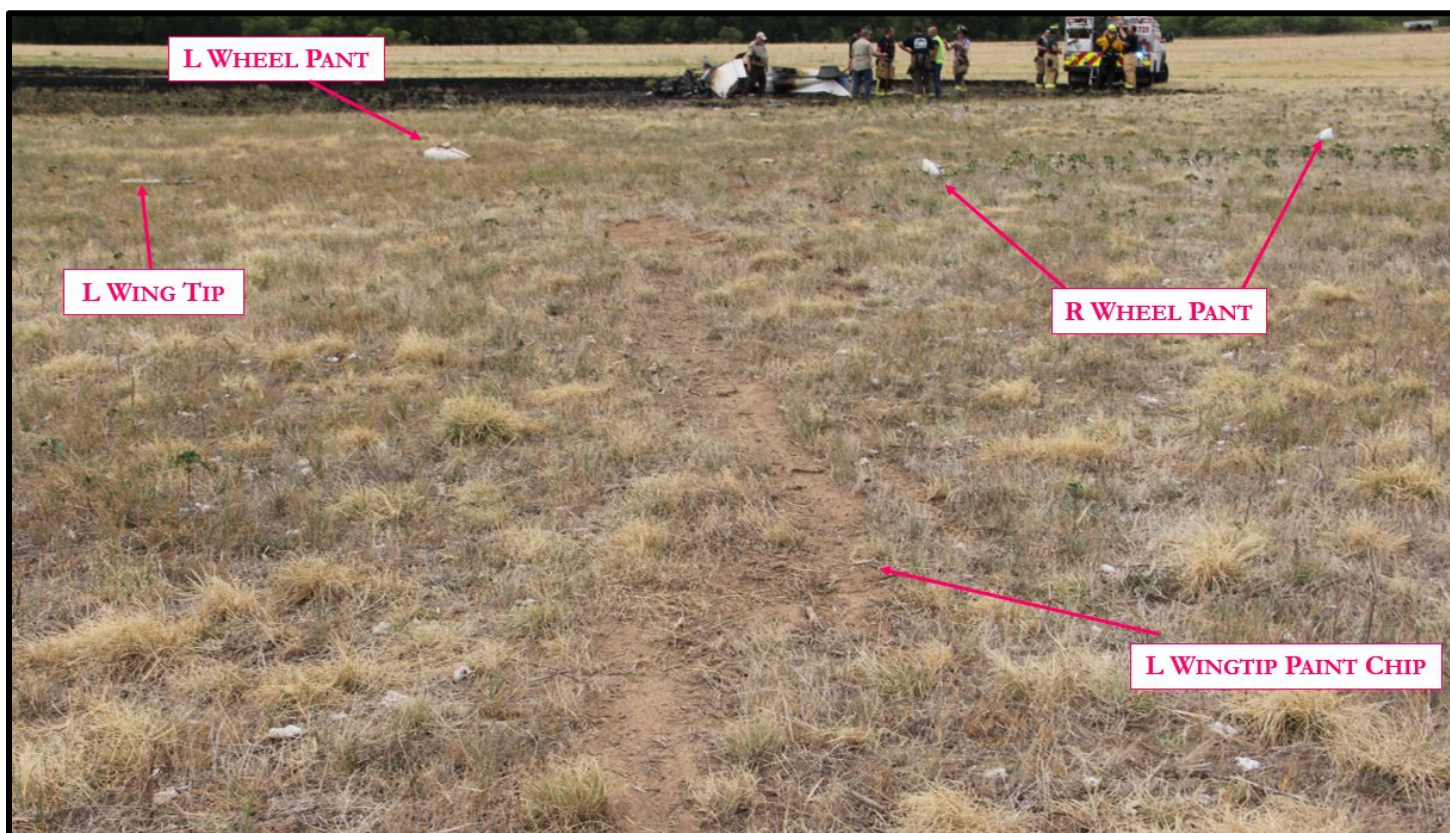


Figure 6: Start of Debris Field

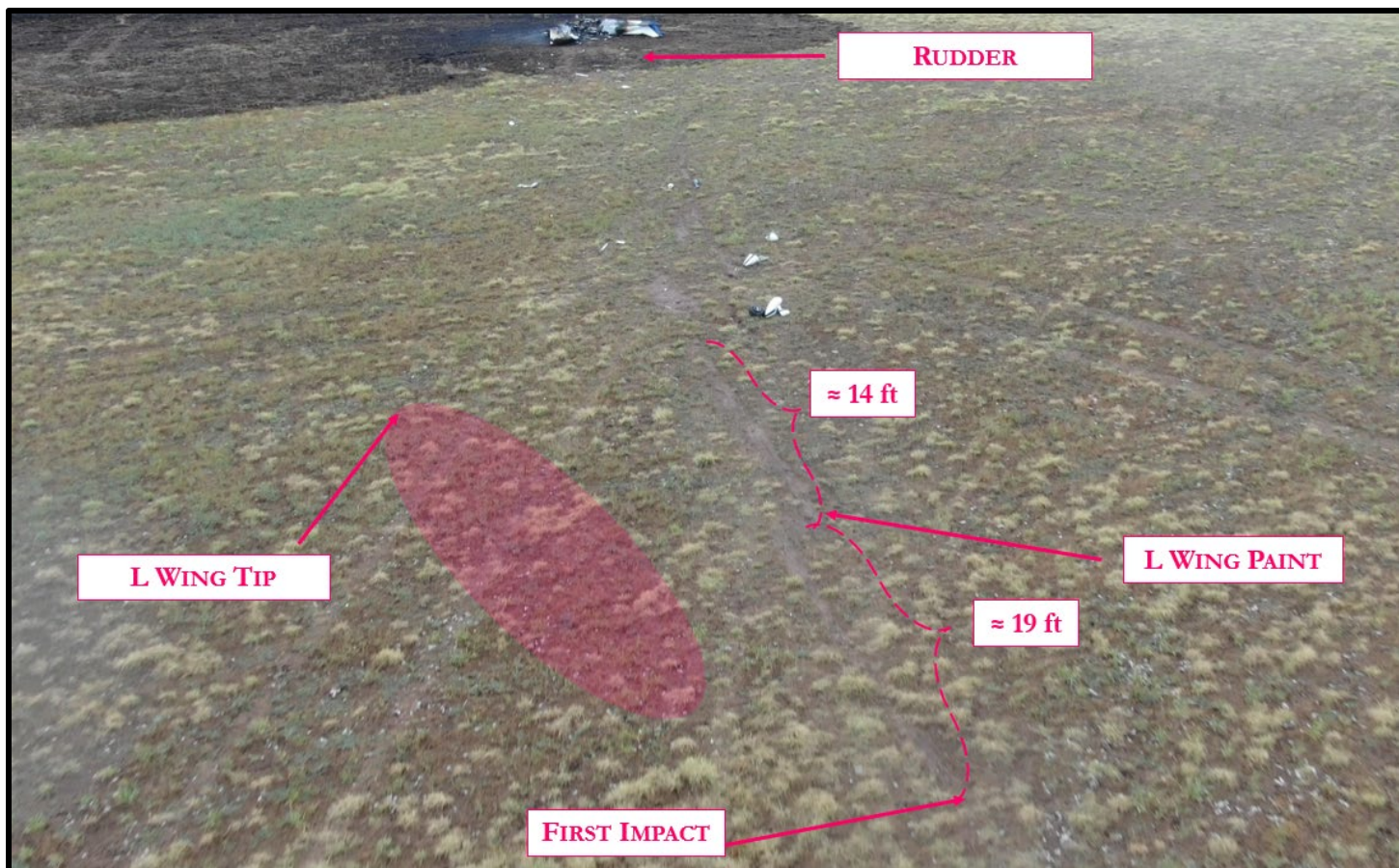


Figure 7: Left Wing Tip Pieces

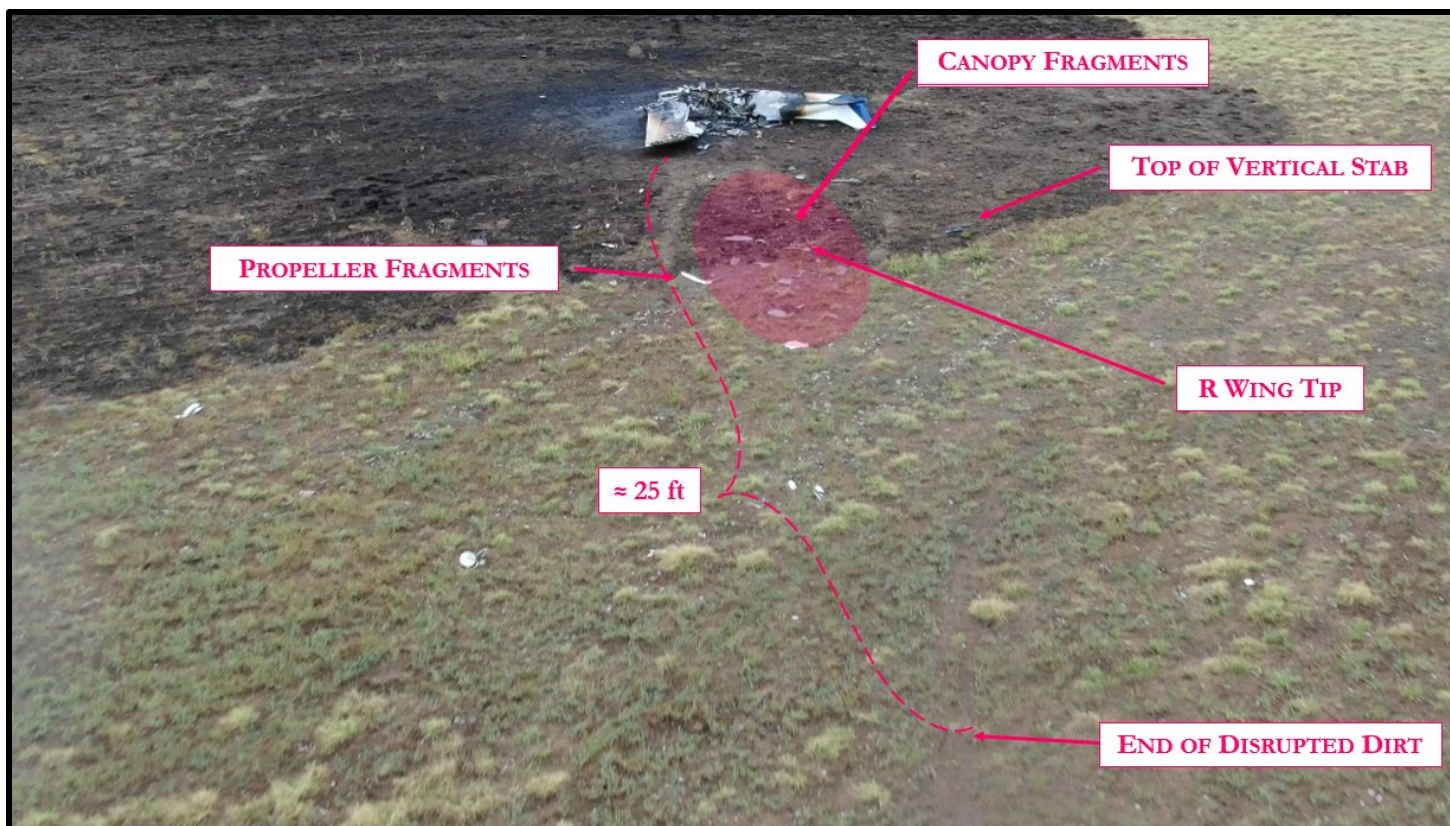


Figure 8: Propeller Fragments in Reference to Wreckage

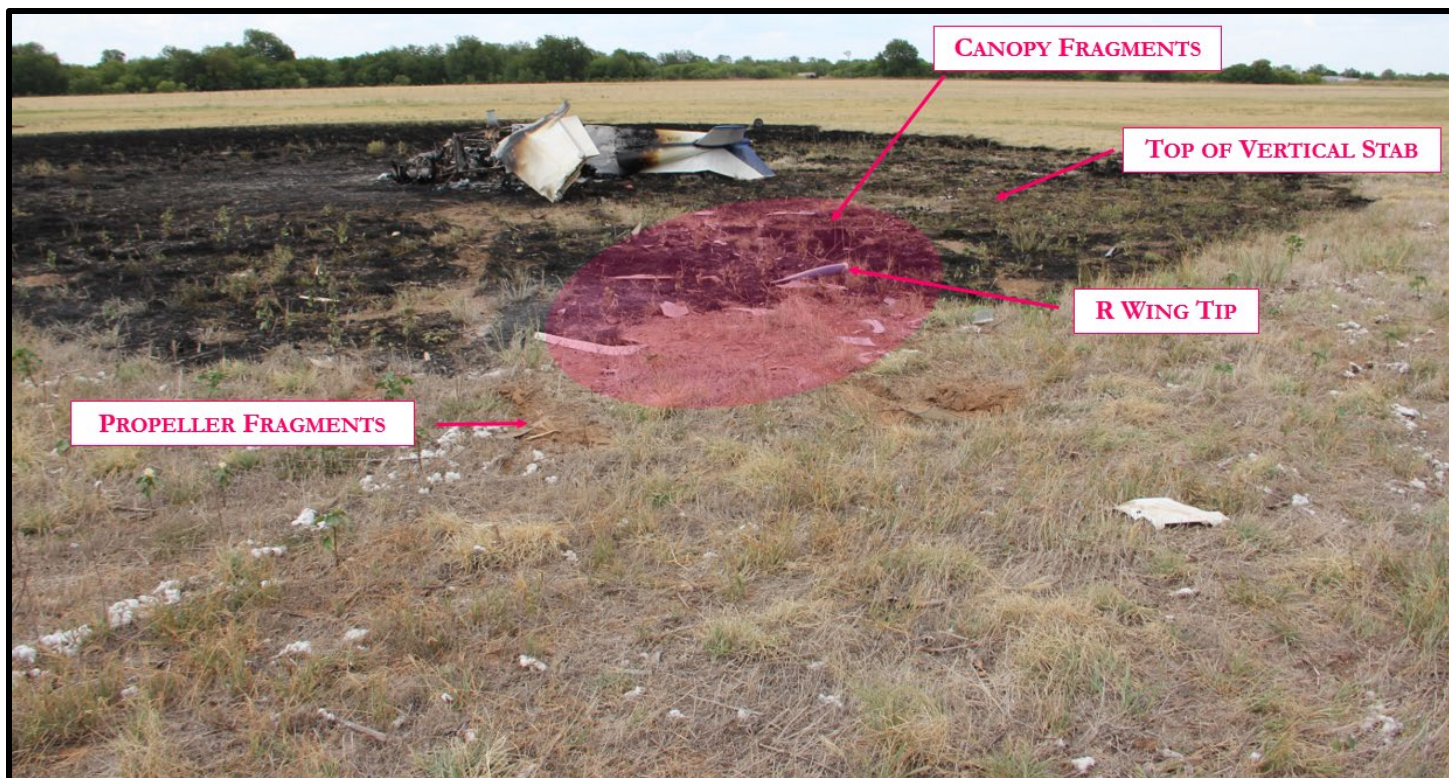


Figure 9: Canopy Fragments in Reference to Wreckage

AIRFRAME

The fuselage came to rest inverted and was partially consumed by fire. The data plate indicated the airplane was a Sidewinder (s/n V1004).

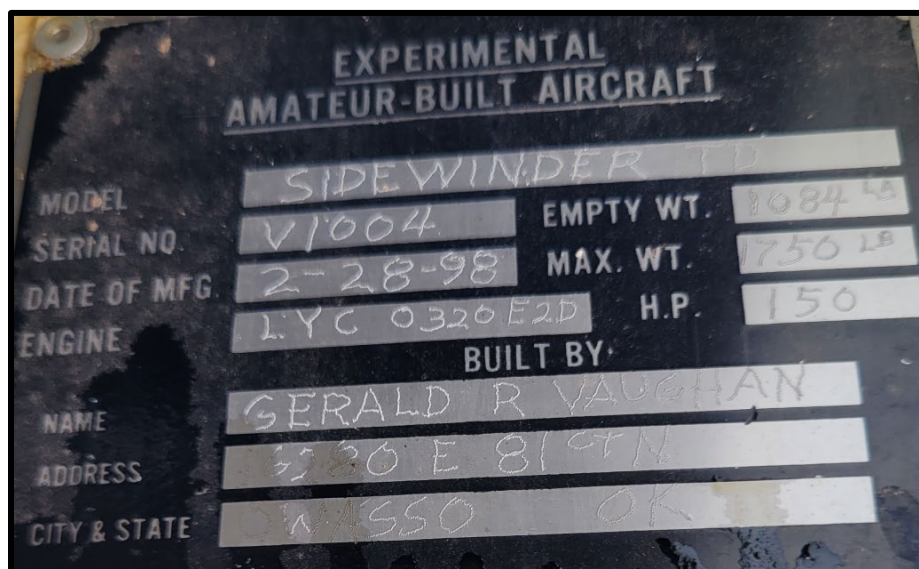


Figure 10: Airplane's Data Plate

Complete control continuity could not be verified due to the extent of the thermal damage to the cockpit. The forward rudder-control-cables were attached to their respective turnbuckles that were melted at the rudder pedal bar. The cables were continuous, through the pulleys, and attached at the aft control horn. Examination of the airframe found control continuity from the cockpit controls to all control surfaces. The horizontal stabilizer trim was found in a mid-range position.

The rudder horn was bent downward on the left side with the left rudder cable attach point on a different plane than the right side. The paint and deflection was consistent with the damage having occurred years prior to the accident. It is unknown if the deflection had any effect of the rudder mobility.

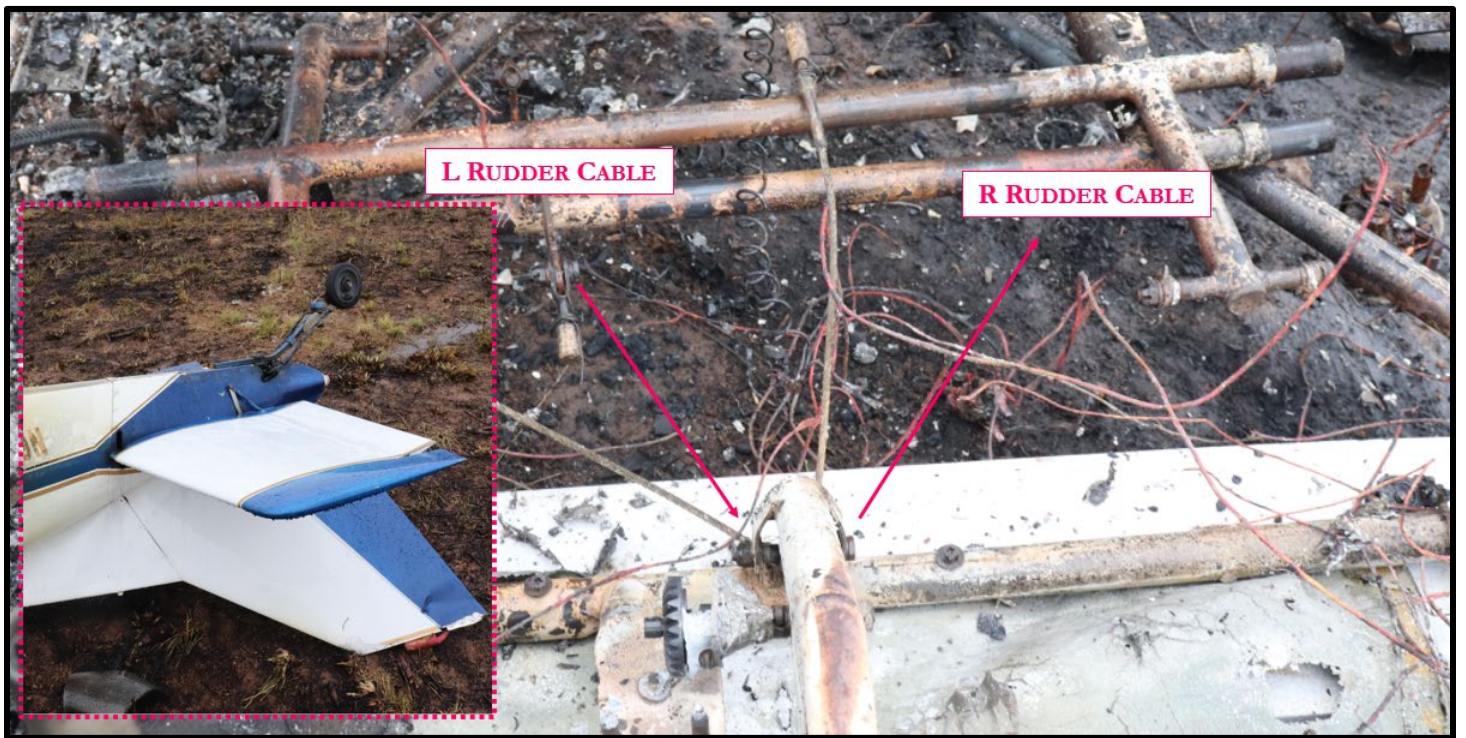


Figure 11: Rudder Cable Attachment

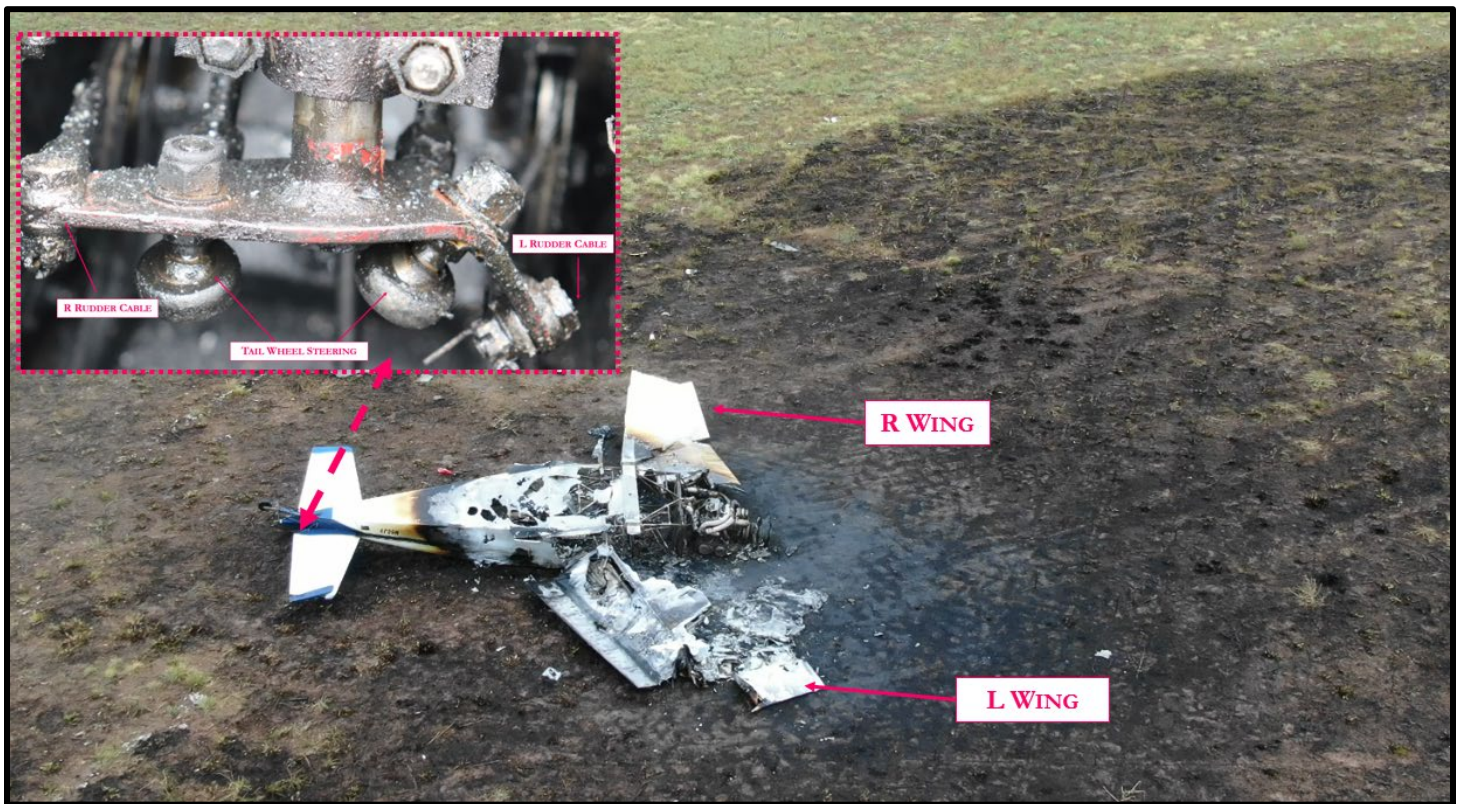


Figure 12: Rudder Control Horn

The Lycoming engine O-320-E2D, serial number L-43950-27A, remained attached to the airframe by the engine mounts. The engine had been displaced left from its normal position due to the absorption of impact energy. Visual examination of the engine revealed that the engine sustained post-impact fire damage with no evidence of pre-impact catastrophic mechanical malfunction.



Figure 13: Engine at Accident Site

Investigators completely disassembled the engine. The cylinder's combustion chambers remained mechanically undamaged, and there was no evidence of foreign object ingestion or detonation. The valves were intact and undamaged. There was no evidence of valve-to-piston face contact observed. The gas path and combustion signatures observed at the spark plugs, combustion chambers, and exhaust system components displayed coloration consistent with a post-crash fire.



Figure 14: Crankshaft



Figure 15: Engine Parts After Disassembly

The spark plugs were secure at each position with their respective spark plug lead attached. The top spark plugs were removed, examined and photographed. The spark plug electrodes remained mechanically undamaged, and according to the Champion Spark Plugs Check-A-Plug chart AV-27, the spark plug electrodes displayed coloration consistent with normal operation.



Figure 16: Cylinder No. 1 Spark Plugs and Lifter Faces

There was no contamination found in the oil pressure screen or rocker box areas during the examination.

The left and right magnetos were thermally consumed and timing could not be ascertained. The carburetor was secured at the mounting pad. The throttle/mixture controls were found securely attached at their respective control arms. The metal float pontoons exhibited moderate hydrodynamic crushing, consistent with there being fuel in the bowl at the time of impact.



Figure 17: Carburetor Disassembled

RECORDS

The airplane's seller stated that he provided the pilot with all the airplane's records which were onboard during the accident; all of the airplane records were presumably consumed by fire.

FUEL

The seller stated that he refueled the airplane with full fuel tanks prior to the pilot

PILOT INFORMATION

Pilot Certificate (ATP AMEL; COMMERCIAL PRIVILEGES ASEL; MECHANIC),

The pilot was a 87-year-old male. This pilot reported civil flight experience that included 19,150 total and 55 hours in last six months as of exam dated 9/2/2010. This pilot was 69 inches tall and weighed 200 lbs at the time of the last exam. This pilot was issued a Third Class Medical Certificate with the following limitation: "Must have available glasses for near vision. Not valid for any class after 9/30/2011." The Medical Certificate expired for all classes in 2011, but this pilot had applied for BasicMed. BasicMed Course Date: 4/10/2019, and Comprehensive Medical Examination Checklist (CMEC) Date: 6/7/2017. This pilot's BasicMed had expired in 2001.

WEATHER INFORMATION

KSPS 201752Z AUTO 16006KT 10SM CLR 34/20 A2998 RMK AO2 SLP136 T03390200 10339 20233 58006
[1330 CDT/1830Z]

Accident time

KSPS 201852Z AUTO VRB05KT 10SM FEW075 36/16 A2995 RMK AO2 SLP125 T03610161

