



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Central Region

7/21/2021

INVESTIGATION SUMMARY

CEN21LA223

A. ACCIDENT

Location: Clayton, Louisiana
Date: May 18, 2021
Aircraft: N887LA; Air Tractor AT802 s/n 502A-2887
NTSB Investigator-in-Charge: Joshua Lindberg

On May 18, 2021, about 1325 central daylight time, an Air Tractor airplane, N887LA, was substantially damaged when it was involved in an accident near Clayton, Louisiana. The pilot was fatally injured. The airplane was operated as a Title 14 Code of Federal Regulations Part 137 aerial application flight.

The operator stated that the pilot had completed several flights already and was in the processing of spraying product on a field when the accident happened.

Witnesses stated that the airplane had just completed a spray pass and was in the process of turning around. During the turn, the airplane pitched up and rolled left into a steep bank so that the wings were almost upside down. One witness stated that it looked like the pilot, “didn’t pull out of a barrel roll.” The airplane “fell out of the sky” and impacted the ground inverted oriented on a southeast heading.



Figure 1 - The accident airplane where it came to rest inverted in a field

A postaccident examination revealed ground impact marks from the outline of the wings, which indicated that the airplane impacted the ground in a flat and wings level inverted attitude. The wing fuel tanks were found breached, and a significant amount of fuel was noted in the dirt under the airplane. The cockpit was crushed into the ground and partially buried. The propeller blades were twisted and bent and also partially buried in the ground. The flaps were found near full extension.

B. ON-SCENE PARTICIPANTS

Michael Wilson – Baton Rouge FSDO
Richard Gordon – Baton Rouge FSDO
Dakota Lowe – Air Tractor

C. ACCIDENT SITE AND EXAMINATION SUMMARY

The wreckage was found near the center of a fallow field about 6 miles north-northwest of Clayton, LA, 850 ft west of US Highway 425. Power transmission lines were located about 1,000 ft west of the wreckage, running north-northwest. Thick tree growth made up the northern edge and the southwest corner of the accident field. The western edge of the accident field contained sparse trees and shrubs. The east edge of the field contained shrubs and bushes. Power distribution lines were located along the east side of US Highway 425. Small fragments of yellow paint and clear, tinted, plastic, consistent with the cockpit windows were found aft of the main wreckage. There were no discernable ground scars leading up to the wreckage. There were no signs of pre- or post-impact fire. The airplane was found upside down with a heading of 122°.

The airplane was equipped with a five-point AmSafe inflatable restraint (airbags). The webbing of the harness and lap belt was found separated consistent with having been cut. The lap belt and shoulder harness buckles were found buckled outside the cockpit. The crotch strap was not located during the on-scene examination. The airbags were found in the deployed state. The preimpact position of the powerplant control levers could not be determined due to the impact forces. The power quadrant was found with the power lever in a mid-power position, the propeller lever was near the feather position, and the condition lever near the ground idle position.

LANDING GEAR:

The main landing gear was found attached to the fuselage with no discernable impact damage. The tail gear was found attached to the fuselage with no discernable impact damage.

WINGS:

The wing center splice was found intact. The main spars remained attached to the fuselage attach points. The left rear spar was found separated from the fuselage attach point consistent with overstress. The rear spar attach hardware was found installed in the proper location. The right rear spar remained attached to the fuselage attach point. The left wing was found with crush damage in the downward direction. Fragments of red glass were found on the ground near the left wing tip. The left aileron and flap were found attached to the wing. The inboard trailing edge rib was found pressed up against the outboard end of the aileron. The inboard end of the aileron was pressed against the outboard end of the flap. The inboard end of the flap was found with crush damage in the outboard direction. The right wing was found with crush damage in the downward direction with the outboard leading edge bent down. Fragments of green glass were found on the ground near the wingtip. The right aileron and flap were found attached to the wing with relatively little damage.

Each of the wings were equipped to hold 117 gallons of fuel in the integral wing fuel tanks for a total of 234 gallons. The fuel tanks were found ruptured.

EMPENNAGE:

The empennage surfaces were present at the aft end of the fuselage. The vertical fin was found attached to the aft fuselage with crush damage in the downward and aft direction. The rudder was found attached to the vertical fin. The top of the rudder exhibited crush damage in the downward direction. Fragments of the fiberglass rudder tip were found in an impact crater below the rudder wreckage. The left horizontal stabilizer was found attached to the fuselage bent in the downward direction outboard of the V-strut attach point. The left elevator remained attached to the horizontal stabilizer. The left elevator was found bent downward outboard of the V-strut. The right horizontal stabilizer was found rotated upward at the fuselage attach point. The stabilizer brace assembly was found separated, displaced inboard. The leading edge of the right elevator balance horn was found with crush damage in the down and aft direction.

FLIGHT CONTROLS:

All flight control surfaces were located with the main wreckage. The flight controls were damaged, but flight control continuity was established to the extent possible by the condition of the wreckage. Flight control continuity could not be established due to impact damage; however, all observed separations were consistent with overstress.

Elevator Controls

The elevator controls are manually operated by steel and aluminum pushrods connecting the control stick to the elevator control horns through two control idlers. The controls were found to be continuous from the control stick to the elevator control horns.

Rudder Controls

The rudder controls are manually operated by a pair of stainless-steel cables running directly from the rudder pedal assemblies to the rudder control horns. Both rudder cables remained attached at the rudder control horn. The right rudder cable was traced forward and found to be continuous to the right rudder pedal. The left rudder cable was traced forward to the cockpit and found to be continuous to the aluminum pedal adjust channel which was separated from the left rudder pedal. The channel was found fractured through one of the adjustment holes. The T-pin was found installed in the rudder pedal.

Aileron Controls

The aileron controls are manually operated by steel and aluminum pushrods connecting the control stick to the aileron control horns through a torquetube and multiple bellcranks and idlers. In addition, the AT-502 ailerons incorporate a drooping feature that lowers both ailerons in conjunction with extension of the flaps. The aileron drooping controls are documented below under "Flap System". The primary aileron controls were continuous to the right aileron except for a separation in the inboard rod end bearing of the aluminum wing mounted pushrod. The left aileron controls were found to be continuous from the control stick to the aileron. Continuity of both aileron controls outboard of the inboard aluminum wing mounted pushrod rod end was established through sympathetic movement of the inboard rod ends when the ailerons were moved.

Flap System

The flap actuator was found near the fully extended position. The extension of the flap actuator measured approximately 3 1/4 inch, which corresponds to a flap extension of 25.4°. The flap control system was found to be continuous from the flap actuator to the flap arms. The aileron drooping system was found to be continuous.

POWERPLANT:

The powerplant remained attached to the engine mount and fuselage. The engine was found to have separated at the “A” flange. The reduction gearbox and propeller were found at the front of the main wreckage near the main powerplant wreckage. The engine was equipped with five-bladed constant speed, fully reversible, propeller. The propeller hub was found attached to the reduction gearbox. All propeller blade shanks were found attached to the propeller hub. Two of the propeller blades were found to have fractured near their shank. The fractured portions of the blades were found in the impact crater containing the propeller hub.

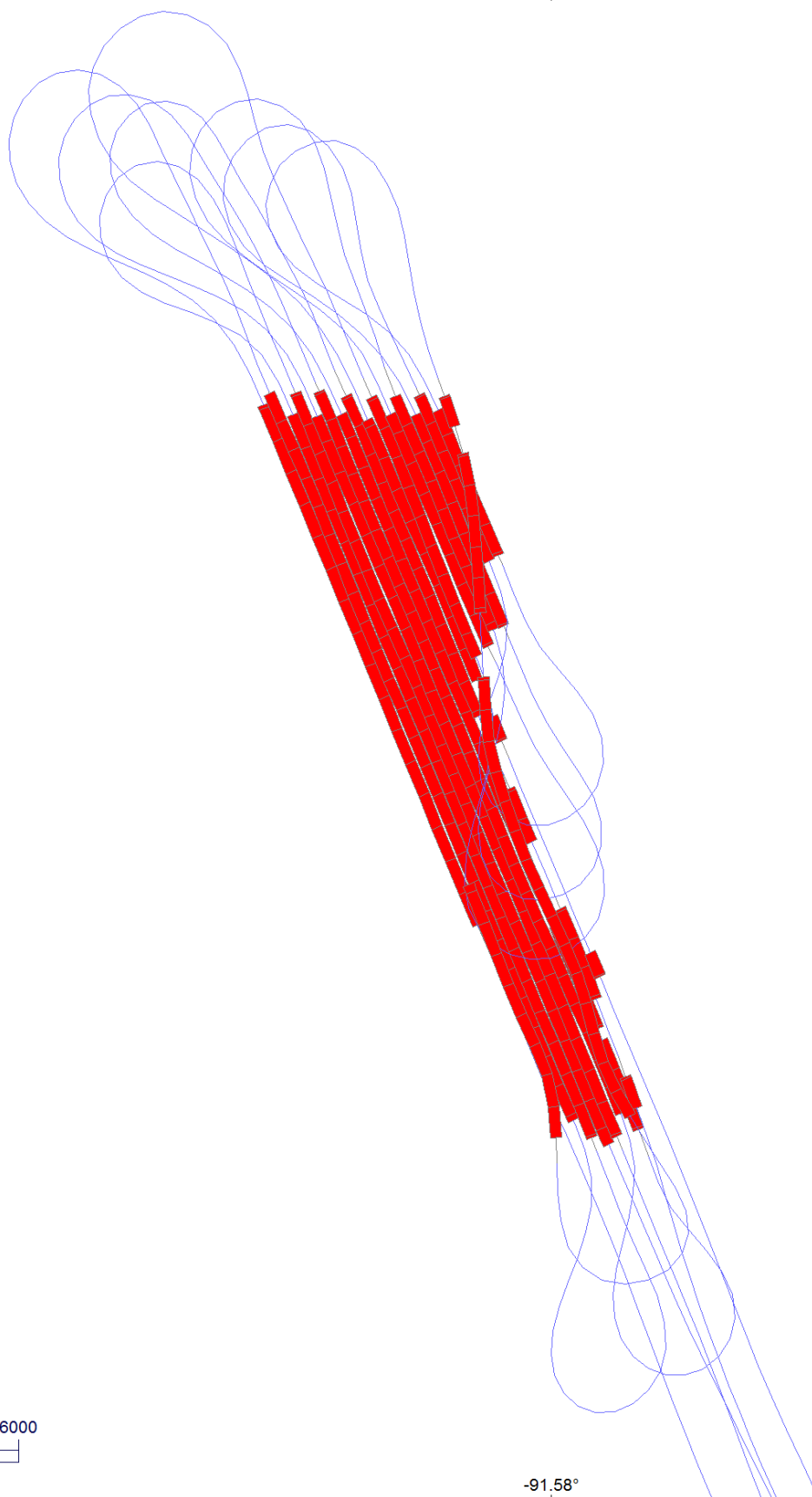
MAINTENANCE RECORDS

The airplane’s maintenance records were not available during the course of the investigation. Therefore, an assessment of the airplane’s recent maintenance could not be made. However, there were no anomalies found during the wreckage examination which would have questioned the airworthiness.

SATLOC:

A SatLoc M3 Bantam GPS (s/n 1739-HH12998-0024) and corresponding USB flash drive were removed from the airplane and sent to the NTSB Vehicle Recorders Lab for examination and data download. The data revealed most of the accident flight, except the last ~30 seconds. The end of the data was likely not recorded due to the unit’s recording latency.





Location, Date: Clayton, LA, 05/18/21

NTSB No. CEN21LA223

