



Air Tractor, Inc.
Accident Investigation

EXAMINATION NOTES

NTSB Accident Number:

CEN23LA425

Date & Location of Accident:

9/28/23
Herington, KS

NTSB REQUESTED CONFIDENTIAL:

The information contained in this report is produced for the sole purpose of providing observations and information to the NTSB and/or FAA during an active accident investigation. No entity may release or share this information prior to its inclusion in the NTSB's public docket without the express written consent of Air Tractor, Inc.

PREPARED BY:

Dakota Lowe
Air Tractor, Inc.



Example of AT-802A

The information contained in this report is the result of traveling to the George's Aircraft Repair on 11/21/23 under the supervision of NTSB Investigator Michael Hodges.

This report is subject to revision as additional information becomes available. The intent of this report is to provide details relating to the investigation of the subject accident. This report is not to be shared with any person outside the scope of this official investigation.

FUSELAGE:

The wreckage was found in a hanger with the wings, horizontal stabilizers, elevators, and main landing gear separated from the fuselage. The fuselage was found upright with no noticeable damage.

The airplane was equipped with AmSafe Inflatable Restraints (airbags), which were found in the undeployed state. The two inflator EMAs were found connected to the inflators. The EMAs were disconnected during the exam. The harnesses were found unbuckled.

The airplane was confirmed to be N445HA, an Air Tractor AT-802, serial number 802-0633 which was manufactured in 2016. The Hobbs meter was found to show 3360.3 hours on the airframe.

LANDING GEAR:

The landing gear was found separated from the fuselage. The left main gear spring was found broken near the fuselage attach location. The right main gear was found intact.

WINGS:

The wings were found separated from the fuselage. The right wing was found with bending in the upward direction on the outboard end to the wing. The right wingtip was found with crush damage in the upward direction on the forward underside of the wing. The right flap and aileron were found separated from the wing.

The left wing was found with bending in the upward direction to the outboard end of the wing. The left flap and aileron were found separated from the left wing.

Each of the wings were equipped to hold 189 gallons of fuel in the integral wing fuel tanks for a total of 378 gallons.

EMPENNAGE:

The horizontal stabilizers were separated from the fuselage. The elevators were separated from the horizontal stabilizers. No impact damage was observed on the horizontal stabilizers or elevators.

The vertical fin was attached to the fuselage. The rudder was found attached to the vertical fin. No impact damage was observed on the vertical fin or rudder.

FLIGHT CONTROLS:

Flight control continuity was established to the extent possible by the condition of the wreckage. All observed separations were consistent with separation occurring during recovery of the airplane.

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 aft pushrod through movement of the pushrod when the control stick was moved. The pushrod was found separated from both elevator control horns. The elevator control horns were found intact attached to each elevator.

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 to the rudder pedals. The control cables were found to be continuous from the rudder pedals to the rudder control horn.

Aileron Controls

The aileron controls are manually operated by steel and aluminum pushrods connecting the control stick to the aileron control horns through torque tubes, bellcranks, and idlers.

The aileron controls were found to be continuous from the control stick to the fuselage mounted idlers through movement of the idlers when the control stick was moved. The aluminum pushrods were separated from the fuselage idlers. The controls were found to be continuous from the aluminum pushrods to the steel wing mounted pushrods through movement of the steel wing mounted pushrod when the inboard end of each aluminum pushrod was moved. The aft end of each steel wing pushrod was separated from each aileron control horn. The aileron control horns were intact, attached to the ailerons.

Flap System

The flap actuator was found in the fully retracted (0°) position. The flap controls were found to

be continuous from the flap actuator to each of the torque tube arms. The flap pushrods were found separated from the torque tube arms. The pushrods were found separated from the flap control horns. The flap control horns were found intact, attached to each flap.

BRAKE/RUDDER SYSTEM:

The main gear spring mounted brake lines were found separated at the fuselage fitting so that the brake system was open, and no pressure was developed when the brakes were depressed. The aft rudder pedals were found in the forward adjustment position. While keeping the brake pedals in the neutral position, the rudder pedals were found to move through the full range of motion. While keeping the rudder pedals in the neutral position, the brakes were found to move through the full range of motion. While holding full left rudder deflection, the left brake pedal motion was found to be restricted by the upper spray valve pushrod.

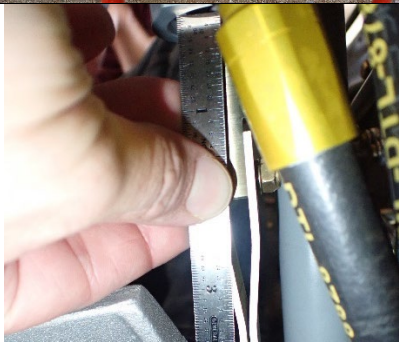
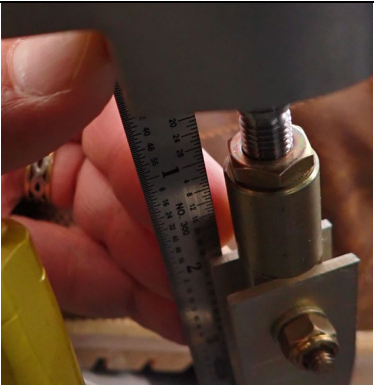
A quantitative value for the interference was obtained by measuring the distance between the bottom of the master cylinder housing and the top of the rudder pedal attach straps. The measurement with the brake pedal in the neutral position was found to be 1 1/8 in. The measurement with full brake deflection and the rudder in the neutral position was found to be 2 1/4 in. The measurement with full left rudder and the brake depressed to contact with the upper spray valve pushrod was 1 3/4 in.

The forward rudder and brake pedals were found to move to their full extent without interference.

DISTURBANCE OF WRECKAGE:

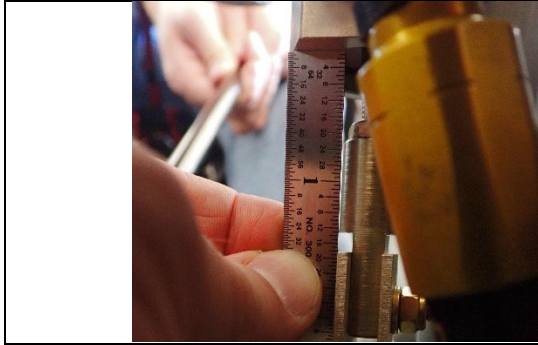
Our disturbance of the wreckage was limited to handling components to the extent necessary for identification and documenting their condition, including removing inspection covers/access panels. We did not make any modification to the aircraft wreckage that would intentionally result in loss of evidence.

No portion of the wreckage was removed by Air Tractor personnel during our involvement in this accident investigation except for an electronics international MVP-50T (S/N: 174553) which was removed for data download. The data download was unsuccessful, and the unit was taken possession of by the NTSB.

 A photograph showing the rudder of an airplane on a tarmac. A red curved line is drawn over the rudder to indicate its deflection angle to the left.	Full rudder deflection to the left = 24°
 A photograph showing the rudder of an airplane on a tarmac. A red curved line is drawn over the rudder to indicate its deflection angle to the left.	With brake fully depressed, rudder deflection = 17°
 A close-up photograph of a hand holding a ruler to measure the distance between a master cylinder and a pedal attach plate. The measurement is approximately 1 1/4 inches.	Without input, the measurement between the master cylinder and the pedal attach plates was found to be $1 \frac{1}{4}''$
 A close-up photograph of a hand holding a ruler to measure the distance between a master cylinder and a pedal attach plate. The measurement is approximately 1 31/32 inches.	With rudder in near neutral position and brake pedal fully depressed, the distance between the master cylinder and pedal attach plates was measured to be $1 \frac{31}{32}''$

Exemplar Airplane: 802-1082

11/8/23



With the rudder fully depressed, and the pedal against the spray valve pushrod, the distance between the master cylinder and pedal attach plates measured $1 \frac{9}{16}$