



Aviation Investigation Factual Report

Location:	Levelland, Texas	Accident Number:	CEN15LA182
Date & Time:	March 26, 2015, 14:55 Local	Registration:	N136DB
Aircraft:	AIR TRACTOR INC AT 400	Aircraft Damage:	Substantial
Defining Event:	Flight control sys malf/fail	Injuries:	1 Serious
Flight Conducted Under:	Part 91: General aviation - Flight test		

Factual Information

On March 26, 2015, about 1455 central daylight time, an Air Tractor Inc., AT-400 airplane, N136DB, was substantially damaged during a precautionary landing on runway 35 at the Levelland Municipal Airport (KLLN), Levelland, Texas. The commercial pilot was seriously injured. Visual meteorological conditions prevailed for the flight, which without a flight plan.. The airplane was registered to and operated by Devil Dusters Inc., under the provisions of 14 Code of Federal Regulations Part 91 as a post maintenance test flight. The local flight was originating at the time of the accident.

According to the pilot, he was asked by HSI Turbine to "test fly" his airplane which they had just rebuilt. During a ground run of the engine an issue with the throttle linkage was found and corrected. The pilot conducted a preflight of the airplane and did not note any issues. After restarting the engine, the pilot went through his preflight checklist including verification that the flight controls were free and correct. The pilot did not discover any discrepancies during the preflight check and the takeoff roll was uneventful.

As the airplane leveled out on the crosswind leg of the traffic pattern, the flight controls felt "stiff." The pilot elected to land the airplane and have the flight controls examined. During the downwind and crosswind legs of the pattern the flight controls continued to feel stiff. After turning to the final leg in the traffic pattern, the airplane started to roll to the left. The pilot attempted to level the wings at which time the flight controls "became loose" and the pilot observed the left aileron "flopping" up and down. The right aileron continued to work correctly.

While trying to land on runway 35, the airplane bounced and rolled to the left. On the second bounce the pilot added power to try and regain control of the airplane. The airplane immediately rolled to the left and the left wing impacted the ground. The airplane cartwheeled and came to rest to the west of runway 35. The empennage, fuselage, and both wings were substantially damaged.

According to the pilot, he had purchased the airplane as a "wreck" in Minnesota. It did not have an engine or propeller and had damage to the right wing and landing gear. He brought the airplane to HSI Turbine during the summer of 2014 to have it repaired. According to the owner of HSI Turbine, the right wing was sent to Air Tractor to be repaired. Several mechanics and mechanic's assistants worked on the airplane and during interviews, they recalled that it was a long project that they worked on sporadically over the winter and spring. All of the mechanics and assistants reported using the maintenance manuals provided by Air Tractor to guide all of their work. All of the mechanics and assistants reported using the existing hardware on the airplane to reinstall the wings and flight controls.

One assistant recalled helping to remount the wings on the airplane and recalled that was in October or November of 2014. Another mechanic recalled installing the ailerons in January of 2015. The maintenance on the airplane was signed off on just prior to the accident flight. Work orders for the airplane, provided by HSI Turbines, indicated that "new hardware" had been used for the installation of the horizontal stabilizer, elevator, rudder, and wings. Specific work on the ailerons was not documented in the work orders provided.

An inspector with the Federal Aviation Administration and an investigator with Air Tractor examined the wreckage of the airplane. Control continuity to the elevator and rudder was confirmed. Separation points were consistent with overload. Control continuity was established to the right aileron control. All of the hardware was installed correctly and separation points were consistent with impact forces and methods used to recover the wreckage from the accident site.

Control continuity was established from the left aileron control, inboard to the long aileron pushrod. The hardware to connect the long aileron pushrod to the aileron bellcrank was not present. The mounting surface on the aileron pushrod was not damaged or elongated, consistent with the hardware not being present prior to the impact sequence. An examination of the remaining wreckage and accident site did not locate the missing hardware.

According to the Air Tractor AT-400 Owner's Manual and Parts Manual, an AN24-19A clevis bolt and an AN364-428 nut should be used to connect the pushrod to the bellcrank. The hardware should be torqued between 30 and 40 inch pounds.

Pilot Information

Certificate:	Commercial	Age:	57
Airplane Rating(s):	Single-engine land	Seat Occupied:	Single
Other Aircraft Rating(s):	None	Restraint Used:	4-point
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	November 5, 2014
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	July 14, 2014
Flight Time:	15792 hours (Total, all aircraft), 200 hours (Total, this make and model), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	AIR TRACTOR INC	Registration:	N136DB
Model/Series:	AT 400	Aircraft Category:	Airplane
Year of Manufacture:	1983	Amateur Built:	
Airworthiness Certificate:	Restricted (Special)	Serial Number:	400-0504
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	March 15, 2015 Annual	Certified Max Gross Wt.:	6000 lbs
Time Since Last Inspection:	0 Hrs	Engines:	1 Turbo prop
Airframe Total Time:	10680 Hrs as of last inspection	Engine Manufacturer:	Pratt & Whitney
ELT:	Not installed	Engine Model/Series:	PT6A 15AG
Registered Owner:	DEVIL DUSTERS INC	Rated Power:	680 Horsepower
Operator:	DEVIL DUSTERS INC	Operating Certificate(s) Held:	Agricultural aircraft (137)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KLBB,3282 ft msl	Distance from Accident Site:	28 Nautical Miles
Observation Time:	14:53 Local	Direction from Accident Site:	90°
Lowest Cloud Condition:	Few / 26000 ft AGL	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	6 knots / None	Turbulence Type Forecast/Actual:	/ None
Wind Direction:	310°	Turbulence Severity Forecast/Actual:	/ N/A
Altimeter Setting:	30.18 inches Hg	Temperature/Dew Point:	16°C / -7°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Levelland, TX (KLLN)	Type of Flight Plan Filed:	None
Destination:	Levelland, TX (KLLN)	Type of Clearance:	None
Departure Time:	14:55 Local	Type of Airspace:	Class G

Airport Information

Airport:	Levelland Municipal Airport KLLN	Runway Surface Type:	Asphalt
Airport Elevation:	3514 ft msl	Runway Surface Condition:	Dry
Runway Used:	35	IFR Approach:	None
Runway Length/Width:	6110 ft / 75 ft	VFR Approach/Landing:	Forced landing;Go around;Precautionary landing

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious	Latitude, Longitude:	33.552501,-102.372497(est)

Administrative Information

Investigator In Charge (IIC):	Rodi, Jennifer
Additional Participating Persons:	William J Fitzgerald; FAA Flight Standards District Office; Lubbock, TX Kyle Schroeder; Air Tractor; Olney, TX
Report Date:	June 5, 2015
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=90947

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).