



Aviation Investigation Final Report

Location:	Arriba, Colorado	Accident Number:	CEN11LA323
Date & Time:	May 5, 2011, 17:30 Local	Registration:	N5192F
Aircraft:	AIR TRACTOR INC AT-402A	Aircraft Damage:	Substantial
Defining Event:	Controlled flight into terr/obj (CFIT)	Injuries:	1 Serious
Flight Conducted Under:	Part 137: Agricultural		

Analysis

The pilot completed an aerial application portion of his flight and departed from the work area. The airplane collided with the ground at a high speed in a flat, open field about 7 miles from the work area. The pilot sustained serious injuries and was unable to recall any of the events preceding the accident. Postaccident examination of the airplane did not identify any preimpact abnormalities with the airframe or engine. The airplane's three-bladed propeller displayed signatures that were consistent with the engine producing power at the time of impact. Data recovered from an on-board GPS unit tracked the airplane from departure to the accident site. The data showed that, during the final minute of the flight, the airplane's airspeed increased and its altitude decreased. The flight profile is consistent with a controlled flight into terrain (CFIT) for undetermined reasons.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's controlled flight into terrain for undetermined reasons.

Findings

Aircraft	Altitude - Not attained/maintained
Not determined	(general) - Unknown/Not determined

Factual Information

History of Flight

Enroute	Controlled flight into terr/obj (CFIT) (Defining event)
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On May 5, 2011, about 1730 mountain daylight time an Air Tractor AT-402A airplane, N5192F, impacted terrain after descending from cruise flight near Arriba, Colorado. The commercial pilot received serious injuries. The airplane sustained substantial damage. The aircraft was registered to and operated by a private individual under the provisions of 14 Code of Federal Regulations Part 137 agricultural flight. Visual meteorological conditions prevailed for the flight, which was not operating on a flight plan. The airplane departed a private airfield about 1630.

A witness observed the airplane at a low altitude heading in a southeasterly direction. Shortly after that, the airplane impacted the ground at a high rate of speed. The witness also noted that the airplane was not performing aerial application at the time.

The first responders were able to assist the pilot from the airplane. The pilot was hospitalized and could not remember the details of the flight.

A Federal Aviation Administration Inspector responded to the accident site, which was a wide open flat field used for farm crops and no trees or obstacles in the vicinity. The airplane had extensive damage to the airframe and no postcrash fire. All components of the airplane were accounted for at the accident site.

The wreckage was recovered and a follow-up exam conducted at a salvage yard. Examination of the wreckage at the salvage yard revealed control continuity and no pre-impact abnormalities with the airframe. A visual examination of the propeller revealed that all three blades had similar bends and marks. One propeller blade had about 6-inches of the blade tip torn off. Two blades were curled towards the non-cambered side with polishing of the blades. The third blade had multiple bends. The signatures and marks on the three-bladed propeller are consistent with engine power at the time of the accident.

A SOTLOC global positioning system (GPS) data card was removed from the airplane and forwarded to the NTSB Vehicle Recorders Laboratory for data extraction. Review of the SATLOC data for the accident date started near Arriba, Colorado, at 1536:40 mountain standard time [the time has not been corrected for daylight savings]. The data tracked the airplane in a northwest direction, before the airplane appeared to work an area with multiple back-n-forth tracks. An individual track was then identified as the airplane headed in an easterly direction. The data revealed the airplane was at an altitude of about 5,300 (mean sea level) and an airspeed of 140 knots. The altitude remained about the same until approximately

one minute before the data ends at 1626:27. About 1625:00, the airplane started a descent from 5,300 feet and ended at an altitude of about 5,033 feet. According to Google Earth, the elevation of the ground in the general vicinity of the accident site was about 5,080 feet. In the last two minutes of data, the airplane increased its speed from about 140 knots to 158 knots, when the data ends.

Pilot Information

Certificate:	Commercial; Flight instructor	Age:	54, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Single
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane single-engine	Toxicology Performed:	No
Medical Certification:	Class 2 Unknown	Last FAA Medical Exam:	May 2, 2011
Occupational Pilot:		Last Flight Review or Equivalent:	November 6, 2010
Flight Time:	(Estimated) 8209 hours (Total, all aircraft), 1812 hours (Total, this make and model), 8029 hours (Pilot In Command, all aircraft), 35 hours (Last 90 days, all aircraft), 24 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	AIR TRACTOR INC	Registration:	N5192F
Model/Series:	AT-402A	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Restricted (Special)	Serial Number:	402A-1093
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	October 10, 2010 Annual	Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	1 Turbo prop
Airframe Total Time:	2249 Hrs as of last inspection	Engine Manufacturer:	P&W
ELT:	Not installed	Engine Model/Series:	PT6A SERIES
Registered Owner:	On file	Rated Power:	500 Horsepower
Operator:	On file	Operating Certificate(s) Held:	None
Operator Does Business As:	On file	Operator Designator Code:	ZJZG

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KLIC	Distance from Accident Site:	25 Nautical Miles
Observation Time:	17:55 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	10 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	160°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.09 inches Hg	Temperature/Dew Point:	18°C / -3°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Arriba, CO	Type of Flight Plan Filed:	None
Destination:	Arriba, CO	Type of Clearance:	None
Departure Time:	16:30 Local	Type of Airspace:	

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:	39.279323,-103.270805(est)

Administrative Information

Investigator In Charge (IIC): Hatch, Craig

Additional Participating Persons: Joshua I Pritchard; FAA FSDO; Denver, CO

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Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=79049>

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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](#).