



Aviation Investigation Final Report

Location:	SHELBYVILLE, Illinois	Accident Number:	CHI00LA101
Date & Time:	April 1, 2000, 10:30 Local	Registration:	N224V
Aircraft:	Aerotek	Aircraft Damage:	Substantial
Defining Event:	PITTS S-2A	Injuries:	1 Fatal, 1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The airplane impacted a golf cart during a grass field landing on runway 14. The golf cart driver was spraying weeds near the edge of runway 14. Ground scarring preceding the accident site began at a point located near the centerline of runway 22 and offset 40 feet to the west from runway 14's left edge. The ground scarring continued to a pre-impact location of the golf cart and continued onto runway 14 where both the accident airplane and golf cart came to rest. The green colored golf cart was used as an airport service vehicle and was not equipped with lighting, flags or a radio. Advisory circular 150/5210-5B, Painting, Marking, and Lighting of Vehicles used on an Airport, provides guidance, specifications, and standards for the painting, marking, and lighting of vehicles operating in the airport operations area. There were no local Notices to Airmen (NOTAM) issued for runway/airport maintenance.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the proper touchdown point and proper alignment not attained by the pilot. Contributing factors were the unmarked golf cart, color, and lack of a radio. Additional factors were the runway maintenance performed by the driver of the golf cart and the NOTAM(s) not issued by airport personnel.

Findings

Occurrence #1: ON GROUND/WATER COLLISION WITH OBJECT
Phase of Operation: LANDING

Findings

1. (F) AIRPORT EQUIPMENT - UNMARKED
2. (C) PROPER TOUCHDOWN POINT - NOT ATTAINED - PILOT IN COMMAND
3. (F) AIRPORT EQUIPMENT - INADEQUATE
4. (C) PROPER ALIGNMENT - NOT ATTAINED - PILOT IN COMMAND
5. (F) RUNWAY MAINTENANCE - PERFORMED - DRIVER OF VEHICLE
6. (F) NOTAMS - NOT ISSUED - AIRPORT PERSONNEL

Factual Information

On April 1, 2000, at 1030 central standard time, an Aerotek Pitts S-2A, N224V, owned and piloted by a commercial pilot, received substantial damage during landing on runway 14 (3,264 feet by 200 feet, grass) at the Shelby County Airport (2H0), Shelbyville, Illinois. The airplane impacted a golf cart that was being used to apply weed killer adjacent to runway 14. The driver of the golf cart sustained fatal injuries. The pilot reported no injuries. Visual meteorological conditions prevailed at the time of the accident. The 14 CFR Part 91 personal flight was not operating on a flight plan. The flight departed from the Coles County Memorial Airport (MTO), Mattoon, Illinois, at 1005, en route to 2H0.

According to the Shelby County Sheriff's report, the golf cart driver was spraying weed killer around the runway markers prior to the accident.

A witness reported the following in a written statement, "I arrived at the Shelbyville airport at approximately 9:45 am on April 1, 2000. I was there to pick up my son, believing he would arrive around 10:15 am. The [relative of the golf cart driver] and four small children were there... We heard a radio transmission from inside and she said it must be my son calling. We heard the plane before we saw it. It approached from the south, flying in a northern direction. The plane turned to land on the runway behind us, on the west side of the airport. Instead of landing, the plane lifted up again and flew south, then made a sharp turn to head north and came around headed southeast again. [A family member of the driver] commented that they were showing off for me, as we still believed that it was my son arriving. [The family member of the driver] said they were going to land on the grass strip, and that Shelbyville was known for having a very good grass strip. As the plane descended, [The family member of the driver] said they were way off of the runway and she screamed that they were going to hit [the driver] spraying weeds at the east side of the airport. He was headed south with his back to the plane. The plane came down and hit the cart... [The pilot] said "I'm so sorry sir, I didn't see you..."

The pilot reported the following in a written statement. "I departed MTO this date at approximately 1605Z on a pleasure flight to Shelby County Memorial Airport 2H0 for touch and go's on their grass runways. 2H0 is apx 27 nm from MTO on the 265 [degree] radial. Arriving at 2H0 just before 1630Z. I announced L downwind for R14. There was no response. I announced again on turns to base and final. Although there was no response, just turning base, I observed a taperwing was just touching down on R14. I continued the approach, but he did not fully exit the runway, so I announced, and initiated, a go around. On the go-around, I announced three more times on the final announcement, turning base to final, a tri-pacer responded saying they were turning downwind at 2,000 ft. The approach and final was normal, with a normal three-point touchdown. After a few seconds of rollout, the aircraft impacted an unseen, unknown object and came to an abrupt stop, tail up about 45 degrees and sitting on

the nose and right wingtip. I still could not see what the aircraft had hit. I shut off the mags, master, electronics, and fuel and looked about. I observed a person apparently lying outboard of the right wings..." "...At no time prior to impact was I aware of any persons or vehicles on the field. I do not recall any flashing beacons or other safety warning signals."

According to the on-scene Federal Aviation Inspector, there was a 430 foot long ground scar from a point located on runway 22 to the accident site. The point on runway 22 was located 40 feet to the southwest from the left edge of runway 14. The accident site was offset approximately 5 feet from the left edge and towards the centerline of runway 14.

The pilot was involved in a landing accident of a Engleman Pitts S1, N64DE, at MTO, on May 15, 1999. The National Transportation Safety Board's probable cause of the accident was, "The pilot's failure to maintain directional control and inadvertent ground loop/swerve. A related factor was the crosswind."

The airport manager stated that the golf cart driver had mowed runways and performed weeding at the airport for approximately two years. The golf cart was green in color and not equipped with vehicle lighting or a radio. He also stated that the airport mowing equipment was equipped with lights. The airport mowing equipment was not equipped with radios.

Advisory Circular 150/5210-5B, Painting, Marking, and Lighting of Vehicles Used on an Airport, states, "This advisory circular (AC) provides guidance, specifications, and standards, in the interest of airport personnel safety and operational efficiency, for painting, marking, and lighting of vehicles operating in the airport air operations area." The AC specifies the color of airfield service vehicles. Under Vehicle Marking, the AC states, "...At airports without air traffic control facilities, flags should be provided on these vehicles." Under Vehicle Lighting, the AC states, "The standard for identification lighting of vehicles routinely operating in the AOA [airport operations area] is an appropriately sized flashing or steady burning beacon, mounted on the uppermost part of the vehicle such that it is conspicuous from any direction including the air..." AC 150/5210-5B is included in this report.

There were no local Notices to Airmen issued for the application of weed killer adjacent to the runway.

Pilot Information

Certificate:	Commercial	Age:	54, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Rear
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	Last FAA Medical Exam:	January 7, 2000
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	906 hours (Total, all aircraft), 64 hours (Total, this make and model), 818 hours (Pilot In Command, all aircraft), 40 hours (Last 90 days, all aircraft), 28 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Aerotek	Registration:	N224V
Model/Series:	PITTS S-2A PITTS S-2A	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Aerobatic	Serial Number:	2216
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	March 1, 2000 Annual	Certified Max Gross Wt.:	1575 lbs
Time Since Last Inspection:	1319 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	1319 Hrs	Engine Manufacturer:	Lycoming
ELT:		Engine Model/Series:	AEIO360
Registered Owner:	JIMMY T. STEWART	Rated Power:	200 Horsepower
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	DEC ,618 ft msl	Distance from Accident Site:	20 Nautical Miles
Observation Time:	15:50 Local	Direction from Accident Site:	356°
Lowest Cloud Condition:	Clear	Visibility	8 miles
Lowest Ceiling:	Broken / 11000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	180°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	16°C / -1°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	MATTOON (MTO)	Type of Flight Plan Filed:	None
Destination:	(2H0)	Type of Clearance:	
Departure Time:	10:05 Local	Type of Airspace:	Class G

Airport Information

Airport:	SHELBY COUNTY 2H0	Runway Surface Type:	Grass/turf
Airport Elevation:	618 ft msl	Runway Surface Condition:	Vegetation
Runway Used:	14	IFR Approach:	
Runway Length/Width:	3264 ft / 200 ft	VFR Approach/Landing:	Full stop;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	1 Fatal	Aircraft Explosion:	None
Total Injuries:	1 Fatal, 1 None	Latitude, Longitude:	39.399383,-88.80017(est)

Administrative Information

Investigator In Charge (IIC):	Gallo, Mitchell
Additional Participating Persons:	DAVE L SLAYBAUGH; SPRINGFIELD , IL
Original Publish Date:	May 8, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=48881

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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](#).