



Aviation Investigation Final Report

Location:	Donahue, Iowa	Accident Number:	CHI02LA227
Date & Time:	July 31, 2002, 11:00 Local	Registration:	N29FJ
Aircraft:	Jackovich Pitts S1D	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

While maneuvering, the engine and propeller stopped completely and a forced landing was executed into a bean field. On landing the airplane flipped over completely, coming to rest upright again, and was substantially damaged. The pilot reported entering a departure stall with full power which resulted in a relatively high pitch attitude. Immediately prior to the stall, the power was reduced to idle and the nose dropped rapidly as the aircraft stalled. The pilot reported that the aircraft may have experienced some rearward motion due to the high pitch attitude and abruptness of the stall. During the stall, the pilot stated that the engine and propeller both stopped completely. Attempts to start the propeller windmilling were not successful. The aerobatic engine had been modified to exhibit an "enhanced compression ratio", which increased propeller resistance to windmilling during the restart attempt. The amateur-built airplane did not have an engine starter installed. A post-accident engine examination revealed no anomalies determined to have existed prior the accident and/or attributable to the loss of power.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A loss of engine power for undetermined reasons.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: MANEUVERING

Findings

1. (C) REASON FOR OCCURRENCE UNDETERMINED
2. ENGINE ACCESSORIES,ENGINE STARTER - NOT INSTALLED

Occurrence #2: FORCED LANDING

Phase of Operation: EMERGENCY DESCENT/LANDING

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: EMERGENCY LANDING

Findings

3. TERRAIN CONDITION - CROP

Occurrence #4: NOSE OVER

Phase of Operation: EMERGENCY LANDING

Factual Information

On July 31, 2002, at 1100 central daylight time, an amateur-built Jackovich Pitts S1D, N29FJ, owned and piloted by a commercial pilot, was substantially damaged during a forced landing following a complete loss of engine power. The pilot departed the Davenport Municipal Airport (DVN), Davenport, Iowa, at 1030 cdt and was practicing in the local area when the engine and propeller both stopped during a stall. Attempts to restart the engine were not successful. An emergency landing was executed into a bean field approximately 7 miles north-northwest of the Davenport Airport. The flight was being conducted under 14 CFR Part 91 and was not on a flight plan. Visual meteorological conditions prevailed at the time of the accident. The pilot did not report any injuries.

In his written statement, the pilot reported entering a departure stall at a relatively steep attitude and with full power applied. Just prior to stall, he reduced power to idle. As the airplane stalled, the nose dropped "rapidly and vertically through the horizon". The pilot stated "I believe the aircraft may have had some reverse direction relative wind producing what some ... refer to as a 'whip stall'." Both the engine and propeller stopped completely as the nose dropped through the horizon, according to the pilot. Attempts to start the propeller windmilling were not successful. The pilot, then, proceeded "in best glide profile" to his selected forced landing site.

Post-accident examination revealed no anomalies with the engine. The pilot stated that the engine and aircraft were performing normally during the flight prior to the stall. Although the propeller was damaged during the landing, engine continuity was verified through rotation of the crankshaft. The pilot noted that the engine was modified to exhibit an enhanced compression ratio (10.5:1) and the propeller installed was a wood core, composite construction. In addition, due to weight and balance considerations, an engine starter was not installed in the aircraft. Approximately 8 gallons of fuel were found in the fuel tanks. No evidence of fuel contamination was noted.

Pilot Information

Certificate:	Commercial	Age:	46, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Single
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	November 12, 2001
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	March 16, 2002
Flight Time:	1029 hours (Total, all aircraft), 435 hours (Total, this make and model), 10 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Jackovich	Registration:	N29FJ
Model/Series:	Pitts S1D	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	7-0513
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	June 3, 2002 Condition	Certified Max Gross Wt.:	1150 lbs
Time Since Last Inspection:	4 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	375 Hrs at time of accident	Engine Manufacturer:	Lycoming
ELT:	Not installed	Engine Model/Series:	AEIO-360
Registered Owner:	On file	Rated Power:	200 Horsepower
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	DVN,753 ft msl	Distance from Accident Site:	7 Nautical Miles
Observation Time:	10:54 Local	Direction from Accident Site:	320°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	220°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.01 inches Hg	Temperature/Dew Point:	29°C / 21°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Davenport, IA (DVN)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	10:30 Local	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	41.716667,-90.675003

Administrative Information

Investigator In Charge (IIC):	SORENSEN, TIM
Additional Participating Persons:	Steve Smith; FAA – DesMoines FSDO; Ankeny, IA
Original Publish Date:	April 18, 2003
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=55480

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