Aviation Investigation Final Report

Location:	TEMPLE, Texas	**Accident Number:**	FTW99LA181
Date & Time:	July 4, 1999, 14:00 Local	**Registration:**	N69CS
Aircraft:	Pitts Special S-1C	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The experimental amateur-built aerobatic airplane impacted power lines during a forced landing following a loss of engine power. The pilot reported that after 1.8 hours of flight and 3 miles from his destination airport the 'engine stopped.' He stated that the fuel pressure gauge was indicating 'no pressure.' The pilot then turned on the fuel boost pump and ensured the mixture was rich, the throttle was full open, and the fuel selector was in the on position. He elected to make a forced landing to a field. During the emergency approach to the field, the engine 'began to run again;' however, it ran for only 30 to 45 seconds. The pilot then attempted a forced landing on a road, and the airplane impacted power lines, which the pilot stated that he 'never saw.' The FAA inspector reported that the main fuel tank contained approximately 4 gallons of fuel, and there was no header tank installed. Without a header tank, the airplane's unusable fuel while maneuvering is 5 gallons.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The loss of engine power due to fuel starvation, as a result of fuel moving away from the fuel supply outlets during maneuvering with a low fuel level, and the pilot's failure to maintain clearance with the power lines during the ensuing forced landing.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL
Phase of Operation: MANEUVERING

Findings
1. (C) FLUID,FUEL - LOW LEVEL
2. (C) FLUID,FUEL - STARVATION

Occurrence #2: FORCED LANDING
Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: EMERGENCY DESCENT/LANDING

Findings
3. OBJECT - WIRE,TRANSMISSION
4. (C) CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND

Occurrence #4: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - EMERGENCY

Factual Information

On July 4, 1999, at 1400 central daylight time, a Pitts Special S-1C aerobatic experimental amateur-built airplane, N69CS, was substantially damaged when it impacted power lines following a loss of engine power while maneuvering near the Draughon-Miller Central Texas Regional Airport near Temple, Texas. The private pilot, sole occupant and part owner of the airplane, sustained minor injuries. Visual meteorological conditions prevailed, and a flight plan was not filed for the 14 Code of Federal Regulations Part 91 personal flight. The local flight originated from Temple, approximately 1215.

According to a written statement given to the FAA inspector, the pilot stated that he had flown to Georgetown, Texas, and was returning to Temple. The airplane had flown approximately 1.8 hours and was approximately 3 miles from the airport when the "engine stopped." He added that he scanned the instruments and found the fuel pressure gauge was indicating "no pressure." The pilot then turned on the fuel pump, checked that the fuel selector was in the on position, ensured that the mixture was in the rich position, and that the throttle was "full" open. The pilot initiated a forced landing to a field. At about 500 feet agl, the engine "began to run again," and the pilot elected to continue to Temple. The pilot stated that the engine only ran for 30-45 seconds, which "botched my approach into the field and left me no alternative but to land on a road." During the forced landing to the road, the airplane impacted power lines, which the pilot "never saw." The 900-pound airplane was arrested by the wires, and then fell from the power lines, impacting the ground with the tail section first. The power line support poles were damaged and electrical power was cut off to the local area.

The FAA inspector, who responded to the accident site, stated that the empennage was accordion crushed forward and burn marks were noted on the airplane and propeller spinner. He estimated that there was approximately 4 gallons of fuel remaining in the main fuel tank, and added that a header tank was not installed in the accident airplane. A header tank is an optional auxiliary fuel tank, which decreases the amount of unusable fuel in the fuel system while maneuvering. Without the header tank, the unusable fuel in the basic Pitts S-1 fuel tank, while maneuvering, is 5 gallons. See the enclosed literature for more information.

Numerous attempts to obtain a completed Pilot/Operator Aircraft Accident Report (NTSB Form 6120.1/2) were made by the NTSB investigator-in-charge; however, the pilot failed to submit the form.

Pilot Information

Certificate:	Private	**Age:**	36,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Center
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 3 Expired	**Last FAA Medical Exam:**	July 10, 1985
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	598 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Pitts Special	**Registration:**	N69CS
Model/Series:	S-1C S-1C	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	DEB-1
Landing Gear Type:	Tailwheel	**Seats:**	1
Date/Type of Last Inspection:	Unknown	**Certified Max Gross Wt.:**	900 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	Lycoming
ELT:	Not installed	**Engine Model/Series:**	O-320
Registered Owner:	ALAN JAMES GARCIA	**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:	TPL ,682 ft msl	**Distance from Accident Site:**	3 Nautical Miles
Observation Time:	13:57 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Scattered / 4600 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	10 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	170°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	33°C / 22°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	, TX (TPL)	**Type of Flight Plan Filed:**	None
Destination:	(TPL)	**Type of Clearance:**	None
Departure Time:	12:15 Local	**Type of Airspace:**	

Airport Information

Airport:		**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	
Runway Used:	0	**IFR Approach:**	
Runway Length/Width:		**VFR Approach/Landing:**	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Minor	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Minor	**Latitude, Longitude:**	31.079561,-97.249183(est)

Administrative Information

Investigator In Charge (IIC):	Lupino, Nicole
Additional Participating Persons:	ROBERT ANDERSON; SAN ANTONIO , TX
Original Publish Date:	June 22, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=46756