Aviation Investigation Final Report

Location:	Parowan, Utah	**Accident Number:**	LAX07LA184
Date & Time:	June 2, 2007, 13:15 Local	**Registration:**	N401PT
Aircraft:	Brook Lancair IV-P	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot was about 1 hour 15 minutes into the flight, and the airplane was cruising at 26,000 feet, when the turbo prop engine lost power with white smoke coming out of the exhaust. About a minute before the pilot had observed what he termed "splats" of moisture on the windscreen. He performed an emergency descent and at 12,500 feet attempted an engine restart. The restart attempt was unsuccessful. He glided to the nearest airport, circled, and performed a power-off landing. The airplane crossed the runway threshold at 120 knots, floated, and touched down at mid field. After touchdown, the airplane continued down the runway, off the end, and into terrain and a fence. The airplane came to rest with the landing gear collapsed. Federal Aviation Administration inspectors examined the airplane, and could not identify any mechanical abnormality with the engine or fuel system. The Pilot Operating Handbook states that an engine relight was possible below 13,000 feet mean sea level, and below 160 knots of airspeed. The pilot could not recall what his airspeed was when he attempted the engine restart. The airplane was not equipped with any type of engine inlet anti-ice or deicing equipment. The pilot did state that he had been in and out of moisture while at his 26,000 feet cruising altitude, but there had been no ice buildup on his wings or windscreen. A technical representative for Lancair stated that a 3/4 blockage of the engine cowling NACA induction scoop might be enough to starve the engine of air and induce a flameout.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A loss of engine power due to engine inlet icing. Contributing to the accident was the lack of engine inlet anti-icing capability.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: CRUISE - NORMAL

Findings
1. (C) WEATHER CONDITION - ICING CONDITIONS
2. (F) AIRCRAFT/EQUIPMENT INADEQUATE - OWNER/BUILDER
3. (C) INDUCTION AIR DUCTING - BLOCKED(PARTIAL)

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

Occurrence #3: ON GROUND/WATER COLLISION WITH OBJECT
Phase of Operation: LANDING - ROLL

Findings
4. TERRAIN CONDITION - GROUND
5. OBJECT - FENCE POST

Factual Information

On June 2, 2007, about 1315 mountain daylight time, an amateur built Brook Lancair IV-P, N401PT, made a forced landing following a loss of engine power at Parowan Airport, Parowan, Utah. The private pilot operated the airplane under the provisions of 14 CFR Part 91. The pilot and single passenger were not injured, and the airplane was substantially damaged. Visual meteorological conditions prevailed, and an IFR flight plan had been filed. The flight originated at Deer Valley Airport, Phoenix, Arizona, at 1100, and was en route to Hailey, Idaho.

The pilot reported to the National Transportation Safety Board investigator that he was about 1 hour 15 minutes into the flight, and the airplane was cruising at 26,000 feet, when the turbo prop engine quit with white smoke coming out of the exhaust. About a minute before he had observed "splats" of moisture on the windscreen. He performed an emergency descent to 15,000 feet, and at 12,500 feet attempted an engine restart. The restart attempt was unsuccessful. He proceeded to the nearest airport, which was Parowan Airport. He circled and performed a no-power approach to runway 04. The airplane crossed the runway threshold at 120 knots, floated, and touched down at mid field. After touchdown, the airplane continued down the runway, off the end, and into terrain and a fence. The airplane came to rest with the landing gear collapsed.

Federal Aviation Administration inspectors examined the airplane at the Parowan Airport. The inspectors determined that the wing vents were clear of debris; the center fuel tank vent was operational; the fuel boost pumps were energized and operated; the fuel system was clean; the engine igniters operated; the engine controls were properly connected to the engine; the engine rotated freely with no binding; and the engine driven fuel pump was operationally checked to function.

The Pilot Operating Handbook states that an engine relight was possible below 13,000 feet mean sea level, and below 160 knots of airspeed. The pilot could not recall what his airspeed was when he attempted the engine restart. The airplane was not equipped with any type of engine inlet anti-ice or deicing equipment. The pilot did state that he had been in and out of moisture while at his 26,000 feet cruising altitude, but there had been no ice buildup on his wings or windscreen. A technical representative for Lancair stated that a 3/4 blockage of the cowling NACA induction scoop might be enough to starve the engine of air and induce a flameout.

Pilot Information

Certificate:	Private	**Age:**	55,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	Glider	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3	**Last FAA Medical Exam:**	August 1, 2006
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	May 1, 2007
Flight Time:	2422 hours (Total, all aircraft), 305 hours (Total, this make and model), 2413 hours (Pilot In Command, all aircraft), 27 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Brook	**Registration:**	N401PT
Model/Series:	Lancair IV-P	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	LIV-408
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	May 1, 2006 Annual	**Certified Max Gross Wt.:**	3800 lbs
Time Since Last Inspection:		**Engines:**	1 Turbo prop
Airframe Total Time:	860 Hrs as of last inspection	**Engine Manufacturer:**	Walter
ELT:	Installed	**Engine Model/Series:**	601E
Registered Owner:	On file	**Rated Power:**	750 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:	KCDC	**Distance from Accident Site:**	
Observation Time:	12:53 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	7 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	300°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.05 inches Hg	**Temperature/Dew Point:**	28°C / -4°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Deer Valley, AZ (KDVT)	**Type of Flight Plan Filed:**	IFR
Destination:	Hailey, ID (KSUN)	**Type of Clearance:**	IFR
Departure Time:	11:00 Local	**Type of Airspace:**	

Airport Information

Airport:	Parowan Airport K1L9	**Runway Surface Type:**	Asphalt
Airport Elevation:	5930 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	4	**IFR Approach:**	None
Runway Length/Width:	5000 ft / 75 ft	**VFR Approach/Landing:**	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 None	**Latitude, Longitude:**	37.859722,-112.816108

Administrative Information

Investigator In Charge (IIC):	McKenny, Van
Additional Participating Persons:	Carl McGuire; Federal Aviation Administration; Salt Lake City, UT
Original Publish Date:	January 31, 2008
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=65926