Aviation Investigation Final Report

Location:	Westport, Washington	**Accident Number:**	SEA04LA157
Date & Time:	August 7, 2004, 15:00 Local	**Registration:**	N3086J
Aircraft:	Headrick Vans RV9A	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 Serious, 1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that he departed from his departure point with about 28 gallons of fuel. About 30 miles out from landing at his destination, the pilot noted that the fuel gage for the right tank (tank selected) was indicating about 2.5 gallons of fuel. When the flight reached the airport, the pilot flew a low downwind to check out the sand bar north of the airport as he and his passenger were planning on fishing in that area. The pilot then turned back to the airport and set-up for a landing on runway 30. The pilot reported that while on downwind, the engine started running rough, the rpm decreased, and the engine subsequently quit. The pilot initiated a forced landing just short of the runway. During the descent, the aircraft collided with trees and the ground. The pilot further stated that carburetor icing conditions were present in the area, however, he had not been utilizing carburetor heat prior to the loss of power. Inspection of the wreckage found that the right fuel tank was empty of fuel, while the left fuel tank still contained 15 gallons. The pilot reported that he had been operating off of the right fuel tank at the time of the loss of power. Inspection of the engine noted that the primer lines, fuel outlet line from the fuel pump and the carburetor bowl were void of fuel.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Fuel starvation as a result of the pilot's improper fuel management. Carburetor icing conditions and trees were a factor.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: APPROACH - VFR PATTERN - DOWNWIND

Findings
1. (C) FLUID,FUEL - STARVATION
2. (C) FUEL MANAGEMENT - IMPROPER - PILOT IN COMMAND
3. (F) WEATHER CONDITION - CARBURETOR ICING CONDITIONS

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

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

Findings
4. (F) OBJECT - TREE(S)

Factual Information

On August 7, 2004, about 1500 Pacific daylight time, an experimental Headrick Vans RV9A, N3086J, registered to and operated by the pilot as a 14 CFR Part 91 personal flight, experienced a loss of engine power while on downwind for landing at the Westport Airport, Westport, Washington. During the forced landing, the aircraft collided with trees and the terrain short of runway 30. Visual meteorological conditions prevailed at the time and no flight plan was filed. The aircraft was substantially damaged. The private pilot was seriously injured and the passenger received minor injuries. The aircraft departed from Eugene, Oregon, about one hour and thirty minutes prior to the accident.

During a telephone interview, the pilot reported that he departed from Eugene with about 28 gallons of fuel. About 30 miles out from landing, the pilot noted that the fuel gage for the right tank (tank selected) was indicating about 2.5 gallons of fuel. When the flight reached the airport, the pilot flew a low downwind to check out the sand bar north of the airport as he and his passenger were planning on fishing in that area. The pilot then turned back to the airport and set-up for a landing on runway 30. The pilot reported that while on downwind, the engine started running rough, the rpm decreased, and the engine subsequently quit. The pilot initiated a forced landing just short of the runway. During the descent, the aircraft collided with trees and the ground.

The pilot further stated that while in the pattern for landing, he heard other pilots reporting carburetor icing conditions. The nearest weather reporting facility was located at Hoquiam, Washington, located eight nautical miles northeast of the accident site, reported the weather at 1453 as a temperature of 66 degrees F and a dewpoint of 57 degrees. The attached carburetor icing chart indicates moderate icing - cruise power or serious icing - glide power for those conditions. The pilot reported that he had not been using carburetor heat prior to the loss of power.

A Federal Aviation Administration Inspector from the Seattle, Washington, Flight Standards District Office responded to the accident site. The inspector reported that the right fuel tank was empty of fuel, while the left fuel tank still contained some fuel. The pilot reported that he had been operating off of the right fuel tank at the time of the loss of power.

During the wreckage recovery by personnel from AvTech Services, Kent, Washington, on August 10, 2004, approximately 15 gallons of blue colored fuel was drained from the left fuel tank. The right fuel tank had been compromised and no fuel was present. AvTech personnel reported that no fuel staining discoloration from leakage onto the grass under the right wing was noted.

Investigators from the National Transportation Safety Board and the Federal Aviation

Administration, inspected the engine on August 13, 2004. During the inspection it was noted that the primer lines, fuel outlet line from the fuel pump and the carburetor bowl were void of fuel.

Pilot Information

Certificate:	None	**Age:**	45,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
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 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	September 3, 2003
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	June 5, 2004
Flight Time:	160 hours (Total, all aircraft), 40 hours (Total, this make and model), 100 hours (Pilot In Command, all aircraft), 40 hours (Last 90 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Headrick	**Registration:**	N3086J
Model/Series:	Vans RV9A	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	90325
Landing Gear Type:	Tricycle	**Seats:**	2
Date/Type of Last Inspection:	May 16, 2004 Annual	**Certified Max Gross Wt.:**	1800 lbs
Time Since Last Inspection:	40 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	68 Hrs at time of accident	**Engine Manufacturer:**	Lycoming
ELT:	Installed, not activated	**Engine Model/Series:**	O-320H-2AD
Registered Owner:	Michael J. Mansker	**Rated Power:**	160 Horsepower
Operator:		**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	HQM,18 ft msl	**Distance from Accident Site:**	8 Nautical Miles
Observation Time:	14:53 Local	**Direction from Accident Site:**	36°
Lowest Cloud Condition:		**Visibility**	10 miles
Lowest Ceiling:	Broken / 6000 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	11 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	250°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.26 inches Hg	**Temperature/Dew Point:**	19°C / 14°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Eugene, OR (EUG)	**Type of Flight Plan Filed:**	None
Destination:	Westport, WA (14S)	**Type of Clearance:**	None
Departure Time:	13:30 Local	**Type of Airspace:**	Class E

Airport Information

Airport:	Westport Airport 14S	**Runway Surface Type:**	Asphalt
Airport Elevation:	8 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	30	**IFR Approach:**	None
Runway Length/Width:	2250 ft / 50 ft	**VFR Approach/Landing:**	Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 Serious	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 Minor	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Serious, 1 Minor	**Latitude, Longitude:**	46.89722,-124.100555

Administrative Information

Investigator In Charge (IIC):	Eckrote, Debra
Additional Participating Persons:	Bruce A Kitelinger; FAA-FSDO; Renton, WA
Original Publish Date:	October 28, 2004
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=59873