



National Transportation Safety Board Aviation Accident Final Report

Location:	PAYSON, UT	Accident Number:	DEN99LA062
Date & Time:	04/01/1999, 1700 MST	Registration:	N80287
Aircraft:	Sly RV-6A	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 None

Flight Conducted Under: Part 91: General Aviation - Personal

Analysis

After being airborne for 15 minutes, the aircraft's engine began to lose power. The pilot initiated an emergency landing along a county road but switched to another road to avoid power lines. Upon touchdown, the aircraft departed the side of the road and struck a fence post. The engine was examined and test run, and no discrepancies were observed. The pilot stated that 'other pilots at the scene agreed the conditions could cause carburetor icing.' According to the FAA inspector present at the accident scene, 'the conditions were a classic setup for carburetor icing.' The Van's Aircraft construction and operating manual states that one method of building the carburetor heat system is to 'run a 2-inch air hose from a heat muff and position it to feed into the alternative air inlet of the carb[uretor] air box,' which is the method by which the pilot constructed the airplane. According to the inspector, the 2-inch hose is not large enough to adequately supply enough heat to the carburetor to sufficiently melt the ice. The aircraft was issued an airworthiness certificate by the FAA on August 24, 1995.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The development of carburetor ice resulting in a loss of engine power, and the inadequate carburetor heat shroud. Factors were the carburetor icing weather conditions, the kit manufacturer's inadequate carburetor heat shroud design, the FAA's inadequate certification of the aircraft, the snow covered, unsuitable terrain on which to perform a forced landing, and the fence post.

Findings

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

Findings

1. (F) WEATHER CONDITION - CARBURETOR ICING CONDITIONS
 2. (C) FUEL SYSTEM,CARBURETOR - ICE
 3. (C) CARBURETOR HEAT,SHROUD - INADEQUATE
 4. (F) ACFT/EQUIP,INADEQUATE DESIGN - KIT MANUFACTURER
 5. (F) INADEQUATE CERTIFICATION/APPROVAL,AIRCRAFT - FAA(ORGANIZATION)
-

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

Findings

6. (F) TERRAIN CONDITION - SNOW COVERED
 7. (F) TERRAIN CONDITION - NONE SUITABLE
-

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

Findings

8. (F) OBJECT - FENCE POST

Factual Information

On April 1, 1999, approximately 1700 mountain standard time, a Sly RV-6A homebuilt aircraft, N80287, owned and operated by the pilot, was substantially damaged after impacting terrain following a loss of engine power while in cruise flight near Payson, Utah. The airline transport rated pilot and one passenger were not injured. The local area personal flight was being operated under Title 14 CFR Part 91, and no flight plan was filed. The flight originated from the Spanish Fork-Springville Airport, Spanish Fork, Utah, at 1645. Visual meteorological conditions prevailed.

According to the pilot, after being airborne for approximately 15 minutes, the aircraft's engine began to lose power. He stated that he applied carburetor heat and switched the fuel tanks, but observed no change in power. The loss of engine power was gradual, with no sudden stoppage, backfiring or surging. Unable to restore power to the engine, he initiated an emergency landing along a county road 6 miles south of the airport. During landing, he switched to another road to avoid power lines. Upon touchdown, the aircraft departed the side of the road and struck a fence post, damaging the nose gear, ailerons and rudder.

At the request and in the presence of a Federal Aviation Administration (FAA) inspector, the engine was examined and test run at the Spanish Fork Flying Service on April 16, 1999. During the inspection, the fuel was clear and free of contaminants. The engine ran with and without the fuel pump turned on, and no discrepancies were noted.

The pilot stated in his accident report that "other pilots at the scene agreed the conditions could cause carburetor icing." According to the FAA inspector present at the accident scene, weather conditions were partly cloudy and cold with calm wind. According to the inspector, "the conditions were a classic setup for carburetor icing."

According to the Van's Aircraft construction and operating manual, one method of building the internal carburetor heat system is to "run a 2-inch air hose from a heat muff and position it to feed into the alternative air inlet of the carb[uretor] air box without being attached and closed." According to the FAA inspector who examined the aircraft following the accident, this is the method by which the pilot constructed the airplane. According to the inspector, the 2-inch hose is not large enough to adequately supply enough heat to the carburetor to sufficiently melt the ice.

The aircraft was issued an airworthiness certificate by the FAA on August 24, 1995.

Pilot Information

Certificate:	Airline Transport; Commercial; Flight Engineer; Military	Age:	61, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	05/13/1997
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	9183 hours (Total, all aircraft), 198 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Sly	Registration:	N80287
Model/Series:	RV-6A RV-6A	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental	Serial Number:	22902
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	09/22/1998, Annual	Certified Max Gross Wt.:	1650 lbs
Time Since Last Inspection:	8 Hours	Engines:	1 Reciprocating
Airframe Total Time:	198 Hours	Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	O-360-A1A
Registered Owner:	RUSSELL M. SLY	Rated Power:	180 hp
Operator:	RUSSELL M. SLY	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	, 0 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	0000	Direction from Accident Site:	0°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	30 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	Light and Variable /	Turbulence Type Forecast/Actual:	/
Wind Direction:	Variable	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	4° C
Precipitation and Obscuration:			
Departure Point:	SPANISH FORK, UT (U77)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	1645 MST	Type of Airspace:	Class G

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:	

Administrative Information

Investigator In Charge (IIC):	B. BEACH SCOTT	Report Date:	05/08/2001
Additional Participating Persons:	JAMES E GILCHRIST; SALT LAKE CITY, UT		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).