National Transportation Safety Board
Aviation Accident Data Summary

Location:	Carthage, NC	**Accident Number:**	ERA13LA072
Date & Time:	12/01/2012, 1030 EST	**Registration:**	N416DH
Aircraft:	HANSEN DAVID DANIEL RV-4	**Injuries:**	2 Serious
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

During cruise flight, the engine began losing power. The pilot in the front seat, who was flying the airplane, attempted to troubleshoot the engine issue, including activating the carburetor heat; however, the engine continued to run roughly, so he chose to divert to a nearby airport. The rear-seat pilot then took control of the airplane. While on final approach to the runway, the rear-seat pilot asked the front-seat pilot, who was seated near the wing flap control, to configure the flaps for landing. After the flaps fully extended, they retracted. The rear-seat pilot then asked the front-seat pilot to re-extend the flaps. About this time, the rear-seat pilot noticed that people and vehicles were at the end of the runway and chose to abort the landing by increasing engine power and turning the airplane toward an adjacent field. However, the airplane had sufficient altitude and power, so the pilot should have been able to make the runway and land safely. During the subsequent attempt to land the airplane, it stalled and then touched down hard. The airplane was substantially damaged, and both pilots were seriously injured.

Postaccident examination of the airplane revealed that the wing flaps appeared to be fully extended. The front-seat pilot, who was a co-owner, had been working to rectify several maintenance discrepancies he had identified after purchasing the airplane 2 months earlier, one of which included a leaking right fuel tank; he had repaired the exterior of the tank. Examination of the engine and fuel system identified the presence of fuel tank sealant on the exterior of the steel braid of both fuel tanks' flexible pick-up tubes and flaked pieces of fuel tank sealant and other contaminants within the gascolator. However, examinations revealed that the fuel screens at the engine-driven fuel pump and the carburetor were not contaminated. Both fuel tanks were found breached. An examination of the engine did not reveal any preimpact mechanical malfunctions or failures that would have precluded normal operation. Although the temperature and dew point about the time of the accident were conducive to the formation of carburetor ice, it unlikely that carburetor ice played a role in the loss of engine power because the pilots' reported using carburetor heat following the loss of engine power.

Flight Events

Enroute-cruise - Loss of engine power (partial)
Emergency descent - Off-field or emergency landing
Approach - Miscellaneous/other
Approach-VFR go-around - Off-field or emergency landing
Landing - Hard landing

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be:
A partial loss of engine power for reasons that could not be determined because postaccident

examinations of the engine and fuel system revealed no anomalies that would have precluded normal operation. Contributing to the severity of the accident was the rear-seat pilots' decision to abort the landing with partial engine power and his failure to successfully perform a forced landing to an available airfield.

Findings

Personnel issues-Action/decision-Info processing/decision-Decision making/judgment-Pilot - F
Personnel issues-Action/decision-Action-Incorrect action performance-Pilot - F
Not determined-Not determined-(general)-(general)-Unknown/Not determined - C

Pilot Information

Certificate:	Commercial	**Age:**	40
Airplane Rating(s):	Multi-engine Land; Single-engine Land	**Instrument Rating(s):**	Airplane
Other Aircraft Rating(s):	None	**Instructor Rating(s):**	None
Flight Time:	99999 hours (Total, all aircraft), 99999 hours (Total, this make and model)		

Co-Pilot Information

Certificate:	Airline Transport; Flight Instructor; Commercial	**Age:**	33
Airplane Rating(s):	Multi-engine Land; Single-engine Land	**Instrument Rating(s):**	Airplane
Other Aircraft Rating(s):	None	**Instructor Rating(s):**	Airplane Multi-engine; Airplane Single-engine; Instrument Airplane
Flight Time:	5500 hours (Total, all aircraft), 50 hours (Total, this make and model), 4700 hours (Pilot In Command, all aircraft), 100 hours (Last 90 days, all aircraft), 25 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	HANSEN DAVID DANIEL	**Registration:**	N416DH
Model/Series:	RV-4	**Engines:**	1 Reciprocating
Operator:	On file	**Engine Manufacturer:**	Lycoming
Air Carrier Operating Certificate:	None	**Engine Model/Series:**	O-320-E2A
Flight Conducted Under:	Part 91: General Aviation - Personal		

Meteorological Information and Flight Plan

Observation Facility, Elevation:	SOP, 462 ft msl	**Weather Information Source:**	Weather Observation Facility
Conditions at Accident Site:	Visual Conditions	**Lowest Ceiling:**	None
Condition of Light:	Day	**Wind Speed/Gusts, Direction:**	5 knots, 220°
Temperature:	15°C / 7°C	**Visibility**	10 Miles
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Long Island, NC (NC26)	**Destination:**	Salisbury, NC (RUQ)

Airport Information

Airport:	McConnell Airfield (5NC3)	**Runway Surface Type:**	
Runway Used:	N/A	**Runway Surface Condition:**	
Runway Length/Width:			

Wreckage and Impact Information

Crew Injuries:	2 Serious	**Aircraft Damage:**	Substantial
Passenger Injuries:	N/A	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None

Administrative Information

Investigator In Charge (IIC):	Dennis Diaz	**Adopted Date:**	04/23/2014
Investigation Docket:	http://dms.ntsb.gov/pubdms/search/dockList.cfm?mKey=85721		