Aviation Investigation Final Report

Location:	El Centro, California	**Accident Number:**	SEA07LA048
Date & Time:	January 14, 2007, 16:10 Local	**Registration:**	N3BP
Aircraft:	Navion G Model	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	2 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that after an uneventful flight, he initiated a normal approach to the airport. While on final approach to runway 22, he stated that he couldn't see the runway or area surrounding it due to the alignment of the sun and decided to abort the landing and go-around. Shortly after applying power and raising the landing gear, the engine "sputtered" and lost power. The pilot stated that he had limited visibility due to the sunglare during the forced landing and was trying to keep the airplane from stalling. Subsequently, the airplane impacted terrain. Examination of the airframe revealed that the left and right wing sustained substantial damage. The right fuel tank was intact and contained a significant amount of fuel. All of the remaining fuel tanks were breeched. The engine was removed from the airframe, installed on an engine run test stand, and successfully ran at various power settings with no anomalies noted. The fuel selector valve was removed from the airframe and examined. The fuel selector valve shaft was bent. Manual activation by hand produced positive engagement in all positions. The fuel selector was placed on a test bench and functionally tested in accordance with the Navion Service Bulletin 106. Within one minute after applying 24 inches of vacuum pressure, an unspecified amount in excess of 20 inches of pressure was lost. According to the type certificate holder, the maximum specified loss is one inch. Both internal and external leaking was observed during the bench test. The fuel selector valve was dissembled and visually inspected with no anomalies noted. The official sunset was recorded to be 48 minutes after the approximate time of the accident and the end of civil twilight was 75 minutes after the approximate time of the accident.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The loss of engine power for undetermined reasons. Contributing factors were the lack of

suitable terrain for the forced landing and the glare from the sun.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: GO-AROUND (VFR)

Findings
1. (F) LIGHT CONDITION - SUNGLARE
2. GO-AROUND - INITIATED - PILOT IN COMMAND
3. (C) 1 ENGINE - FAILURE,TOTAL
4. (C) REASON FOR OCCURRENCE UNDETERMINED

Occurrence #2: FORCED LANDING
Phase of Operation: GO-AROUND (VFR)

Findings
5. (F) TERRAIN CONDITION - NONE SUITABLE

Factual Information

On January 14, 2007 about 1610 Pacific standard time, a Navion (G model) airplane, N3BP, sustained substantial damage during an uncontrolled descent and subsequent collision with terrain, about 1 mile west of Douthitt Strip Airport (23CN), El Centro, California. The airplane was being operated as a visual flight rules (VFR) cross-country flight under the provisions of Title 14, CFR Part 91, when the accident occurred. The private pilot, who also owned the airplane, and passenger sustained serious injuries. Visual meteorological conditions prevailed and no flight plan was filed. The flight originated from Salinas Municipal Airport (SNS), Salinas, California, and was destined for 23CN.

In a written statement, the pilot reported that after an uneventful flight from SNS, he initiated a normal approach to 23CN. While on final approach to runway 22, he stated that he couldn't see the runway or area surrounding it due to the alignment of the sun and decided to abort the landing and go-around. Shortly after applying power and raising the landing gear, the engine "sputtered" and lost power. The pilot stated that he had limited visibility due to the sun glare during the forced landing and was trying to keep the airplane from stalling. Subsequently, the airplane impacted terrain.

Examination of the airframe and engine were conducted on February 2, 2007. Examination of the airframe revealed that the left and right wing sustained substantial damage. The recovery personnel reported that the right fuel tank was intact and contained about 10 gallons of fuel. All of the remaining fuel tanks were breeched. Examination of the fuel selector valve revealed that it was in the main fuel tank position and the shaft was bent. Manual activation of the fuel selector valve by hand produced positive engagement in all positions.

The engine was removed from the airframe and installed on an engine run test stand. To facilitate an engine test run, the number five cylinder rocker box cover and an inlet fuel line to the fuel pump were replaced. Tape was applied over a hole in the number five cylinder intake tube. The engine driven fuel pump was removed from the engine and the fuel pump drive coupling was intact. The fuel pump drive shaft rotated freely when manually actuated by hand. The fuel pump was reinstalled on the engine. The engine was successfully run at various power settings with no anomalies noted.

The fuel selector valve was removed from the airframe and sent to Sierra Hotel Aero Inc. of St. Paul, Minnesota for further examination. On April 11, 2007, under the supervision of a Federal Aviation Administration (FAA) inspector the fuel selector valve was examined. The fuel selector valve was placed on a test bench and functionally tested in accordance with the Navion Service Bulletin 106. Approximately 24 inches of vacuum pressure was applied in all operating positions. During the test, an amount in excess of 20 inches of mercury was lost within one minute in all positions after pressure was applied. According to the Type Certificate Holder for the airplane, this exceeded parameters (maximum specified loss is 1 inch). Both internal and external leakage of the fuel selector valve was observed during the test. The fuel selector valve was disassembled and inspected. No further anomalies were noted.

According to the US Naval Observatory, Astronomical Applications Department, the time of sunset was 1658 and the end of civil twilight was 1725.

Pilot Information

Certificate:	Private	**Age:**	80,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 Without waivers/limitations	**Last FAA Medical Exam:**	January 1, 2005
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	November 1, 2005
Flight Time:	3600 hours (Total, all aircraft), 3000 hours (Total, this make and model), 3600 hours (Pilot In Command, all aircraft), 10 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Navion	**Registration:**	N3BP
Model/Series:	G Model	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	NAV-4-2457
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	November 1, 2006 Annual	**Certified Max Gross Wt.:**	2068 lbs
Time Since Last Inspection:	10 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	3578 Hrs as of last inspection	**Engine Manufacturer:**	Continental
ELT:	Installed, not activated	**Engine Model/Series:**	IO-520-BA
Registered Owner:	David L. Price	**Rated Power:**	285 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:		**Distance from Accident Site:**	
Observation Time:		**Direction from Accident Site:**	
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:		**Temperature/Dew Point:**	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Salinas, CA (SNS)	**Type of Flight Plan Filed:**	None
Destination:	El Centro , CA (23CN)	**Type of Clearance:**	VFR flight following
Departure Time:	13:00 Local	**Type of Airspace:**	

Airport Information

Airport:	Douthitt Strip Airport 23CN	**Runway Surface Type:**	Dirt
Airport Elevation:	45 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	22	**IFR Approach:**	None
Runway Length/Width:	1800 ft / 100 ft	**VFR Approach/Landing:**	Forced landing;Go around

Wreckage and Impact Information

Crew Injuries:	1 Serious	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 Serious	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Serious	**Latitude, Longitude:**	32.788887,-115.529441

Administrative Information

Investigator In Charge (IIC):	Hogenson, Dennis
Additional Participating Persons:	Carl Allen; Federal Aviation Administration; San Diego, CA
Original Publish Date:	January 31, 2008
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=65146