Aviation Investigation Final Report

Location:	Page, Arizona	**Accident Number:**	LAX04LA191
Date & Time:	April 8, 2004, 09:16 Local	**Registration:**	N91729
Aircraft:	North American Aviation Div. Navion	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	3 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The airplane stalled and collided with terrain in the takeoff initial climb. A witness reported that after liftoff the airplane climbed out of ground effect and stalled. The airplane returned back into ground effect, and the pilot lowered the nose to regain speed. He rotated out of ground effect, and subsequently stalled. The airplane returned to ground effect and, again, the pilot attempted to regain speed. As the airplane was approaching a cliff, it lifted out of ground effect and banked to the right. The left wing appeared to stall and the airplane impacted terrain in a nose and left wing low attitude. Based upon the atmospheric conditions provided by the METAR, the density altitude was calculated to be 4,896 feet. A Federal Aviation Administration maintenance inspector examined the airplane after the accident. He reported that he ran the engine, and found no anomalies or malfunctions that would have resulted in a decrease in power.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's failure to attain and maintain a sufficient airspeed, which led to an inadvertent stall mush in high density altitude conditions.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings
1. WEATHER CONDITION - HIGH DENSITY ALTITUDE
2. (C) AIRSPEED - NOT OBTAINED/MAINTAINED - PILOT IN COMMAND
3. (C) STALL/MUSH - INADVERTENT - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings
4. TERRAIN CONDITION - CLIFF

Factual Information

On April 8, 2004, at 0916 mountain standard time, a North American Navion, N91729, collided with terrain while departing from the Page Municipal Airport, Page, Arizona. The pilot/owner was operating the airplane under the provisions of 14 CFR Part 91. The private pilot and two passengers were not injured; the airplane sustained substantial damage. Visual meteorological conditions prevailed, and a visual flight rules flight plan had been filed. The personal cross-country flight was originating from Page, with a planned destination of Grand Canyon National Park Airport, Grand Canyon, Arizona.

In a written a statement, the pilot reported that prior to departure, he calculated the weight and balance of the airplane to be within the airplane's limits, by weighing persons and baggage. He received weather information from the Automated Surface Observation Station, which reported winds light and variable. He opted to depart from runway 33, and, after an uneventful run-up, he leaned the engine in an effort to compensate for the density altitude. During the takeoff roll, the pilot began rotation about 65 miles per hour (mph).

The pilot further stated that the airplane climbed to about 50 feet above ground level, at which point the engine experienced a reduction of power. With the throttle in the full power position, the airspeed decreased below 60 mph, and the pilot lowered the airplane's nose in an effort to regain speed. The pilot opted to abort the takeoff, and the airplane touched down at the end of the runway. The airplane continued off the runway onto loose dirt. After decelerating for about 150 yards, the pilot maneuvered the airplane to the left in an effort to avoid a steep drop-off in terrain. The airplane turned and came to rest in a nose down position.

During a telephone interview with a National Transportation Safety Board investigator, a Federal Aviation Administration maintenance inspector, who examined the airplane after the accident, reported that he ran the engine at Air Transport, Phoenix, Arizona. He stated that the engine operated normally during the run-up. He did note that the bracket holding the airbox cable was broken, allowing the cable to loosely hang. When he activated the alternate air in the cockpit he noted about 100 rpm drop in engine power. He could not ascertain if the broken bracket was a result of the impact.

In a telephone conversation with a Safety Board investigator, a certified flight instructor at Page Municipal Airport reported that while performing a run-up, he witnessed the Navion attempt to takeoff. He stated that the airplane departed ground effect with about 8 to 12 degrees pitch attitude and stalled. The airplane returned back into ground effect, and the pilot attempted to regain speed for about 1,000 feet of runway. The airplane again rotated out of ground effect, and subsequently stalled. The airplane returned to ground effect and, again, the pilot attempted to regain speed. As the airplane was approaching a cliff, it lifted out of ground effect and banked to the right. The left wing appeared to stall, and the airplane impacted

terrain in a nose low attitude.

A routine aviation weather report (METAR) for Page was issued at 0856. It reported a temperature of 12 degrees Celsius and an altimeter setting of 29.97 inHg. Based upon the atmospheric conditions provided by the METAR, a Safety Board computer program calculated the density altitude to be 4,896 feet. The Airport/ Facility Directory, Southwest U. S., indicates that Page Municipal Airport runway 33 is 5,499 feet long and 150 feet wide.

Pilot Information

Certificate:	Private	**Age:**	46,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--no waivers/lim.	**Last FAA Medical Exam:**	August 16, 2002
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	May 13, 2003
Flight Time:	293 hours (Total, all aircraft), 242 hours (Total, this make and model), 216 hours (Pilot In Command, all aircraft), 27 hours (Last 90 days, all aircraft), 13 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	North American Aviation Div.	**Registration:**	N91729
Model/Series:	Navion	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	NAV-4-490
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	April 25, 2003 Annual	**Certified Max Gross Wt.:**	3190 lbs
Time Since Last Inspection:	79.8 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	3992.3 Hrs at time of accident	**Engine Manufacturer:**	Continental
ELT:	Installed, not activated	**Engine Model/Series:**	IO-470-D
Registered Owner:	Ken and Laura Whitall-Scherfee	**Rated Power:**	260 Horsepower
Operator:	Ken Whittall-Scherfee	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KPGA,4289 ft msl	**Distance from Accident Site:**	0 Nautical Miles
Observation Time:	08:56 Local	**Direction from Accident Site:**	0°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	5 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.96 inches Hg	**Temperature/Dew Point:**	12°C / 3°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Page, AZ (PGA)	**Type of Flight Plan Filed:**	VFR
Destination:	Grand Canyon , AZ (GCN)	**Type of Clearance:**	None
Departure Time:	09:16 Local	**Type of Airspace:**	Class E

Airport Information

Airport:	Page Municipal Airport PGA	**Runway Surface Type:**	Asphalt
Airport Elevation:	4313 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	33	**IFR Approach:**	None
Runway Length/Width:	5499 ft / 150 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	2 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	3 None	**Latitude, Longitude:**	36.926109,-111.448333

Administrative Information

Investigator In Charge (IIC):	Petterson, George
Additional Participating Persons:	John Eller; Federal Aviation Administration ; Scottsdale, AZ
Original Publish Date:	June 8, 2005
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=59093