Aviation Investigation Final Report

Location:	CARRIZOZO, New Mexico	**Accident Number:**	DEN99LA022
Date & Time:	November 30, 1998, 08:00 Local	**Registration:**	N2PE
Aircraft:	Ryan NAVION A	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot said that the engine was 'strong' during the takeoff roll. He said that shortly after liftoff the engine sputtered once, and then quit. He performed a forced landing, and the right main landing gear impacted plant roots during the landing roll. A member of the National Navion Association said that if a pilot attempts a takeoff with the fuel selector on one of the tip tanks, the engine will quit soon after takeoff. The POH directs the pilot to takeoff with the fuel selector on a main fuel tank. The fuel selector was found on the right main fuel tank. The pilot said that he was adjusting the mixture during the takeoff roll. No abnormalities were identified with the engine which would have prevented normal operation.

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.

Findings

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

Findings
1. REASON FOR OCCURRENCE UNDETERMINED

Occurrence #2: FORCED LANDING

Phase of Operation: EMERGENCY DESCENT/LANDING

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

Findings
2. (F) OBJECT - OTHER

Factual Information

On November 30, 1998, approximately 0800 mountain standard time, a Ryan Navion A, N2PE, was substantially damaged when it collided with terrain during a forced landing following takeoff from Carrizozo Municipal Airport, Carrizozo, New Mexico. The private pilot, the sole occupant aboard, received minor injuries. The airplane was owned/operated by the pilot under Title 14 CFR part 91. Visual meteorological conditions prevailed for the personal cross-country flight which was originating at the time of the accident. No flight plan had been filed.

The pilot reported that the engine preflight run-up was "excellent," and the takeoff roll was "strong." He said that shortly after liftoff the engine sputtered once, and then quit. He "worked the throttle," turned on the fuel pump, and the engine started. The pilot said that 5 or 10 seconds later, the engine quit a second time. He leveled the wings (the landing gear was still down and the flaps were up) and hit hard. Subsequently, the right main landing gear struck a yucca root system, and collapsed. The airplane rotated 90 degrees, and the left main landing gear collapsed.

Postimpact examination by an FAA inspector revealed that the fuselage was bent up aft of the wings and the right main landing gear box was separated from the airplane. He further stated that "initial ground scar indicated that all 3 landing gear touched down simultaneously." The FAA inspector found the engine's spark plugs white in appearance, and the airplane's battery was missing. The fuel selector was found on the right main fuel tank. The FAA inspector found fuel in the flow divider, and in the fuel line between the fuel pump and the flow divider. No abnormalities were identified with the engine which would have prevented normal operation.

According to the airplane's maintenance logbooks, the airplane did not meet the FAA requirement for an annual inspection. A mechanic reported that he had worked on the airplane and had performed most of the required tasks for an annual inspection. He further stated that the airplane had an automobile battery in it, and the pilot did not want to replace it with an aviation battery. The mechanic stated that he would not signoff the annual inspection in the maintenance logbooks because "the airplane didn't meet airworthiness requirements."

The FAA inspector interviewed the pilot on two different occasions. During the first interview, the pilot reported that "he may have pulled the mixture back during the departure." During the second interview, the pilot stated that "he was adjusting the propeller rpm during departure."

The FAA inspector interviewed a member of the National Navion Association and he reported that "if the pilot performs a takeoff with the fuel selector on the tip tank, shortly after liftoff, the engine will quit." He said that the airplane's tip tank and its fuel lines are located in such away, that after the nose wheel landing gear rotates off the runway, "air will enter the fuel line." The

airplane's Pilot's Operating Handbook states that takeoffs must be performed with the fuel selector on a main fuel tank.

Pilot Information

Certificate:	Private	**Age:**	67,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 Unknown	**Last FAA Medical Exam:**	March 24, 1998
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	2346 hours (Total, all aircraft), 1921 hours (Total, this make and model), 2346 hours (Pilot In Command, all aircraft), 7 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Ryan	**Registration:**	N2PE
Model/Series:	NAVION A NAVION A	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	NAV-4-1999
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	October 15, 1998 Annual	**Certified Max Gross Wt.:**	2850 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	Continental
ELT:	Installed, not activated	**Engine Model/Series:**	IO-470-D
Registered Owner:	CONRAD M. CURTIS	**Rated Power:**	260 Horsepower
Operator:		**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	ROW ,3669 ft msl	**Distance from Accident Site:**	80 Nautical Miles
Observation Time:	07:52 Local	**Direction from Accident Site:**	100°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	0°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	2°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(Q37)	**Type of Flight Plan Filed:**	None
Destination:	LAS CRUCES , NM (LRU)	**Type of Clearance:**	None
Departure Time:	08:00 Local	**Type of Airspace:**	Class G

Airport Information

Airport:		**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	Dry
Runway Used:	0	**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Minor	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Minor	**Latitude, Longitude:**	33.540622,-105.59098(est)

Administrative Information

Investigator In Charge (IIC):	Struhsaker, James
Additional Participating Persons:	KARRY D RAY; ALBUQUERQUE , NM
Original Publish Date:	March 31, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=45383