



National Transportation Safety Board Aviation Accident Final Report

Location:	Salmon, ID	Accident Number:	SEA05FA201
Date & Time:	09/28/2005, 1715 MDT	Registration:	N45SE
Aircraft:	Cessna P210N	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	2 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The pilot and passenger were returning home after spending several days on an elk hunting trip in the Idaho backcountry. One of them had shot an elk, and they loaded the airplane with the four elk quarters and their personal gear. A witness heard the airplane taking off and it "didn't sound right." He looked towards the 2,000-foot-long grass airstrip and saw the airplane "barely off the ground" heading south. The witness stated that the airplane was "wallowing back and forth, trying to stall out." He further stated that the "motor sounded like a boat cavitating" and "the nose of the airplane was pointed up." The witness watched the airplane as it veered left and impacted the ground tail first. The airplane's nose then "slammed into the ground," and the airplane nosed over and came to rest inverted. A fire erupted, which destroyed the fuselage and the inboard sections of the wings. The accident site was about 1/4 mile from the end of the runway, offset to the left of the runway centerline, and approximately the same elevation as the runway. The site was located on level grass covered terrain. Examination of the airframe and engine revealed no evidence of any abnormalities that would have prevented normal operation. The pilot began flying the airplane, which had been modified by replacement of its original reciprocating engine with a gas turbine engine, about 4 months before the accident and according to his logbook, had accumulated about 22 hours flight time in it. He had about 1,167 hours in other non-modified airplanes of the same make and model. An estimated weight and balance placed the airplane's takeoff weight at 3,729.4 pounds, which was below the maximum gross weight of 4,000 pounds. The estimated center of gravity was 48.57 inches, which was within, but near, the aft limit of 49 inches. A short field landing performance chart indicated that for the approximate accident conditions, the takeoff ground roll would be 1,581 feet and the total distance to clear a 50 foot obstacle would be 2,461 feet. A pilot, who had experience flying the accident airplane, stated the following with respect to its performance: "Weight and balance is very, very critical. With weight aft, you really need to hold the nose down and gain airspeed on takeoff."

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to obtain airspeed during the initial takeoff climb, which resulted in a

stall/mush and subsequent collision with terrain.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT

Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (C) AIRSPEED - NOT OBTAINED/MAINTAINED - PILOT IN COMMAND
2. STALL/MUSH - ENCOUNTERED - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

3. TERRAIN CONDITION - GRASS

Factual Information

HISTORY OF FLIGHT

On September 28, 2005, about 1715 mountain daylight time, a Cessna P210N, N45SE, impacted terrain during takeoff initial climb from the Flying B Ranch airstrip, located about 38 nautical miles west of Salmon, Idaho. The airplane was destroyed by impact and fire damage, and the two occupants, the private pilot and one passenger, sustained fatal injuries. The airplane was registered to Marlin Ventures LLC of Corte Madera, California, and operated by the pilot. Visual meteorological conditions prevailed and no flight plan was filed for the personal cross country flight. The flight was originating at the time of the accident, and the intended destination was Boise, Idaho.

According to family members, the pilot and passenger had flown the airplane from San Rafael Airport (Smith Ranch) in San Rafael, California, to the Flying B on September 22, 2005. They were met at the Flying B by three other members of their hunting party, who had flown in on a charter flight from McCall, Idaho. The pilot and passenger did not mention having any problems with the airplane during the non-stop flight that lasted about 2.5 to 3 hours. After spending several days hunting elk, on the day of the accident, the pilot and the passenger returned to the airstrip and prepared to fly back to San Rafael with a planned fuel stop in Boise, Idaho. One of them had shot an elk, and they loaded the airplane with the four elk quarters and their personal gear.

An employee of the Flying B Ranch who observed the pilot and passenger loading the airplane reported that the pilot "did check some figures" and told the passenger that they could have "at least 160 pounds of weight in the rear compartment." The passenger commented that the elk "hindquarters would fit and be almost that weight." The passenger loaded "the 2 hind quarters and then put in 2 sleeping bags, a shirt, a pair of pants, a felt hat, and some Styrofoam packing." The employee reported seeing two seats in the rear of the airplane's passenger compartment. In front of these seats, in the middle of the passenger compartment, the pilot and passenger loaded "the 2 front quarters, 2 rifles, 2 duffle bags, 2 scabbards, a back pack (possibly 2), a small saw, saddlebags, and the antlers." Additionally, this area contained "3 shopping bags with merchandise they had just purchased in the store (3 vests, 2 T-shirts, 1 Jacket, and 1 Visor)" and "a container with cleaning supplies to clean windows on the plane." After the accident, the employee talked with another employee, a wrangler, who estimated each hindquarter weighed approximately 75 pounds, each front quarter weighed 70 to 75 pounds, and each duffle bag weighed "75 pounds at the very most."

According to another Flying B Ranch employee who witnessed the accident, he heard the airplane taking off and it "didn't sound right." He looked towards the airstrip and saw the airplane "barely off the ground" heading south. The witness stated that the airplane was "wallowing back and forth, trying to stall out." He further stated that the "motor sounded like a boat cavitating" and "the nose of the airplane was pointed up." The witness watched the airplane as it veered left, crossed the Middle Fork of the Salmon River, and impacted the ground tail first. The airplane's nose then "slammed into the ground," and the airplane nosed over and came to rest inverted. A fire erupted, which consumed the fuselage of the airplane.

PERSONNEL INFORMATION

The pilot held a private pilot certificate with single- and multi-engine land airplane and

instrument airplane ratings. His most recent third class medical was issued on May 5, 2005, with the limitation, must wear corrective lenses for near and distant vision.

According to a "Pilot Record" sheet dated May 20, 2005, completed by the pilot in connection with an application for insurance on the accident airplane, he had accumulated 1,939 hours total flight time of which 1,167 hours were in same make and model as the accident airplane. Copies of the pilot's flight logbooks were provided to the NTSB investigator-in-charge (IIC) by a family member. The most recent logbook covered the time period from April 22, 1994, to September 12, 2005. Review of this logbook revealed no entries indicating a flight into or out of the Flying B Ranch. The last 12 entries in the logbook appeared to record flights in the accident airplane. All of the entries listed the aircraft type as "P210," and one of the entries listed the aircraft identification as "SE." These entries began on June 1, 2005, ended on September 12, 2005, and totaled 21.8 hours.

During an interview conducted by the NTSB IIC, the flight instructor, who gave the pilot flight training in the accident airplane, stated that the pilot received 10 hours ground school and over 15 hours dual instruction in the airplane over a 4 to 5 day period. He further stated that the training "progressed normally." Landings were made at 8 different airports during the training including Reno, Nevada, elevation 4,415 feet, and Bend, Oregon, elevation 3,456 feet. Short field takeoff and landing techniques were covered during the flight training. The instructor described the short field takeoff technique for the airplane as follows: Add 10 degrees to the normal 10-degree flap setting, pull the airplane off at 75 knots (as opposed to rotating at 75 and letting the airplane fly off), climb at V_x (80 knots), raise flaps 10 degrees at a time - usually after raising the landing gear.

The Flying B employee who observed the loading of the airplane stated that the pilot had been coming to the Flying B for 30 years, but had not flown in himself since 2000.

AIRCRAFT INFORMATION

FAA airworthiness records for the airplane indicated the 1979 Cessna P210N, S/N P21000267, was modified by installation of a Rolls Royce gas turbine engine Model 250-B17F/2, S/N CAE881125, and Hartzell propeller Model HC-B3TF-7A/T9212NK-2, S/N EXA1123, in accordance with STC SA1003NE on March 20, 2000. This modification, known as a "Silver Eagle" conversion, was performed by the STC holder, O & N Aircraft Modifications, Inc., of Factoryville, Pennsylvania. At this time, a new hour meter was installed.

The airplane's maintenance logbooks were not located during the investigation. According to records obtained from the maintenance facility that had been maintaining the airplane since its conversion, the most recent annual inspection was completed in March 2005. At the time of this inspection, the airplane had accumulated 1,004.0 hours since the conversion.

Review of FAA registration records indicated Marlin Ventures LLC purchased the airplane on May 20, 2005. The accident pilot signed the ownership documents as President of Marlin Ventures LLC. The records indicated that as of May 20, 2005, the airplane had accumulated 2,379.0 hours total time and 1,040.1 hours since its conversion.

The weight and balance of the airplane at takeoff was estimated using the following information:

Basic empty weight, 2,541.2 pounds, obtained from aircraft weighing report prepared by O & N Aircraft dated May 4, 2000.

Front seat occupants, 340 pounds (170 pounds each).

Middle seat baggage, 380 pounds, from information provided by Flying B employee who observed loading of airplane.

Rear baggage, 160 pounds, from information provided by Flying B employee who observed loading of airplane.

Fuel in wing tanks, 308.2 pounds (46 gallons times 6.7 pounds/gallon)

The estimated takeoff weight was 3,729.4 pounds, which was below the maximum gross weight of 4,000 pounds. The estimated takeoff moment was 181.116 pound-inches, and the estimated center of gravity was 48.56 inches, which was within the aft limit of 49 inches. (According to the FAA Approved Flight Manual Supplement for STC SA1003NE, the aft center of gravity limit is 49 inches at all weights, and the forward center of gravity limit varies with weight. At 3,800 pounds, the forward center of gravity limit is 42.5 inches.)

The fuel aboard the airplane at takeoff was estimated by assuming a fuel burn rate of 25 gallons/hour, 3 hours of flight time since refueling, and usable fuel aboard following last refueling of 121 gallons (wing and tip tanks full, baggage tank empty).

The short field takeoff checklist provided in Section IV, the Normal Procedures section, of the FAA Approved Flight Manual Supplement for STC SA1003NE, stated:

1. Wing Flaps -- 10 degrees (see Section V Takeoff Chart).
2. Brakes -- APPLY.
3. Condition Lever -- FULL INCREASE.
4. Power Lever -- TAKEOFF (111 psi torque or 810 degrees C TOT). Observe torque and temperature limits.
5. Brakes -- RELEASE.
6. Elevator Control -- LIFT NOSE WHEEL at 65 KIAS.

NOTE: WHEN NOSE WHEEL IS LIFTED, THE GEAR MOTOR MAY RUN 2-3 SECONDS TO RESTORE HYDRUALIC PRESSURE.

7. Climb Speed -- 78 KIAS (until obstacles are cleared).
8. Landing Gear -- RETRACT (after obstacles are cleared).
9. Wing Flaps -- RETRACT after reaching 85 KIAS.

NOTE: DO NOT REDUCE POWER UNTIL WING FLAPS AND GEAR HAVE BEEN RETRACTED.

Regarding wing flap settings, the amplified procedures for takeoff in Section IV stated the following: For normal takeoffs, use of 0-20 degrees flaps is approved. Each notch of flaps will reduce takeoff distances approximately 10% as compared to the next lesser notch.

Regarding short field takeoffs, the amplified procedures for takeoff in Section IV stated the following: Takeoff performance shown in the Basic P210N Pilot's Operating Handbook, repeated in Section V of this Airplane Flight Manual Supplement, can be equaled or exceeded for all ambient conditions except altitudes above 7,000 feet and temperatures above 30 degrees C. In this circumstance, the use of 20 degrees flap will produce equivalent takeoff

performance.

The TAKEOFF DISTANCE/MAXIMUM WEIGHT 3,700 LBS/SHORT FIELD chart in Section V, the Performance section, of the FAA Approved Flight Manual Supplement for STC SA1003NE, indicated that at a pressure altitude of 3,000 feet and a temperature of 20 degrees C, the takeoff ground roll would be 1,375 feet and the total distance to clear a 50 foot obstacle would be 2,255 feet. The chart indicated that for operation on a dry, grass runway, the distances should be increased by 15% of the ground roll figure, resulting in a ground roll of 1,581 feet and a total distance to clear a 50 foot obstacle of 2,461 feet. The chart conditions included flaps 10 degrees, zero wind, lift off speed of 69 KIAS and climb speed at 50 feet of 75 KIAS.

The STALL SPEEDS chart in Section V indicated that at the most rearward center of gravity, at a weight of 4,000 pounds, a bank angle of zero degrees, and flap deflections of 10 and 20 degrees, the stall speeds would be 69 and 63 KIAS, respectively. The chart indicated that at the most forward center of gravity, the stall speeds for 10 and 20 degrees flaps would be 70 and 65 KIAS, respectively.

The owner of the aforementioned maintenance facility, who had been flying and maintaining the airplane since its Silver Eagle conversion, stated the following with respect to airplane performance: "Weight and balance is very, very critical. With weight aft, you really need to hold the nose down and gain airspeed on takeoff."

METEOROLOGICAL INFORMATION

At 1655, the reported weather conditions at Lemhi County Airport in Salmon, Idaho, located approximately 38 nautical miles east of the accident site, at an elevation of 4,043 feet, were wind from 360 at 4 knots, visibility 10 statute miles, sky clear, temperature 20 degrees C, dew point 0 degrees C, and altimeter 30.25 inches. At 1755, the conditions at Lemhi County Airport were winds calm, visibility 10 statute miles, sky clear, temperature 21 degrees C, dew point -1 degrees C, and altimeter 30.22 inches.

At 1655, the reported weather conditions at Challis Airport in Challis, Idaho, located approximately 35 nautical miles southeast of the accident site, at an elevation of 5,039 feet, were winds calm, visibility 10 statute miles, sky clear, temperature 20 degrees C, dew point -6 degrees C, and altimeter 30.26 inches. At 1755, the conditions at Challis Airport were winds calm, visibility 10 statute miles, sky clear, temperature 21 degrees C, dew point -6 degrees C, and altimeter 30.24 inches.

The eyewitness to the accident reported that the weather at the time was "good, no wind, 65 to 70 degrees F, and good visibility."

Using a temperature of 68 degrees F (20 degrees C), the Flying B Ranch airstrip elevation of 3,647 feet, and an altimeter setting of 30.25 inches, the pressure and density altitudes were calculated to be 3,343 and 4,793 feet, respectively.

AIRPORT INFORMATION

According to information obtained from the airnav.com website, the Flying B Ranch Landing Strip Airport is privately owned and has a single turf runway, runway N/S, which is 2,000 feet long and 100 feet wide. There are no obstructions listed for runway N. The obstructions listed for runway S are "ridge, RIDGE ACROSS APCH END OF RWY S." The airport is located in the canyon of the Middle Fork of the Salmon River. The canyon is oriented north-south and

downstream is to the north. The runway is located on a flat bench on the west bank of the river.

WRECKAGE AND IMPACT INFORMATION

Lemhi County Sheriff's Office personnel examined the accident site on September 29, 2005, and reported that the wreckage was located at 44:58.078 North latitude and 114:43.972 West longitude. Examination of photos provided by the Sheriff's Office revealed that the wreckage was visible when looking southeast from the departure end of the south runway. The accident site appeared to be within 1/4 mile of the end of the runway, offset to the left of the runway centerline, and approximately the same elevation as the runway. The site was located on level grass covered terrain. The wreckage path began with a ground scar that continued to the main wreckage. The propeller separated and was found between the start of the ground scar and the main wreckage. The nose wheel separated and was found beyond the main wreckage. The main wreckage consisted of the inverted fuselage with wings, tail group and engine attached. The fuselage and the inboard sections of the wings were destroyed by fire.

The wreckage was recovered from the accident site on October 6, 2005, and inspected on November 8, 2005, by an NTSB investigator and representatives of Cessna Aircraft Company and Rolls-Royce Corporation at the Discount Aircraft Salvage facility in Deer Park, Washington.

The left wing was fire damaged. The outboard portion of the wing separated from the remainder of the wing. The aft portion of the wing was fire damaged. The left aileron was not observed. The left aileron cables had been cut and continuity was established to the inboard portion of the wing. The left flap had fire damage. The outboard flap push/pull rod remained attached to the bell crank. The rod between the outboard and inboard bell cranks was bent and broken. The flap actuator separated from structure and was fire damaged. The flap actuator measurement indicated approximately a 15 degree down position.

The right wing was fire damaged. The right aileron remained attached. Aileron control cable continuity was established to the inboard portion of the wing. The right flap remained attached and a majority of the flap was consumed by fire. The right flap push/pull rods remained attached to the flaps and the bell cranks. One right wing flap cable was observed cut and the other flap cable was torn and fire damaged. Speed brakes were observed installed on both the left and right wings.

The horizontal stabilizer had been cut from the tail cone by recovery personnel. The left and right elevators remained attached to the horizontal stabilizer. Both the horizontal stabilizer and elevators had fire damage. Elevator control continuity was established from the elevator torque tube to the elevator link assembly in the aft tailcone. The elevator control cables were cut by recovery personnel forward of the elevator link assembly. The elevator trim tab remained attached to the right elevator. The non-Cessna trim tab installation had two actuators. The inboard trim tab rod measurement was approximately 1 3/4 inches and the outboard trim rod measurement was 1 1/2 inches. The trim tab had damage at the inboard portion of the tab and the tab was observed in approximately the neutral position. The trim tab cables were separated at the elevator root. The trim tab moved freely when the cables were moved. The vertical fin was fire damaged. The rudder was removed by recovery personnel. The rudder cables had been cut in the aft tail cone area. The rudder cables were observed attached to the cockpit rudder pedal assembly, which was fire damaged.

The cabin area was destroyed by fire. No seat rails were observed. A portion of a seat frame from an unidentified seat was observed. Two dual pin seat adjust handles with attaching pins were observed. No seat belts or shoulder harness were found during the wreckage examination. The seat frame from the bench seat was separated and fire damaged. No tie downs for the luggage were observed. The instrument panel was destroyed by fire.

The fuel system was modified for the installation of the Rolls Royce turbine engine. Fuel placards were observed for the use of Jet A on both left and right wing fuel tanks. The left fuel tank was breached. A fire damaged vent line was observed in the left wing. Two STC installed wing tip fuel tanks were observed. The right fuel tip tank was observed torn open. The aircraft had an auxiliary baggage compartment fuel tank, which was not observed. The position of the non-Cessna fuel selector mechanism could not be determined due to damage. A detailed examination of the fuel system could not be performed due to the damage to the fuel system.

The propeller remained attached to the hub and was separated from the engine. All three blades were still intact in the hub. One blade did not have bending and a diagonal cut was observed approximately 1 foot from the tip. The second blade was bent aft approximately at midspan and the blade had chordwise scratching. The third blade was bent aft midspan and chordwise scratching was observed.

During examination of the engine, no engine compressor or turbine case penetration was observed. The engine propeller gearbox had sustained considerable impact damage. The case was fractured and the prop shaft had sustained rotational fractures. The compressor inlet was examined and was found unremarkable. Some light impact debris was found in the first and second stage area. The N1 drive displayed rotational continuity by rotating the compressor. The N2 drive train was locked. All engine air and fuel line fittings were at least finger tight and no pre-impact fractures were observed. An engine control cable continuity check was performed from the engine controls back through the aircraft firewall to the end of the cables at the lever arms. No cockpit mounting structure remained, and due to impact damage, the control cables could not be exercised. The engine control governor pointer was found at 84 degrees. The bottom gearbox drain plug was removed and no debris was observed.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy of the pilot was not performed. Toxicological samples were obtained, and toxicological tests conducted by the FAA's Toxicology and Accident Research Laboratory were negative for carbon monoxide, cyanide, ethanol, and drugs.

TESTS AND RESEARCH

A complete engine teardown examination was conducted on November 23, 2005, at the facilities of Rolls-Royce Corporation in Indianapolis, Indiana, under the supervision of an FAA inspector. The compressor rotated freely after removal from the gearbox; it was not examined further. The accessory gearbox was rotated in both the N1 and N2 drive trains from the tachometer drives pads once the turbine and compressor were removed. All drive pads rotated freely; no further disassembly was performed. The combustion section was unremarkable. Significant turbine wheel tip rub was observed in the fourth stage turbine nozzle third stage blade track area. The rub circumferentially was from approximately the 9 o'clock to the 6 o'clock position. The N2 drive train rotated after removal of the exhaust collector. All engine shafting was intact and unremarkable. The observed engine bearings were intact, rotated smoothly and displayed no signs of distress. On January 31, 2006, the fuel control unit was

bench tested at the facilities of Honeywell Controls in South Bend, Indiana, under the supervision of an FAA inspector. The bench test results indicated the control met or exceeded in-service limits. On February 2, 2006, the overspeed governor and the propeller governor were bench tested at the facilities of Woodward Controls in Rockville, Illinois, under the supervision of an FAA inspector. Both units performed within service limits. No mechanical anomaly was found which would have precluded normal operation of the engine or its components.

ADDITIONAL INFORMATION

The wreckage was released to a representative of the owner on March 14, 2006.

Pilot Information

Certificate:	Private	Age:	60, 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:	Yes
Medical Certification:	Class 3 With Waivers/Limitations	Last FAA Medical Exam:	05/01/2005
Occupational Pilot:		Last Flight Review or Equivalent:	06/01/2004
Flight Time:	1939 hours (Total, all aircraft), 1167 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N45SE
Model/Series:	P210N	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	P21000267
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	03/01/2005, Annual	Certified Max Gross Wt.:	4000 lbs
Time Since Last Inspection:		Engines:	1 Turbo Prop
Airframe Total Time:	1004 Hours as of last inspection	Engine Manufacturer:	Rolls-Royce
ELT:	Installed, not activated	Engine Model/Series:	250-B17F
Registered Owner:	Marlin Ventures LLC	Rated Power:	450 hp
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	
Lowest Ceiling:		Visibility (RVR):	
Wind Speed/Gusts:	Calm /	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	20° C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Salmon, ID (12ID)	Type of Flight Plan Filed:	None
Destination:	Boise, ID	Type of Clearance:	None
Departure Time:	1715 MDT	Type of Airspace:	

Airport Information

Airport:	Flying B Ranch Landing Strip (12ID)	Runway Surface Type:	Grass/turf
Airport Elevation:	3647 ft	Runway Surface Condition:	Dry
Runway Used:	S	IFR Approach:	None
Runway Length/Width:	2000 ft / 100 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	1 Fatal	Aircraft Fire:	On-Ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Fatal	Latitude, Longitude:	44.968056, -114.732778

Administrative Information

Investigator In Charge (IIC):	Georgia R Struhsaker	Report Date:	08/29/2006
Additional Participating Persons:	Mike Misnick; FAA FSDO; Boise, ID Robert E Ketchum; Rolls-Royce Corporation; Indianapolis, IN Thomas Teplik; Cessna Aircraft Company; Wichita, KS		
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](#).