Aviation Investigation Final Report

Location:	Yellow Pine, Idaho	**Accident Number:**	WPR13FA296
Date & Time:	June 28, 2013, 09:48 Local	**Registration:**	N1540P
Aircraft:	Piper PA-22-135	**Aircraft Damage:**	Substantial
Defining Event:	Midair collision	**Injuries:**	2 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

A Piper PA-28R-200 and a Piper PA-22-135 collided while on short final approach to land at a nontowered remote airport. The PA-22-135 pilot reported that he made several position reports on the common traffic advisory frequency (CTAF) before performing an upwind entry to the airport traffic pattern from the north. He continued to turn the airplane to the crosswind, downwind, and base legs of the traffic pattern while announcing his positions on the CTAF and then turned the airplane to the final leg and again announced his position on the CTAF. The pilot stated that, as the airplane crossed the river north of the runway, he heard a transmission on the CTAF that "someone was too close" and that he began to abort the landing just before the collision occurred.

The PA-28R-200 pilot reported that he initially approached the airport from the south, announced his position several times on the CTAF, and then entered the airport traffic pattern. However, he aborted his approach to land because an airplane was on the runway. The pilot then flew the airplane south to the vicinity of another airport for spacing from other airplanes in the area. He then proceeded to enter the airport traffic pattern a second time on an extended downwind while again announcing his position several times on the CTAF. The pilot stated that, while in the traffic pattern, he monitored his radio for the positions of other aircraft but that he heard no position reports indicating that an airplane was in front of his position or while he was on final approach. The pilot continued the approach to land and noted that the runway and the flightpath to the runway were clear. Shortly thereafter, the airplane collided with the PA-22-135. The pilot reported that he did not see the other airplane before the collision.

A review of two videos of the collision revealed that the PA-28R-200 flew at a higher altitude than the PA-22-135 while on the downwind, base, and final legs of the airport traffic pattern. In addition, the videos showed that the PA-28R-200 overtook and then descended onto the PA-22-135. Given the PA-28R-200's descent angle and the position of the PA-22-135, it could not be determined if the PA-28R-200 pilot could have seen the PA-22-135.

A review of the recorded CTAF transmissions revealed that both pilots were transmitting their positions within the airport traffic pattern, corroborating their reports that they did so. It could not be determined why neither pilot heard the other pilot's position reports; however, it is likely that they were not adequately monitoring other aircraft position reports while in the airport traffic pattern. If either pilot had heard the other pilot's position reports, it is likely that the collision would not have occurred.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The other pilot's failure to see and avoid the airplane, which resulted in a midair collision while both airplanes were on final approach to land. Contributing to the accident was both pilots' failure to adequately monitor other aircraft position reports while in the pattern.

Findings

Personnel issues	Monitoring other aircraft - Pilot of other aircraft
Personnel issues	Monitoring communications - Pilot
Personnel issues	Monitoring communications - Pilot of other aircraft

Factual Information

History of Flight

Approach-VFR pattern final	Midair collision (Defining event)

HISTORY OF FLIGHT

On June 28, 2013, about 0948 mountain daylight time, a Piper PA-22-135, N1540P, and a Piper PA-28R-200, N2108T, collided in midair while on final approach to landing at the Johnson Creek Airport (3U2), Yellow Pine, Idaho. The PA-22-135 was registered to the pilot and the PA-28R-200 was registered to a private individual. Both airplanes were operated by the pilots under the provisions of Title 14 Code of Federal Regulations Part 91. The private pilot of the PA-22-135 and his pilot-rated passenger sustained serious injuries. The private pilot of the PA-28R-200 sustained serious injuries and his passenger sustained fatal injuries. Visual meteorological conditions prevailed and no flight plan was filed for either flight. The PA-22-135 originated from the Flying B Ranch (12ID), near Salmon, Idaho, about 0800, and the PA-28R-200 originated from Bountiful, Utah, about 0700. Both airplanes had an intended destination of 3U2.

Witnesses located adjacent to the accident site reported observing both the PA-22-135 and the PA-28R-200 collide at an altitude of about 50 feet above ground level just before the threshold of Runway 17. Subsequently, both airplanes were observed descending into terrain.

In a written statement, the pilot of the PA-22-135 reported that he had departed 12ID with two other airplanes. Upon arriving at 3U2, he was following a Cessna 170, who was part of the flight of three airplanes. Following position announcements on the Common Traffic Advisory Frequency (CTAF) over Yellow Pine, he announced and performed an upwind entry to the airport traffic pattern for Runway 17. The pilot stated that he continued to turn left crosswind, downwind, and base for the runway, while announcing his position on the CTAF. He added that as he turned base, he observed the Cessna 170 he was following initiate a go-around due to another airplane on the runway. The pilot further stated that he turned final and announced his position on the CTAF, and that as he crossed the river north of the runway, he heard someone transmitting on the CTAF that "someone was too close" and began to abort the landing. Subsequently, the airplanes collided and impacted terrain.

In a written statement, the pilot of the PA-28R-200 reported that as he approached 3U2 from the south, he announced his position several times. As he entered the airport traffic pattern, he turned left base, and final, while announcing his position. He noticed that an airplane was still on the far departure end of the runway, and felt the airplane would not be clear of the runway before he touched down. The pilot initiated a go-around and continued south to the vicinity of Landmark Airport (0U0), for spacing from other airplanes in the area. The pilot initiated a turn to the north, and intended on entering the airport traffic pattern for 3U2 on an extended downwind, while announcing his position at several intervals.

The pilot stated that he entered the airport traffic pattern at the traffic pattern altitude, and continued to turn left base and final for Runway 17. He added that he announced his positions on the CTAF and

monitored the radio for positions of other aircraft, however, heard no radio position broadcasts that suggested an airplane was in front of his position, or while he was on final approach. He further stated that he continued his approach to landing, noting that the runway and the flight path to the runway was clear. Shortly thereafter, both airplanes collided. The pilot reported that he did not see the other airplane prior to the collision.

During the investigation, a review of two videos, which were provided to the National Transportation Safety Board (NTSB) investigator-in-charge (IIC) by witnesses located at 3U2, revealed the PA-22-135 first came into camera view in a position consistent with being on the left downwind leg for Runway 17. About 13 seconds later, at a noticeably higher altitude, the PA-28R-200 came into the cameras view, also on left downwind for Runway 17. The PA-28R-200 remained at a higher altitude throughout the downwind and base legs, while the PA-22-135 remained at a lower altitude and what appears to be in close proximity to the runway during the base leg and turn onto final. The PA-28R-200 continued a descent while on final to Runway 17, overtaking the PA-22-135. Subsequently, the PA-28R-200 collided with the PA-22-135 near the approach end of Runway 17, and both airplanes impacted terrain.

Representatives from Backcountrypilot.org reported that they were holding an annual summer fly in at 3U2, spanning from June 28 to 30. Airport management reported that during this time, a high volume of airplanes were at or within the vicinity of 3U2.

PERSONNEL INFORMATION

Piper PA-22-135

The pilot, age 39, held a private pilot certificate with an airplane single-engine land rating. A third-class airman medical certificate was on January 6, 2012, with the limitations stated "must wear corrective lenses." The pilot reported that he had accumulated 144 total flight hours.

The pilot rated passenger, age 54, held a commercial pilot certificate with airplane single-engine land, single-engine sea, and instrument airplane ratings. A second-class airman medical certificate was issued on January 7, 2012, with the limitations stated "must wear corrective lenses for distant and near vision." The pilot reported on his most recent medical certificate application that he had accumulated 1,500 total flight hours.

Piper PA-28R-200

The pilot, age 48, held a private pilot certificate with an airplane single-engine land rating, which was issued on April 15, 2010. A third-class airman medical certificate was issued on November 16, 2012, with no limitations stated. The pilot reported that he had accumulated 341 total flight hours. In addition, the pilot stated that he was seated in the front left seat of the airplane and that his 20-month old son, was seated in the front right seat, using a Child Aviation Restraint System (CARES) device.

AIRCRAFT INFORMATION

Piper PA-22-135

The four-seat, high-wing, fixed-gear airplane, serial number (S/N) 22-2404, was manufactured in 1954. It was powered by a Lycoming O-320-A3A engine, rated at 150 horsepower. The airplane was also

equipped with a fixed pitch propeller. Additionally, the airplane was equipped with an auxiliary fuel tank where the rear seats would be installed. The rear seats were found removed from the airplane.

Piper PA-28R-200

The four-seat, low-wing, retractable-gear airplane, serial number (S/N) 28R-7135053, was manufactured in 1971. It was powered by a Lycoming IO-360 engine, rated at 200 horsepower. The airplane was also equipped with an adjustable pitch propeller.

METEOROLOGICAL INFORMATION

A review of recorded data from the McCall Municipal Airport (MYL), McCall Idaho automated weather observation station, located 26 miles west of the accident site, revealed at 0951, conditions were wind calm, visibility 10 miles, clear sky, temperature 19 C , dew point 11 C , and an altimeter setting of 30.33 inches of mercury.

COMMUNICATIONS

Recorded communications of the CTAF were obtained from a private individual who had landed a few minutes prior to the collision. The individual was recording communications inside his own airplane. The supplied recording was 5 minutes, 5 seconds in length, and captured numerous aircraft within the vicinity of the airport, of which were either departing or arriving at 3U2 about the time of the accident. The recorded transmissions revealed that pilots from both accident airplanes were transmitting their locations within the airport traffic pattern. For further details, see the transcript in the public docket for this accident.

AIRPORT INFORMATION

The Johnson Creek Airport is a non-towered airport that is located within a large canyon, with significant rising terrain to the east and west. The airport features a single turf runway, 17/35, which is 3,400 feet in length and 150 feet wide. The edges of the runway were marked by white rocks. The CTAF is 122.90. The reported field elevation is 4,933 feet mean sea level.

Recommended procedures for arrival is from the north, and to report your position over the town of Yellow Pine (3 miles north of 3U2), fly upwind for Runway 17, and enter a left downwind, followed by a left base, and left turn to final. When arriving from the south, it is recommended to report your position over Wapiti Meadows (3 miles south of 3U2), enter the traffic pattern on a left downwind for Runway 17. In addition, landings are generally conducted on Runway 17 and takeoffs on Runway 35 when wind conditions allow, due to surrounding terrain and residential structures.

WRECKAGE AND IMPACT INFORMATION

Examination of the accident site revealed that both airplanes came to rest within about 50 feet of each other. The main wreckages were located about 225 feet from the approach end of Runway 17, along the eastern edge of the runway. The debris path was about 410 feet in length and oriented on a magnetic heading of about 160. Debris was located 185 feet north of the approach end of Runway 17, which included red lens fragments, insulation, and the anti-collision light housing from the PA-22-135. The right flap of the PA-22-135 was located about 374 feet from the main wreckage. Three ground

impressions about 15 feet in length were observed about 115 feet from the main wreckage. A crater of disturbed dirt, about 2 feet by 6 feet in size, which contained fragments of cowling from the PA-28R-200, was located about 105 feet from the main wreckage.

PA-22-135

Examination of the PA-22-135 revealed that the airplane came to rest nose low on a magnetic heading of about 287 degrees. The fuselage remained mostly intact. The aft cabin and left and right door frames were deformed right, and twisted in a clockwise direction when looking aft to forward. The fuselage structure aft of the baggage area was compressed upward to the empennage. The engine was partially attached and displaced to the right. The propeller was separated from the crankshaft aft of the propeller flange. The forward portion of the fuselage and engine firewall was deformed upward and to the left. The left and right forward seat lap belts and shoulder harnesses remained attached to their respective attach points. The front seat was buckled upward about 7 inches on the right side, consistent with fuselage floor deformation. The right seat back was deformed to the right and detached from the fittings. The floorboard exhibited upward crushing to the right of the center console.

The left wing remained attached to the fuselage via both forward and aft mounts. Leading edge and forward spar compression buckling was observed from about 20 inches outboard from the wing root and extended inboard at an approximate 45-degree angle to the wing root. The aileron and flap remained attached. The forward lift strut was buckled downward about 14 inches from the fuselage, and the aft lift strut was buckled downward about midspan.

The right wing remained attached to the fuselage via the both forward and aft mounts. The wing was crushed aft with the trailing edge twisted upwards about 80 degrees that originated from slightly outboard of the right fuel tank. Leading edge crushing was observed from about midspan outboard to the wing tip. The lift strut exhibited downward deformation. An approximate two inch by three inch rub mark and downward deformation was observed about 12 inches outboard from the wing root and 36 inches aft of the leading edge, on the right fuel tank cover panel. The rub mark was oriented on an approximate 30-degree direction when measured from the leading edge. The right aileron remained attached and the flap was separated. The right flap attach hinge was partially detached. The wing structure aft of the fuel tank exhibited downward bending, and the fabric wing covering was torn. Slight buckling was observed on the inboard edge of the aileron.

The vertical stabilizer remained attached and was deformed to the right with downward buckling on the upper edge. The rotating beacon bracket remained attached; however, the housing was separated and located throughout the debris path. The left horizontal stabilizer was buckled aft and upwards. The left elevator remained `attached via its mounts and exhibited downward buckling at the outboard tip. The right horizontal stabilizer and elevator remained attached at each of their respective mounts. . The outboard tip of the right elevator was bent upwards.

The airplane was equipped with a KX175B radio, which was found intact. The radio was tuned to a frequency of 122.90 Megahertz, and the volume knob was rotated fully to the left, consistent with the lowest volume setting. It was not determined how the radio volume knob was positioned in the low volume setting. In addition, the transponder was in the "off" position.

PA-28R-200

Examination of the Piper PA-28R-200 revealed that it came to rest on its right side on a magnetic heading of of about 270 degrees. The fuselage was mostly intact. The engine and firewall were crushed aft. The engine remained partially attached. The propeller remained attached and exhibited purple color transfer on one of the propeller blades. Both propeller blades exhibited chord wise scratching along the forward side of the blade. The firewall, instrument panel, and forward portion of the fuselage were progressively crushed aft from the left to the right (aft looking forward). The cabin roof above the forward seats, including the door posts were crushed and partially separated. The aft area of the fuselage (aft cabin seating area aft) was intact and mostly undamaged.

The rear seats were removed by first responders to facilitate access to the emergency locator transmitter, which was mounted behind the aft bulkhead of the cabin area. The front seats remained attached to their respective seat rails. The left forward seat restraints, which included a lap belt and single shoulder harness, were intact and remained attached to their respective fuselage attach points. The shoulder harness was attached to an inertia reel, and was attached to the laptop buckle assembly. The lap belt was found in the buckled position, however, was cut on the left side by first responders. The forward right seat lap belt restraints were intact and remained attached to their respective attach points. The left side of the seatbelt harness was cut by first responders.

The forward right seat was equipped with a Child Aviation Restraint System (CARES), which was strapped around the seatback about 10.5 inches above the seat bottom. The CARES strap was found secure to the seatback and appeared to be slightly compressing either side of the seat back. The right side of the lap belt restraint was found threaded between the loop of the CARES shoulder restraint, however, the left side was found free from the lap belt restraint. The CARES shoulder restraints remained buckled, however, left shoulder restraint webbing was cut by first responders just above the buckle. First responders reported that the shoulder straps surrounding the infant passenger appeared to be loose; however, the lap belt was tight.

Both the forward left and right seat backs moved forward when pressure was applied to assist with access to the aft seating area.

The airplane was equipped with a King KMA Audio Panel, which sustained impact damage. The airplane was also equipped with two radios, both of which were displaced from the instrument panel and sustained impact damage. The front faces of both radios were separated and not located. It could not be determined what radio frequency was set or the volume setting for either radio.

The left wing was separated from the fuselage via the forward and aft attach points and wing spar, and remained attached via control cables. The aileron and flap remained attached via their mounts. The leading edge was buckled throughout its span. 45-degree crushing was observed from the stall switch and extended aft to the wing tip forward of the main spar. The forward portion of the fiberglass wingtip was separated. The left main landing gear was partially extended. Yellow and orange paint transfer was observed on the leading edge of the wing from the tie down ring to about 6 inches outboard of the stall warning switch. Purple colored material was observed on the leading edge at the flap/aileron junction.

The right wing was separated from the fuselage via the forward and aft attach points and wing spar, and remained attached via control cables. The aileron and flap remained attached via their mounts. The leading edge of the wing was bent downwards and exhibited 45-degree crushing about 22 inches outboard of the flap/aileron junction. The right main landing gear was extended.

The empennage was intact and mostly undamaged. The horizontal stabilator was intact and undamaged. The fiberglass tips were damaged. The left tip exhibited blue paint transfer oriented on a 45-degree angle. The vertical stabilizer was intact and undamaged. The rotating beacon lens was separated.

TESTS AND RESEARCH

Survival Factors

Examination of the PA-28R-200 revealed that the front left seat was found in its original position with all four seat posts attached to the airplane floor track. The seat operated normally on the seat track with no damage to the seat cushions. The seat was located 4 inches aft of the wing carry through spar, with the seat post locked into the 3rd hole on the seat track. The front left seat remained stationary while the seatback rotated forward at the left and right hinge with no locking mechanism. No part number was located on the seat frame.

The forward right seat was found in its original position with all four seat posts attached to the airplane floor track. The seat operated normally on the seat tracks. The seatback cushion was torn on the top outboard portion with a 2 inch by 1.5 inch long sharp tear. The seat was located 6 5/16th inches aft of the wing carry through spar, with the seat post locked into the 5th hole on the seat track. The forward right seat remained stationary while the seatback rotated forward at the left and right hinge with no locking mechanism. No part number was located on the seat frame.

The seatbelt/shoulder harness was manufactured by Pacific Scientific and made up of a lap belt assembly with a single shoulder harness/connector inertia reel. Both the pilot and forward right seat lap belt part numbers were illegible. The shoulder harness/connector inertia reel part number was 45402-1-71. All belts and straps were made from nylon webbing. The lap portion was fitted with an adjustable connector on one end and an adjustable buckle on the other end. The ends of the lap belt portion are attached to the airframe with a sewn-on end-fitting and secured with a bolt to the airframe. The upper torso inertia reel was attached to the airframe sidewall at the cabin window divider with screws. The shoulder harness was attached to the lap belt with a button on top of the male buckle.

The front left seat lap belt and shoulder harness were cleanly separated in a manner consistent with extrication by rescue personnel. The outboard portion of the lap belt measured a total of 25 4 ¼ inches. 16 inches from the attach bolt to the cut webbing and 9 ¼ inches from the remainder of the 5 webbing to the male buckle. The inboard portion of the lap belt measured 20 inches from the 6 attach bolt to the female buckle. The shoulder harness inertia reel webbing measured 12 inches from the reel to the cut webbing ; the remainder of the webbing and attach buckle were missing.

The forward right seat lap belt was cleanly separated in a manner consistent with extrication by rescue personnel. The outboard portion of the lap belt measured 14 ¼ inches from the attach point to the cut webbing; the remainder of the webbing and female buckle were missing. The inboard portion of the lap belt measured 36 ¾ inches from the attach bolt to the female buckle. The shoulder harness inertia reel webbing measured 52 inches from the reel to the 14 attach buckle.

The CARES device was manufactured by AmSafe, Inc., P/N 4082-1-17 021-8061. The 2-inch red webbing restraint slips over the seatback and is adjusted with a metal slip buckle. There are two 1.5 inch black webbing shoulder straps that attach to the main restraint and hang down over the child's shoulders.

The lap belt is then fed thru the bottom portion of the restraint. The final step to completing the harness system is to connect the chest clip.

The Federal Aviation Administration permits Child Restraint Systems meeting the Federal Motor Vehicle Safety Standard (FMVSS) 213 (49CFR 517.213) Child Restraint Systems used in Motor Vehicle and Aircraft. The SAE S-9 committee used FMVSS 213 and research data to write Aerospace Standard (AS) 5276 in 2000, Performance Standard for Child Restraint Systems in Transport Category Airplanes. The FAA then revised the Technical Standard Order (TSO) C100b to reference SAE AS 5276 in 2002.

Originally the CARES device was certified under a supplemental type certificate (STC), but was later certified under section 21.305(d) as meeting an equivalent level of safety (ELOS) to TSO C100b. The STC process was aircraft-specific. The 21.305(d) process was used to facilitate more wide-spread use of the device. Subsequently, the operating rules for various types of aircraft were revised to also permit the use of additional devices certified under TSO C100b, and 21.305(d)

FAA Publication 92-01, Seat Belts and Shoulder Harnesses, states in part "... for maximum protection and safety, small children should be placed and secured in approved "child safety seat" devices during aircraft operation. Child safety seats must meet current manufacturing and identification requirements of the Federal government and be installed and secured in accordance with these regulations. Install the safety seat in a rear airplane seat, but not near an entry door or emergency exit. If you must use a front airplane seat, make sure that the child seat cannot interfere with the airplane controls or limit pilot access to the radios and flight instruments."

Other flight crew Information

Certificate:	Commercial	**Age:**	54
Airplane Rating(s):	Single-engine land; Single-engine sea	**Seat Occupied:**	Right
Other Aircraft Rating(s):	None	**Restraint Used:**	3-point
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	June 7, 2012
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	May 29, 2012
Flight Time:	144 hours (Total, all aircraft), 65 hours (Total, this make and model), 116 hours (Pilot In Command, all aircraft), 24 hours (Last 90 days, all aircraft)		

Pilot Information

Certificate:	Private	**Age:**	39
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	Yes
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 With waivers/limitations	**Last FAA Medical Exam:**	January 6, 2012
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	1500 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N1540P
Model/Series:	PA-22-135	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	22-2404
Landing Gear Type:	Tricycle	**Seats:**	4
Date/Type of Last Inspection:	December 9, 2012 Annual	**Certified Max Gross Wt.:**	2000 lbs
Time Since Last Inspection:	55 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	3296 Hrs as of last inspection	**Engine Manufacturer:**	LYCOMING
ELT:	Installed, not activated	**Engine Model/Series:**	O-290 SERIES
Registered Owner:	Christopher Jordan	**Rated Power:**	140 Horsepower
Operator:	Christopher Jordan	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	MYL,5024 ft msl	**Distance from Accident Site:**	26 Nautical Miles
Observation Time:	09:51 Local	**Direction from Accident Site:**	270°
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:	30.32 inches Hg	**Temperature/Dew Point:**	19°C / 11°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Salmon, ID (12ID)	**Type of Flight Plan Filed:**	None
Destination:	Yellow Pine, ID (3U2)	**Type of Clearance:**	None
Departure Time:	07:00 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	Johnson Creek Airport 3U2	**Runway Surface Type:**	Grass/turf
Airport Elevation:	4933 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	17	**IFR Approach:**	None
Runway Length/Width:	3400 ft / 150 ft	**VFR Approach/Landing:**	Full stop;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	2 Serious	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Serious	**Latitude, Longitude:**	44.911666,-115.485275(est)

Administrative Information

Investigator In Charge (IIC):	Cawthra, Joshua
Additional Participating Persons:	Patrick Darling; Federal Aviation Administration; Boise, ID Charles Little; Piper Aircraft Inc.; Vero Beach, FL Chris Arnold; AmSafe; Phoenix, AZ Giuseppe Gullotto; AmSafe; Phoenix, AZ
Original Publish Date:	September 8, 2015
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=87324

Aviation Investigation Final Report

Location:	Yellow Pine, Idaho	**Accident Number:**	WPR13FA296
Date & Time:	June 28, 2013, 09:48 Local	**Registration:**	N2108T
Aircraft:	Piper PA-28R-200	**Aircraft Damage:**	Substantial
Defining Event:	Midair collision	**Injuries:**	1 Fatal, 1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

A Piper PA-28R-200 and a Piper PA-22-135 collided while on short final approach to land at a nontowered remote airport. The PA-22-135 pilot reported that he made several position reports on the common traffic advisory frequency (CTAF) before performing an upwind entry to the airport traffic pattern from the north. He continued to turn the airplane to the crosswind, downwind, and base legs of the traffic pattern while announcing his positions on the CTAF and then turned the airplane to the final leg and again announced his position on the CTAF. The pilot stated that, as the airplane crossed the river north of the runway, he heard a transmission on the CTAF that "someone was too close" and that he began to abort the landing just before the collision occurred.

The PA-28R-200 pilot reported that he initially approached the airport from the south, announced his position several times on the CTAF, and then entered the airport traffic pattern. However, he aborted his approach to land because an airplane was on the runway. The pilot then flew the airplane south to the vicinity of another airport for spacing from other airplanes in the area. He then proceeded to enter the airport traffic pattern a second time on an extended downwind while again announcing his position several times on the CTAF. The pilot stated that, while in the traffic pattern, he monitored his radio for the positions of other aircraft but that he heard no position reports indicating that an airplane was in front of his position or while he was on final approach. The pilot continued the approach to land and noted that the runway and the flightpath to the runway were clear. Shortly thereafter, the airplane collided with the PA-22-135. The pilot reported that he did not see the other airplane before the collision.

A review of two videos of the collision revealed that the PA-28R-200 flew at a higher altitude than the PA-22-135 while on the downwind, base, and final legs of the airport traffic pattern. In addition, the videos showed that the PA-28R-200 overtook and then descended onto the PA-22-135. Given the PA-28R-200's descent angle and the position of the PA-22-135, it could not be determined if the PA-28R-200 pilot could have seen the PA-22-135.

A review of the recorded CTAF transmissions revealed that both pilots were transmitting their positions within the airport traffic pattern, corroborating their reports that they did so. It could not be determined why neither pilot heard the other pilot's position reports; however, it is likely that they were not adequately monitoring other aircraft position reports while in the airport traffic pattern. If either pilot had heard the other pilot's position reports, it is likely that the collision would not have occurred.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The pilot's failure to see and avoid the airplane ahead of his position in the airport traffic pattern, which resulted in a midair collision while both airplanes were on approach to land. Contributing to the accident was both pilots' failure to adequately monitor other aircraft position reports while in the pattern.

Findings

Personnel issues	Monitoring other aircraft - Pilot
Personnel issues	Monitoring communications - Pilot
Personnel issues	Monitoring communications - Pilot of other aircraft

Factual Information

History of Flight

Approach-VFR pattern final	Midair collision

HISTORY OF FLIGHT

On June 28, 2013, about 0948 mountain daylight time, a Piper PA-22-135, N1540P, and a Piper PA-28R-200, N2108T, collided in midair while on final approach to landing at the Johnson Creek Airport (3U2), Yellow Pine, Idaho. The PA-22-135 was registered to the pilot and the PA-28R-200 was registered to a private individual. Both airplanes were operated by the pilots under the provisions of Title 14 Code of Federal Regulations Part 91. The private pilot of the PA-22-135 and his pilot-rated passenger sustained serious injuries. The private pilot of the PA-28R-200 sustained serious injuries and his passenger sustained fatal injuries. Visual meteorological conditions prevailed and no flight plan was filed for either flight. The PA-22-135 originated from the Flying B Ranch (12ID), near Salmon, Idaho, about 0800, and the PA-28R-200 originated from Bountiful, Utah, about 0700. Both airplanes had an intended destination of 3U2.

Witnesses located adjacent to the accident site reported observing both the PA-22-135 and the PA-28R-200 collide at an altitude of about 50 feet above ground level just before the threshold of Runway 17. Subsequently, both airplanes were observed descending into terrain.

In a written statement, the pilot of the PA-22-135 reported that he had departed 12ID with two other airplanes. Upon arriving at 3U2, he was following a Cessna 170, who was part of the flight of three airplanes. Following position announcements on the Common Traffic Advisory Frequency (CTAF) over Yellow Pine, he announced and performed an upwind entry to the airport traffic pattern for Runway 17. The pilot stated that he continued to turn left crosswind, downwind, and base for the runway, while announcing his position on the CTAF. He added that as he turned base, he observed the Cessna 170 he was following initiate a go-around due to another airplane on the runway. The pilot further stated that he turned final and announced his position on the CTAF, and that as he crossed the river north of the runway, he heard someone transmitting on the CTAF that "someone was too close" and began to abort the landing. Subsequently, the airplanes collided and impacted terrain.

In a written statement, the pilot of the PA-28R-200 reported that as he approached 3U2 from the south, he announced his position several times. As he entered the airport traffic pattern, he turned left base, and final, while announcing his position. He noticed that an airplane was still on the far departure end of the runway, and felt the airplane would not be clear of the runway before he touched down. The pilot initiated a go-around and continued south to the vicinity of Landmark Airport (0U0), for spacing from other airplanes in the area. The pilot initiated a turn to the north, and intended on entering the airport traffic pattern for 3U2 on an extended downwind, while announcing his position at several intervals.

The pilot stated that he entered the airport traffic pattern at the traffic pattern altitude, and continued to turn left base and final for Runway 17. He added that he announced his positions on the CTAF and

monitored the radio for positions of other aircraft, however, heard no radio position broadcasts that suggested an airplane was in front of his position, or while he was on final approach. He further stated that he continued his approach to landing, noting that the runway and the flight path to the runway was clear. Shortly thereafter, both airplanes collided. The pilot reported that he did not see the other airplane prior to the collision.

During the investigation, a review of two videos, which were provided to the National Transportation Safety Board (NTSB) investigator-in-charge (IIC) by witnesses located at 3U2, revealed the PA-22-135 first came into camera view in a position consistent with being on the left downwind leg for Runway 17. About 13 seconds later, at a noticeably higher altitude, the PA-28R-200 came into the cameras view, also on left downwind for Runway 17. The PA-28R-200 remained at a higher altitude throughout the downwind and base legs, while the PA-22-135 remained at a lower altitude and what appears to be in close proximity to the runway during the base leg and turn onto final. The PA-28R-200 continued a descent while on final to Runway 17, overtaking the PA-22-135. Subsequently, the PA-28R-200 collided with the PA-22-135 near the approach end of Runway 17, and both airplanes impacted terrain.

Representatives from Backcountrypilot.org reported that they were holding an annual summer fly in at 3U2, spanning from June 28 to 30. Airport management reported that during this time, a high volume of airplanes were at or within the vicinity of 3U2.

PERSONNEL INFORMATION

Piper PA-22-135

The pilot, age 39, held a private pilot certificate with an airplane single-engine land rating. A third-class airman medical certificate was on January 6, 2012, with the limitations stated "must wear corrective lenses." The pilot reported that he had accumulated 144 total flight hours.

The pilot rated passenger, age 54, held a commercial pilot certificate with airplane single-engine land, single-engine sea, and instrument airplane ratings. A second-class airman medical certificate was issued on January 7, 2012, with the limitations stated "must wear corrective lenses for distant and near vision." The pilot reported on his most recent medical certificate application that he had accumulated 1,500 total flight hours.

Piper PA-28R-200

The pilot, age 48, held a private pilot certificate with an airplane single-engine land rating, which was issued on April 15, 2010. A third-class airman medical certificate was issued on November 16, 2012, with no limitations stated. The pilot reported that he had accumulated 341 total flight hours. In addition, the pilot stated that he was seated in the front left seat of the airplane and that his 20-month old son, was seated in the front right seat, using a Child Aviation Restraint System (CARES) device.

AIRCRAFT INFORMATION

Piper PA-22-135

The four-seat, high-wing, fixed-gear airplane, serial number (S/N) 22-2404, was manufactured in 1954. It was powered by a Lycoming O-320-A3A engine, rated at 150 horsepower. The airplane was also

equipped with a fixed pitch propeller. Additionally, the airplane was equipped with an auxiliary fuel tank where the rear seats would be installed. The rear seats were found removed from the airplane.

Piper PA-28R-200

The four-seat, low-wing, retractable-gear airplane, serial number (S/N) 28R-7135053, was manufactured in 1971. It was powered by a Lycoming IO-360 engine, rated at 200 horsepower. The airplane was also equipped with an adjustable pitch propeller.

METEOROLOGICAL INFORMATION

A review of recorded data from the McCall Municipal Airport (MYL), McCall Idaho automated weather observation station, located 26 miles west of the accident site, revealed at 0951, conditions were wind calm, visibility 10 miles, clear sky, temperature 19 C , dew point 11 C , and an altimeter setting of 30.33 inches of mercury.

COMMUNICATIONS

Recorded communications of the CTAF were obtained from a private individual who had landed a few minutes prior to the collision. The individual was recording communications inside his own airplane. The supplied recording was 5 minutes, 5 seconds in length, and captured numerous aircraft within the vicinity of the airport, of which were either departing or arriving at 3U2 about the time of the accident. The recorded transmissions revealed that pilots from both accident airplanes were transmitting their locations within the airport traffic pattern. For further details, see the transcript in the public docket for this accident.

AIRPORT INFORMATION

The Johnson Creek Airport is a non-towered airport that is located within a large canyon, with significant rising terrain to the east and west. The airport features a single turf runway, 17/35, which is 3,400 feet in length and 150 feet wide. The edges of the runway were marked by white rocks. The CTAF is 122.90. The reported field elevation is 4,933 feet mean sea level.

Recommended procedures for arrival is from the north, and to report your position over the town of Yellow Pine (3 miles north of 3U2), fly upwind for Runway 17, and enter a left downwind, followed by a left base, and left turn to final. When arriving from the south, it is recommended to report your position over Wapiti Meadows (3 miles south of 3U2), enter the traffic pattern on a left downwind for Runway 17. In addition, landings are generally conducted on Runway 17 and takeoffs on Runway 35 when wind conditions allow, due to surrounding terrain and residential structures.

WRECKAGE AND IMPACT INFORMATION

Examination of the accident site revealed that both airplanes came to rest within about 50 feet of each other. The main wreckages were located about 225 feet from the approach end of Runway 17, along the eastern edge of the runway. The debris path was about 410 feet in length and oriented on a magnetic heading of about 160. Debris was located 185 feet north of the approach end of Runway 17, which included red lens fragments, insulation, and the anti-collision light housing from the PA-22-135. The right flap of the PA-22-135 was located about 374 feet from the main wreckage. Three ground

impressions about 15 feet in length were observed about 115 feet from the main wreckage. A crater of disturbed dirt, about 2 feet by 6 feet in size, which contained fragments of cowling from the PA-28R-200, was located about 105 feet from the main wreckage.

PA-22-135

Examination of the PA-22-135 revealed that the airplane came to rest nose low on a magnetic heading of about 287 degrees. The fuselage remained mostly intact. The aft cabin and left and right door frames were deformed right, and twisted in a clockwise direction when looking aft to forward. The fuselage structure aft of the baggage area was compressed upward to the empennage. The engine was partially attached and displaced to the right. The propeller was separated from the crankshaft aft of the propeller flange. The forward portion of the fuselage and engine firewall was deformed upward and to the left. The left and right forward seat lap belts and shoulder harnesses remained attached to their respective attach points. The front seat was buckled upward about 7 inches on the right side, consistent with fuselage floor deformation. The right seat back was deformed to the right and detached from the fittings. The floorboard exhibited upward crushing to the right of the center console.

The left wing remained attached to the fuselage via both forward and aft mounts. Leading edge and forward spar compression buckling was observed from about 20 inches outboard from the wing root and extended inboard at an approximate 45-degree angle to the wing root. The aileron and flap remained attached. The forward lift strut was buckled downward about 14 inches from the fuselage, and the aft lift strut was buckled downward about midspan.

The right wing remained attached to the fuselage via the both forward and aft mounts. The wing was crushed aft with the trailing edge twisted upwards about 80 degrees that originated from slightly outboard of the right fuel tank. Leading edge crushing was observed from about midspan outboard to the wing tip. The lift strut exhibited downward deformation. An approximate two inch by three inch rub mark and downward deformation was observed about 12 inches outboard from the wing root and 36 inches aft of the leading edge, on the right fuel tank cover panel. The rub mark was oriented on an approximate 30-degree direction when measured from the leading edge. The right aileron remained attached and the flap was separated. The right flap attach hinge was partially detached. The wing structure aft of the fuel tank exhibited downward bending, and the fabric wing covering was torn. Slight buckling was observed on the inboard edge of the aileron.

The vertical stabilizer remained attached and was deformed to the right with downward buckling on the upper edge. The rotating beacon bracket remained attached; however, the housing was separated and located throughout the debris path. The left horizontal stabilizer was buckled aft and upwards. The left elevator remained `attached via its mounts and exhibited downward buckling at the outboard tip. The right horizontal stabilizer and elevator remained attached at each of their respective mounts. . The outboard tip of the right elevator was bent upwards.

The airplane was equipped with a KX175B radio, which was found intact. The radio was tuned to a frequency of 122.90 Megahertz, and the volume knob was rotated fully to the left, consistent with the lowest volume setting. It was not determined how the radio volume knob was positioned in the low volume setting. In addition, the transponder was in the "off" position.

PA-28R-200

Examination of the Piper PA-28R-200 revealed that it came to rest on its right side on a magnetic heading of of about 270 degrees. The fuselage was mostly intact. The engine and firewall were crushed aft. The engine remained partially attached. The propeller remained attached and exhibited purple color transfer on one of the propeller blades. Both propeller blades exhibited chord wise scratching along the forward side of the blade. The firewall, instrument panel, and forward portion of the fuselage were progressively crushed aft from the left to the right (aft looking forward). The cabin roof above the forward seats, including the door posts were crushed and partially separated. The aft area of the fuselage (aft cabin seating area aft) was intact and mostly undamaged.

The rear seats were removed by first responders to facilitate access to the emergency locator transmitter, which was mounted behind the aft bulkhead of the cabin area. The front seats remained attached to their respective seat rails. The left forward seat restraints, which included a lap belt and single shoulder harness, were intact and remained attached to their respective fuselage attach points. The shoulder harness was attached to an inertia reel, and was attached to the laptop buckle assembly. The lap belt was found in the buckled position, however, was cut on the left side by first responders. The forward right seat lap belt restraints were intact and remained attached to their respective attach points. The left side of the seatbelt harness was cut by first responders.

The forward right seat was equipped with a Child Aviation Restraint System (CARES), which was strapped around the seatback about 10.5 inches above the seat bottom. The CARES strap was found secure to the seatback and appeared to be slightly compressing either side of the seat back. The right side of the lap belt restraint was found threaded between the loop of the CARES shoulder restraint, however, the left side was found free from the lap belt restraint. The CARES shoulder restraints remained buckled, however, left shoulder restraint webbing was cut by first responders just above the buckle. First responders reported that the shoulder straps surrounding the infant passenger appeared to be loose; however, the lap belt was tight.

Both the forward left and right seat backs moved forward when pressure was applied to assist with access to the aft seating area.

The airplane was equipped with a King KMA Audio Panel, which sustained impact damage. The airplane was also equipped with two radios, both of which were displaced from the instrument panel and sustained impact damage. The front faces of both radios were separated and not located. It could not be determined what radio frequency was set or the volume setting for either radio.

The left wing was separated from the fuselage via the forward and aft attach points and wing spar, and remained attached via control cables. The aileron and flap remained attached via their mounts. The leading edge was buckled throughout its span. 45-degree crushing was observed from the stall switch and extended aft to the wing tip forward of the main spar. The forward portion of the fiberglass wingtip was separated. The left main landing gear was partially extended. Yellow and orange paint transfer was observed on the leading edge of the wing from the tie down ring to about 6 inches outboard of the stall warning switch. Purple colored material was observed on the leading edge at the flap/aileron junction.

The right wing was separated from the fuselage via the forward and aft attach points and wing spar, and remained attached via control cables. The aileron and flap remained attached via their mounts. The leading edge of the wing was bent downwards and exhibited 45-degree crushing about 22 inches outboard of the flap/aileron junction. The right main landing gear was extended.

The empennage was intact and mostly undamaged. The horizontal stabilator was intact and undamaged. The fiberglass tips were damaged. The left tip exhibited blue paint transfer oriented on a 45-degree angle. The vertical stabilizer was intact and undamaged. The rotating beacon lens was separated.

TESTS AND RESEARCH

Survival Factors

Examination of the PA-28R-200 revealed that the front left seat was found in its original position with all four seat posts attached to the airplane floor track. The seat operated normally on the seat track with no damage to the seat cushions. The seat was located 4 inches aft of the wing carry through spar, with the seat post locked into the 3rd hole on the seat track. The front left seat remained stationary while the seatback rotated forward at the left and right hinge with no locking mechanism. No part number was located on the seat frame.

The forward right seat was found in its original position with all four seat posts attached to the airplane floor track. The seat operated normally on the seat tracks. The seatback cushion was torn on the top outboard portion with a 2 inch by 1.5 inch long sharp tear. The seat was located 6 5/16th inches aft of the wing carry through spar, with the seat post locked into the 5th hole on the seat track. The forward right seat remained stationary while the seatback rotated forward at the left and right hinge with no locking mechanism. No part number was located on the seat frame.

The seatbelt/shoulder harness was manufactured by Pacific Scientific and made up of a lap belt assembly with a single shoulder harness/connector inertia reel. Both the pilot and forward right seat lap belt part numbers were illegible. The shoulder harness/connector inertia reel part number was 45402-1-71. All belts and straps were made from nylon webbing. The lap portion was fitted with an adjustable connector on one end and an adjustable buckle on the other end. The ends of the lap belt portion are attached to the airframe with a sewn-on end-fitting and secured with a bolt to the airframe. The upper torso inertia reel was attached to the airframe sidewall at the cabin window divider with screws. The shoulder harness was attached to the lap belt with a button on top of the male buckle.

The front left seat lap belt and shoulder harness were cleanly separated in a manner consistent with extrication by rescue personnel. The outboard portion of the lap belt measured a total of 25 4 ¼ inches. 16 inches from the attach bolt to the cut webbing and 9 ¼ inches from the remainder of the 5 webbing to the male buckle. The inboard portion of the lap belt measured 20 inches from the 6 attach bolt to the female buckle. The shoulder harness inertia reel webbing measured 12 inches from the reel to the cut webbing ; the remainder of the webbing and attach buckle were missing.

The forward right seat lap belt was cleanly separated in a manner consistent with extrication by rescue personnel. The outboard portion of the lap belt measured 14 ¼ inches from the attach point to the cut webbing; the remainder of the webbing and female buckle were missing. The inboard portion of the lap belt measured 36 ¾ inches from the attach bolt to the female buckle. The shoulder harness inertia reel webbing measured 52 inches from the reel to the 14 attach buckle.

The CARES device was manufactured by AmSafe, Inc., P/N 4082-1-17 021-8061. The 2-inch red webbing restraint slips over the seatback and is adjusted with a metal slip buckle. There are two 1.5 inch black webbing shoulder straps that attach to the main restraint and hang down over the child's shoulders.

The lap belt is then fed thru the bottom portion of the restraint. The final step to completing the harness system is to connect the chest clip.

The Federal Aviation Administration permits Child Restraint Systems meeting the Federal Motor Vehicle Safety Standard (FMVSS) 213 (49CFR 517.213) Child Restraint Systems used in Motor Vehicle and Aircraft. The SAE S-9 committee used FMVSS 213 and research data to write Aerospace Standard (AS) 5276 in 2000, Performance Standard for Child Restraint Systems in Transport Category Airplanes. The FAA then revised the Technical Standard Order (TSO) C100b to reference SAE AS 5276 in 2002.

Originally the CARES device was certified under a supplemental type certificate (STC), but was later certified under section 21.305(d) as meeting an equivalent level of safety (ELOS) to TSO C100b. The STC process was aircraft-specific. The 21.305(d) process was used to facilitate more wide-spread use of the device. Subsequently, the operating rules for various types of aircraft were revised to also permit the use of additional devices certified under TSO C100b, and 21.305(d)

FAA Publication 92-01, Seat Belts and Shoulder Harnesses, states in part "... for maximum protection and safety, small children should be placed and secured in approved "child safety seat" devices during aircraft operation. Child safety seats must meet current manufacturing and identification requirements of the Federal government and be installed and secured in accordance with these regulations. Install the safety seat in a rear airplane seat, but not near an entry door or emergency exit. If you must use a front airplane seat, make sure that the child seat cannot interfere with the airplane controls or limit pilot access to the radios and flight instruments."

Pilot Information

Certificate:	Private	**Age:**	48
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	3-point
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 With waivers/limitations	**Last FAA Medical Exam:**	November 16, 2012
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	February 19, 2013
Flight Time:	341 hours (Total, all aircraft), 35 hours (Total, this make and model), 277 hours (Pilot In Command, all aircraft), 18 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:	Piper	**Registration:**	N2108T
Model/Series:	PA-28R-200	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	28R-7135053
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	Unknown	**Certified Max Gross Wt.:**	
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	LYCOMING
ELT:	Installed, not activated	**Engine Model/Series:**	IO-360 SER
Registered Owner:	On file	**Rated Power:**	180 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	MYL,5024 ft msl	**Distance from Accident Site:**	26 Nautical Miles
Observation Time:	09:51 Local	**Direction from Accident Site:**	270°
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:	30.32 inches Hg	**Temperature/Dew Point:**	19°C / 11°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Bountiful, UT	**Type of Flight Plan Filed:**	None
Destination:	Yellow Pine, ID (3U2)	**Type of Clearance:**	None
Departure Time:	07:00 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	Johnson Creek Airport 3U2	**Runway Surface Type:**	Grass/turf
Airport Elevation:	4933 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	17	**IFR Approach:**	None
Runway Length/Width:	3400 ft / 150 ft	**VFR Approach/Landing:**	Full stop;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 Serious	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 Fatal	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal, 1 Serious	**Latitude, Longitude:**	44.911666,-115.485275(est)

Administrative Information

Investigator In Charge (IIC):	Cawthra, Joshua
Additional Participating Persons:	Patrick Darling; Federal Aviation Administration; Boise, ID Charles Little; Piper Aircraft Inc.; Vero Beach, FL Chris Arnold; AmSafe; Phoenix, AZ Giuseppe Gullotto; AmSafe; Phoenix, AZ
Original Publish Date:	September 8, 2015
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=87324