

AVIATION SAFETY MANAGEMENT SYSTEMS



FY 2015 AVIATION SAFETY SUMMARY



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How to interpret Data within this report

Note: Formulas Used: Industry Standard "Per 100,000 Hours Flown"

Accident Rate = Number of accidents divided by the number of hours flown multiplied by 100,000.

Fatal Accident Rate = Number of fatal accidents divided by the number of hours flown multiplied by 100,000.

Fatality Rate = Number of fatalities divided by the number of hours flown multiplied by 100,000.

Click on <u>2015 Aviation Safety Summary</u> to access this report online.

Aircraft Category Definitions:

- USFS Owned and Operated (O&O) includes a total of 38 aircraft; 24 fleet aircraft (20 fixedwing, 1 airtanker and 3 helicopters) and 14 leased fixed-wing aircraft.
- > Fixed-Wing Aircraft this includes all contract fixed-wing, excluding all airtankers.
- > Helicopters includes all contract helicopters, including tanked helicopters.
- Airtankers include all contract multi-engine/jet large and very large airtankers and scoopers.
- SEAT's are Single Engine Airtankers. The USFS only has one on contract through DOI-OAS, however the hours are obtained from DOI-OAS for all SEAT's that flew on USFS missions.

Mishap Definitions:

- Aircraft Accident: An occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight and the time all such persons have disembarked, and in which any person suffers death or serious injury or in which the aircraft receives substantial damage. During a jump sequence, a Forest Service smokejumper is considered to have safely disembarked the aircraft after detaching from the static line from the parachute deployment system and when the parachute canopy has successfully deployed. (Refer to 14 CFR NTSB 830 for definition of reportable accidents)
- Aircraft Incident with Potential: An "in-flight incident" that narrowly misses being an accident by NTSB definition and circumstances involve some aircraft damage, property damage, or minor injury to crew or passengers. Classification of Incidents with Potential is determined by the US Forest Service, Branch Chief, Aviation Safety Management Systems.

Operational Control is defined as the exercise of authority over initiating, conducting, or terminating a flight (14 CFR Part 1.1). This includes direct management oversight, supervision and accountability for a specific task, mission or assignment.

- Forest Service fleet aircraft or aircraft on contract to the USFS that have a mishap while under operational control of another agency (i.e. BLM, NPS, State, etc.) are not USFS reportable mishaps but that of the agency with operational control.
- Cooperator aircraft (fleet and contract) under operational control of the USFS that have a mishap are USFS reportable mishaps and are included in these statistics.
- Military aircraft remain under the operational control of the military even while supporting USFS operations.

Executive Summary

The Forest Service Aviation Risk Management program is based on the philosophy that all aircraft mishaps are preventable and that mishap prevention is an inherent function of management.

The Forest Service had three accidents in 2015, two fixed-wing and one helicopter, ending the 5 year accident free streak for helicopters.

The USFS flew 67,580 hours in FY 2015 which is slightly below the 10-year average of 69,864 flight hours. The primary mission of Forest Service Aviation is to support natural resource programs through a variety of means, including, but not limited to:

- Aerial delivery of firefighters by parachute, rappel rope, or on site landing
- Air tactical command and control
- Surveillance, reconnaissance, and intelligence gathering
- Infrared detection & mapping
- Aerial delivery of fire retardant and water
- Passenger transport for firefighting and resource missions
- Administrative flights
- Research
- Forest rehabilitation
- Forest Health Protection (aerial surveys, application and photography)
- Law enforcement
- Aerial photography
- Emergency Medical Assistance

Approximately 300 employees at the Washington Office, Regional Offices and Forest levels administer the Forest Service aviation program. The national staff is located in Washington D.C. and at the National Interagency Fire Center in Boise, Idaho. The vast majority of aviation personnel are located throughout the forests, with local forest and regional staff providing dayto-day operational oversight and program guidance.

The Forest Service utilized approximately 530 aircraft in FY 2015. These include government owned and leased, but primarily contracted aircraft.

Numerous state agencies and county municipalities operate Forest Service owned aircraft under the Federal Excess Personal Property (FEPP) program. These aircraft are not included in these statistics or mishap data.

Safety Management System

A Safety Management System (SMS) is essentially a quality management approach to controlling risk. It provides the organizational framework to construct and support a sound safety culture that actively controls its risk exposure. With increased aviation activity and decreased resources, the SMS pushes the limits of current safety strategies and practices by developing and implementing a structured management system to control risk and meet legal responsibilities in aviation operations.

Our goal is to develop a safety culture that achieves and maintains a zero accident rate. A highly successful safety culture understands that every person in the organization accepts that safety is a conscious and ongoing mindset as opposed to simply a box to be checked. We understand that safety is a dynamic non-event. Consequently, we need to maintain the capability to continuously seek out and eliminate latent defects within our systems and culture. By being proactive in this area we eliminate potential causal factors that could lead to future accidents.

There are four components comprising the Agency's safety management system; each component is an essential piece of a comprehensive safety-oriented management system.

→ Policy is management commitment, responsibility and accountability for the program and the appointment of key safety personnel. Forest Service manuals are being revised using principle centered management for guidance of aviation operations.

+ Risk Management identifies hazards and applies risk assessment and mitigation processes.

→ Assurance is the process of monitoring controls that also includes safety and compliance audits, aviation accident prevention, review and analysis of historical data, accident investigation, error analysis, and corrective action plans.

→ Promotion includes training for pilots, crews, managers, support personnel and end-users.
 Other communications, awards and lessons learned help to maintain safety awareness.



Accomplishments in aviation safety in FY 2015 include the following:

Policy:

- ✤ Revised the Safety Management System (SMS) Guide
- ✤ Participated in the FSM 5700 rewrite
- Provided input to several interagency guides and handbooks
- ✤ Participated in the revision of the National Aviation Safety Management Plan
- ✤ Developed Aviation Accident investigation Guide
- ✤ Participated in the development of the Short Haul Operations Plan

Risk Management:

- ✤ Instructed multiple risk management sessions nationally
- ✤ Provided Safety Officer oversight to the new HC-130 airtanker program
- ✤ Inclusion of SMS requirements into the 2.0 Airtanker contract

Assurance:

- ✤ Coordinated investigations for three accidents, four Incidents With Potential (IWP) and multiple other Facilitated Analysis and Peer Reviews.
- ✤ Revised and strengthened the Exclusive Use (EU) and Call When Needed (CWN) contract specifications for vendor SMS
- Participated in contract technical evaluation board proposals
- ✤ Participated in quality assurance reviews

Safety Promotion:

- Published 2 monthly SAFECOM Summaries
- ✤ Published a combined total of 16 Safety Alerts, Technical Bulletins, Lessons Learned, Accident Prevention Bulletins and Information Bulletins
- Presented A-200 Aviation Mishap Reviews at Helicopter Association International (HAI), several Regional Aviation and Safety meetings, Helicopter Crewmember, Helicopter Manager and Helibase Manager Courses
- ✤ Provided numerous SMS scholarships to Treasure Valley community college.
- USFS students completed a total of 11,043 Interagency Aviation Training (IAT) modules.
 These were completed through Classroom (2,522 modules), Webinars (244 modules) and online learning (8,277 modules).

Statistical Summary

USFS Aircraft Accident Rates 2006-2015

Statistical Summary

USFS Aircraft Accident Rates 2006-2015



FY 2015 Accident Statistics

Aircraft Type	Hours	Number of Accidents	Accident Rate	Number of Fatalities	Fatality Rate
Fixed-Wing	21,709	2	9.21	0	0
Helicopter	32,253	1	3.1	2	6.2
Airtanker	4,710	0	0	0	0
Single Engine Airtanker (SEAT)	484	0	0	0	0
USFS Owned and/or Operated (USFS O/O)	8,424	0	0	0	0
Total	67,580	3	4.43	2	2.95

FY 2015 Flight Hour Percentages



10-Year Average of Flight Hour Percentages 2006-2015





Average vs Actual Hours Flown for FY 2015

Comparison of Average vs 2015

	10 Year Average	2015	Comparison	
Hours flown	69,864	67,580	-2,284	
Number of Accidents	2.3	3	+0.7	
Number of Fatalities	2.5	2	-0.5	
Accident Rate	3.29	4.43	+1.35	
Fatality Rate	3.57	2.95	62	

Average vs Actual for 2015



10-Year Accident Data by Aircraft Category

Aircraft Category	Fixed-Wing	Helicopter	Airtanker	SEAT	USFS O&O	TOTAL
Number of Accidents	6	12	3	2	0	23
Number of Fatal Accidents	1	6	1	0	0	8
Number of fatalities	3	19	3	0	0	25

In 2015 there were 3 accidents, 2 fixed-wing and 1 helicopter

Flight Hour Statistics

Year	Fixed-Wing	Helicopter	Airtanker	SEAT	USFS O&O	Total
2015	21,709	32,253	4,710	484	8,424	67 <i>,</i> 580
10-Year Totals	233,334	331,856	42,860	7,820	82,774	698,644
10-Year Average	23,333	33,186	4,286	782	8,277	69,864

Accident Rates

Year	# of Accidents	Accident Rate	Fixed- Wing	Helicopter	Airtanker	SEAT	USFS O&O
2015	3	4.43	4.43	3.10	0	0	0
10-Year Average	2.3	3.29	2.57	3.61	6.99	25.57	0

Accident Rate = Number of accidents divided by the number of hours flown multiplied by 100,000.

Fatal Accident and Fatality Rates

Year	Fatal Accidents	Fatal Accident Rate	Number of Fatalities	Fatality Rate
2015	1	1.47	2	2.95
10-Year Average	.8	1.14	2.5	3.57

Fatal Accident Rate = Number of fatal accidents divided by the number of hours flown multiplied by 100,000.

Fatality Rate = Number of fatalities divided by the number of hours flown multiplied by 100,000.

Forest Service Aircraft Accident Statistics in 5-Year Increments

The total number of accidents in 5-year increments shows a steady decline, until the 2001-2005 period. The total number of fatalities in 5-year increments shows a major decline from the 60's to the mid 70's. There was a spike in the early 2000's, however; the last 5 years shows a dramatic decrease in the number of both accidents and fatalities.



Total Number of Accidents for all aircraft (5-Year Increments)

Total Number of Fatalities for all aircraft (5-Year Increments)



USFS Owned and/or Operated (O&O) Aircraft Statistics

This includes the 24 Forest Service owned fleet aircraft (20 fixed-wing, 3 helicopter and 1 airtanker) and 14 leased Forest Service operated aerial supervision aircraft. The Forest Service owned aircraft accounted for 5,070 flight hours and the 14 leased aerial supervision aircraft flew 3,354 hours in FY 2015. This was 12.5% of the total flight hours, which is above the average of 11.8%. There have not been any accidents in the past 11 years and no fatal accidents for 20 years in USFS O/O aircraft.

Fiscal Year	Hours Flown	# of Accidents	Accident Rate	Fatal Accidents	Fatal Accident Rate	Fatalities	Fatality Rate
2015	8,424	0	0.00	0	0.00	0	0.00
10-Year Total	82,774	0		0		0	
10-Year Average	8,277	0	0.00	0	0.00	0	0.00



USFS O&O Hours Flown



Fixed-Wing Aircraft Statistics

This includes all contract fixed-wing aircraft excluding all airtankers. These aircraft accounted for 32.1% of the total hours flown; the 10-year average is 33.4%. There were 21,709 hours flown, which is slightly below the 10-year average of 23,333. After 4 four years of being accident free, we had 2 accidents in FY2015 making the accident rate 9.21 well above the 10-year average accident rate of 2.57.

Fiscal Year	Hours Flown	# of Accidents	Accident Rate	Fatal Accidents	Fatal Accident Rate	Fatalities	Fatality Rate
2015	21,709	2	9.21	0	0.00	0	0.00
10-Year Total	233,334	6		1		3	
10-Year Average	23,333	0.6	2.57	0.1	0.42	0.3	1.28





Airtanker Statistics

This includes all contract multi-engine/jet large and very large airtankers and scoopers. These accounted for 7% of the total hours flown; above the 10-year average of 6.1%. We have seen a significant decrease in airtanker accidents and fatalities since the 1960's, however; there have still been 3 accidents with 3 fatalities in the last 10 years.

Fiscal Year	Hours Flown	# of Accidents	Accident Rate	Fatal Accidents	Fatal Accident Rate	Fatalities	Fatality Rate
2015	4,710	0	0.00	0	0.00	0	0.00
10-Year Total	42,860	3		1		3	
10-Year Average	4,286	0.3	6.99	0.1	2.33	0.3	6.99



Single Engine Airtanker Statistics

This includes all contract Single Engine Airtankers (SEAT). These only accounted for 0.7% of the flight hours; which is below the average of 1.1%. There has not been a SEAT accident for 8 years, in 2007 there were 2 accidents. There has never been a fatal SEAT accident under USFS operational control.

Fiscal Year	Hours Flown	# of Accidents	Accident Rate	Fatal Accidents	Fatal Accident Rate	Fatalities	Fatality Rate
2015	484	0	0.00	0	0.00	0	0.00
10-Year Total	7,820	2		0		0	
10-Year Average	782	0.2	25.57	0	0.00	0	0.00





Helicopter Statistics

This includes all contract helicopters. These accounted for 47.7% of the flight hours, which is very close to the 10-year average of 47.5%. There was one helicopter accident breaking the 5-year accident free streak with helicopters. Sadly, this accident took the lives of one of our FS employees and a contract pilot and left one FS employee with serious injuries. The 10-year accident rate for Helicopters is 3.61, with 12 accidents and 19 fatalities.

Fiscal Year	Hours Flown	# of Accidents	Accident Rate	Fatal Accidents	Fatal Accident Rate	Fatalities	Fatality Rate
2015	32,253	1	3.10	1	3.10	2	6.20
10-Year Total	331,856	12		6		19	
10-Year Average	33,185	1.2	3.61	0.6	1.80	1.9	5.72





USFS SAFECOM Summary

The SAFECOM system satisfies Federal Aviation Regulation requirements for incident reporting, but more importantly, it provides management and front line supervisors with near real time accident prevention information. Armed with data on emerging safety and effectiveness challenges, management can take appropriate actions before a mishap occurs.

The following charts trend the Forest Service SAFECOM data submitted to the Interagency SAFECOM database online at <u>https://www.safecom.gov/</u>. In FY 2015 there were 416 Forest Service SAFECOMs submitted, which is below the 10-year average of 527.

USFS O&O aircraft are not separated in the SAFECOM data, they are reported under the actual type of aircraft; fixed-wing, airtanker or helicopter.

There were a total of 775 SAFECOMs (416 Forest Service, 279 DOI, 67 State and 13 Other/Unknown/Military/Vendor) submitted to the Interagency SAFECOM database in FY 2015.

The 10 most reported USFS SAFECOMs in FY 2015 were: Hazard Communications (56), Incident - Precautionary Landing (37), Mishap Prevention – Kudos (34), Hazard - Mission Equipment (30), Maintenance - Engine (27), Maintenance - Electrical (26), Hazard - Policy Deviation (24), Maintenance - Chip Light (21), Airspace – Conflict (19), and Management – Internal (15).

10-Year SAFECOM Data

YEAR	Number of SAFECOM's
2015	416
10-Year Total	5,270
10-Year Average	527

2015 SAFECOM's by Aircraft Type

Aircraft Type	Number
Fixed Wing	67
Helicopter	249
Airtanker	42
N/A	9
SEAT	10
UAS	10
USFS Owned/Operated	29
Total	416

USFS SAFECOM's by Category

The numbers of SAFECOMs by category will be more than the total number of SAFECOMs reported as each SAFECOM may have more than one category assigned to it. For example several Incident and Hazard SAFECOMs also have Maintenance SAFECOMs associated with them.



2015 Percent of SAFECOM's by Category



10-Year Average Percent of SAFECOMs by Category

USFS Airspace SAFECOM's by sub-category

There were a total of 47 Airspace SAFECOM's reported in 2015, above the average of 39. There were six near mid-air events which is well above the average 2.4 and two of them involved UAS. Nine of the 14 intrusions involved UAS.



2015 Percent of Airspace SAFECOM's

10-Year Average Percent of Airspace SAFECOM's



USFS Hazard SAFECOM's by sub-category

There were a total of 154 Hazard SAFECOM's reported. Below are charts indicating the top 5 Hazard SAFECOM's reported and the number of Hazard SAFECOM's for the past 10 years. These are consistent with previous years with the exception of flight equipment, which was either preflight action or instructions.



2015 Top 5 Hazards reported

Total number of Hazards reported by year



USFS Incident SAFECOMs by sub-category

There were a total of 118 Incident SAFECOM's reported. Below are the top 5 Incident SAFECOMs reported and the total number of Incident SAFECOMs reported for the last 10-years. These are consistent with previous years as the top 5. Last year was the exception where dragged loads were not in the top 5. Although not in the top 5, there were 7 bird strikes in 2015 which is more than double the average of 3.



2015 Top 5 Incidents reported

Total number of Incidents reported by year



USFS Maintenance SAFECOM's by sub-category

There were a total of 191 maintenance SAFECOMs reported. Below are the top 8 Maintenance SAFECOMs reported and the total number of maintenance SAFECOMs reported for the last 10-years. Maintenance SAFECOMS accounted for 35% of all the USFS SAFECOM reports. Engine maintenance discrepancies continue to be the most reported; there were a total of 27, of which, 5 were engine failures or required shutdown.



2015 Top 8 Maintenance deficiencies reported





USFS Mishap Prevention SAFECOM's

Mishap Prevention is a category to recognize the good things folks are doing in aviation. Most Airwards come from the SAFECOM system under this category.



USFS Management SAFECM's by sub-category

Below are the SAFECOM reports classified as Management, sub-categorized by internal and external.



Mishap Summary

The Forest Service investigated three accidents and three Incidents With Potential (IWP's) in 2015. The table below shows the basic information and the NTSB reports are included on the accidents. For additional information review the A-200 Mishap Review on the Interagency Aviation Training <u>website</u>.

Date	Region/Forest	Aircraft Type	Incident Description
10/04/14	R-5 Eldorado NF	Rockwell 690B	Accident: Went off runway landing
03/30/15	R-8 Mississippi NF's	Bell 206 L-3	Accident: Crashed during aerial ignition operations
07/21/15	R-1 Idaho Panhandle NF	Cessna 182	Accident: Engine failure, emergency landing damage
07/12/15	R-4 Humboldt NF	AS-350-B2	IWP: Tail Rotor Strike
08/04/15	R-5 Sequoia NF	S-61	IWP: Main Rotor Strike
08/13/15	R-4 Payette NF	DHC-6	IWP: Cargo in tow
08/14/15	R-5 Angeles NF	B-205 A1++	IWP: Wire Strike

NTSB Identification: WPR15TA002 14 CFR Part 91: General Aviation Accident occurred Saturday, October 04, 2014 in Grass Valley, CA Aircraft: ROCKWELL INTERNATIONAL 690B, registration: N700PQ Injuries: 3 Uninjured.

This is preliminary information, subject to change, and may contain errors. Any errors in this report will be corrected when the final report has been completed. NTSB investigators may not have traveled in support of this investigation and used data provided by various sources to prepare this public aircraft accident report.

On October 4, 2014, at 1343 Pacific daylight time, a Rockwell International 690B airplane, N700PQ, departed the runway surface and impacted medium sized boulders and came to rest in a drainage area at the Nevada County Air Park (GOO), Grass Valley, California. The airplane was registered to Rogers Helicopters, Inc., and operated under an exclusive use contract to the United States Forest Service (USFS) as a public-use flight. The pilot and two USFS passengers were not injured. The airplane sustained substantial damage to the fuselage undercarriage. The local area flight departed GOO at 0953 in support of the King Fire. Visual meteorological conditions prevailed, and a company flight plan had been filed.

The flight was designated as an Air Attack flight for the King Fire; a pilot and two Air Attack Group Supervisors (ATGS) were onboard. The mission flight was uneventful, and after transition with another crew and aircraft, the accident airplane returned to base. Upon landing, the pilot reported that he landed slightly long. He reduced the power setting to flight idle, and then moved the thrust levers to beta. On the landing roll out, the pilot adjusted levers for less reverse thrust, and indicated that he would not be able to make his normal exit turnoff. He knew he needed to slow down in order to make the next turnoff. As he input more reverse thrust, the airplane began to drift to the left. The pilot applied right rudder and brake to return the airplane to the runway; however, the airplane continued to exit the runway surface into the infield where it impacted several medium-sized boulders, and came to rest upright in a drainage area.

NTSB Identification: ERA15FA173 14 CFR Public Use Accident occurred Monday, March 30, 2015 in Saucier, MS Aircraft: BELL HELICOPTER TEXTRON 206 L-1, registration: N50KH Injuries: 2 Fatal, 1 Serious.

This is preliminary information, subject to change, and may contain errors. Any errors in this report will be corrected when the final report has been completed. NTSB investigators either traveled in support of this investigation or conducted a significant amount of investigative work without any travel, and used data obtained from various sources to prepare this aircraft accident report.

On March 30, 2015, about 1435 central daylight time, a Bell 206 L-1, N50KH, operated by T&M Aviation for the U. S. Forest Service, was destroyed when it impacted terrain near Saucier, Mississippi. Day visual meteorological conditions prevailed; however, obscuration due to smoke were reported by multiple eyewitnesses and no flight plan was filed. The commercial pilot and one flight crew member were fatally injured; another flight crew member received serious injuries. The public use aerial application flight had departed from Dean Griffin Memorial Airport (M24), Wiggins, Mississippi, about 1334.

The public use flight was contracted by the U. S. Forest Service to assist in a controlled burn through a process known as "aerial ignition." Multiple witnesses were in contact with the accident helicopter from the ground during the operation; however, none of the witnesses observed the helicopter crash. Preliminary satellite tracking data indicated that the helicopter had been operating at a low altitude over the controlled burn area for approximately 50 minutes prior to the accident. The last recorded position for the helicopter at 1433, indicated that it was at an altitude of 350 feet, and a heading of 150 degrees. According to a witness, seconds prior to the accident he observed the helicopter complete a 180 degree left turn to a northerly heading. About 7 seconds later he heard a sound that resembled an air hose being unplugged from a high pressure tank, which was followed by the helicopter impacting trees and then the ground.

The accident site was located in a wooded area on a northerly heading about one quarter mile north of a road. The initial impact point was identified by several broken trees, at a height of about 80 feet, and was located about 1,000 feet southeast of the helicopter's final recorded position. The wreckage path was about 40 feet long, and oriented approximately 002 degrees magnetic. Both the tail rotor and tailboom sustained fire damage and were co-located near a tree 20 feet south of the main wreckage. The tailboom was separated into five sections; each section contained a Thomas disc coupling, a hanger bearing and about 3 feet of tail rotor drive shaft. A two foot section of tail rotor drive shaft extended from the 90 degree gearbox of the tail rotor assembly. The high skid landing gear was separated from the fuselage and located a few feet aft of the main wreckage. The helicopter upper deck section, which included the main rotor, transmission, and collective/cyclic hydraulic servos, was attached to the fuselage and had sustained fire damage. The cockpit and cabin were destroyed by fire with the exception of the center window frame and portions of the instrument panel, which were co-located with the fuselage. Both main rotor blades sustained significant fire damage, but were attached to the main rotor hub: Blade A (the white blade) was slightly bent opposite the direction of the rotation and Blade B (the red blade) displayed two 45 degree chordwise bends. The tip to Blade B exhibited signs of overload separation that was consistent with impact forces and was located about 20 feet northeast of the main wreckage.

Post-accident examination of the airframe was conducted at the accident site. Flight control continuity was traced from the collective/cyclic hydraulic servos to the swash plate and pitch change links, respectively. Hand rotation of the main drive shaft confirmed the presence of drive continuity through the main transmission to the main rotor blades. Both pitch change links fractured on impact; the Blade A pitch change link exhibited fracture signatures at the swaged end that were consistent with overload forces and the link to Blade B fractured about mid-span. The main rotor hub assembly sustained little damage, but was completely intact. Each fracture section of the tail rotor drive shaft displayed evidence of overload separation at the fracture ends; however, all sections rotated freely by hand through their respective hanger bearings and flexible Thomas couplings. Continuity of the tail rotor drive shaft that was mounted to the freewheeling unit on the engine gearbox. There were no indications of spline drive wear on the tail rotor spline shaft coupling at the freewheeling unit and the main drive shaft did not exhibit any resistance when moved forward and aft.

The pilot held a FAA Commercial Pilot Certificate with ratings for rotorcraft, airplane single engine land, and instrument airplane. He also held an airframe and power plant certificate. His most recent FAA second-class medical certificate was issued on February 23, 2015, at which time he reported 8,000 hours of total flight experience.

14 CFR Part 91: General Aviation Accident occurred Tuesday, July 21, 2015 in Prichard, ID Aircraft: CESSNA 182Q, registration: N759LV Injuries: 2 Uninjured.

This is preliminary information, subject to change, and may contain errors. Any errors in this report will be corrected when the final report has been completed. NTSB investigators may not have traveled in support of this investigation and used data provided by various sources to prepare this aircraft accident report.

On July 21, 2015, about 1446 mountain daylight time, a Cessna 182Q, N759LV, was substantially damaged during a forced landing near Prichard, Idaho. The airplane was registered to and operated by Interstate Aviation, Pullman, Washington, under contract with the United States Forest Service. The local fire reconnaissance flight was operated under the provisions of 14 Code of Federal Regulations (CFR) Part 91. The commercial pilot and his passenger were not injured. Visual meteorological conditions prevailed and a company flight plan was filed for aerial observation flight. The local flight originated from Coeur d'Alene, Idaho, about 2 hours prior to the accident.

The pilot reported that during cruise flight, he heard a loud pop, followed by oil covering the windscreen. Despite the pilot's attempts, the engine would not restart and he initiated a forced landing to an open field. Subsequently, during the landing roll, the nose wheel landing gear separated from the airplane and the right wing impacted the ground.

Examination of the airplane by the pilot revealed that the right wing was substantially damaged. The wreckage was recovered to a secure location for further examination.