

**NATIONAL TRANSPORTATION SAFETY BOARD
PILOT/OPERATOR AIRCRAFT ACCIDENT/INCIDENT REPORT**

This form to be used for reporting civil and public aircraft accidents and incidents

BASIC INFORMATION	
Accident/Incident Location Nearest City/Place: <u>Missoula</u> State: <u>MT</u> ZIP: <u>59808</u> Country: <u>USA</u> Latitude: <u>46°55.05'N</u> Longitude: <u>114°05.60'W</u> <i>(Enter in decimal degrees or degrees:minutes:seconds)</i>	Accident/Incident Date/Time Date: <u>12/28/2019</u> Local Time: <u>13:45</u> <i>mm/dd/yyyy</i> Time Zone: <u>MST</u> Collision with Other Aircraft: <input type="radio"/> Midair <input type="radio"/> On-ground <input checked="" type="radio"/> None

AIRCRAFT INFORMATION	
Registration Number: <u>N 4476B</u> Manufacturer: <u>Cessna</u> Model: <u>170B</u> Serial Number: <u>26820</u> Year of Manufacture: <u>1955</u> Amateur-Built: <input type="radio"/> Yes <input checked="" type="radio"/> No If Yes: <input type="radio"/> Kit/Plans <input type="radio"/> Original Design	<input type="checkbox"/> IFR-Equipped and Certified <input type="checkbox"/> Commercial Space Flight <input type="checkbox"/> Unmanned Aircraft Maximum Gross Weight: <u>2200</u> lbs Weight at Time of Accident/Incident: <u>1962</u> lbs Number of Seats: <u>4</u> Flight Crew Seats: <u>1</u> Cabin Crew Seats: <u>0</u> Passenger Seats: <u>3</u> Number of Engines: <u>1</u>

Category of Aircraft <input checked="" type="radio"/> Airplane <input type="radio"/> Balloon <input type="radio"/> Blimp/Dirigible <input type="radio"/> Glider <input type="radio"/> Gyroplane <input type="radio"/> Helicopter <input type="radio"/> Powered Lift <input type="radio"/> Rocket <input type="radio"/> Ultralight <input type="radio"/> Unknown	Type of Airworthiness Certificate <i>(Check all that apply)</i> <table style="width:100%;"> <tr> <th style="text-align: left;">Standard</th> <th style="text-align: left;">Special</th> </tr> <tr> <td><input checked="" type="checkbox"/> Normal</td> <td><input type="checkbox"/> Restricted</td> </tr> <tr> <td><input type="checkbox"/> Aerobatic</td> <td><input type="checkbox"/> Limited</td> </tr> <tr> <td><input type="checkbox"/> Balloon</td> <td><input type="checkbox"/> Provisional</td> </tr> <tr> <td><input type="checkbox"/> Commuter</td> <td><input type="checkbox"/> Special Flight</td> </tr> <tr> <td><input type="checkbox"/> Transport</td> <td><input type="checkbox"/> Experimental</td> </tr> <tr> <td><input type="checkbox"/> Utility</td> <td><input type="checkbox"/> Special Light-Sport</td> </tr> <tr> <td></td> <td><input type="checkbox"/> Experimental Light-Sport</td> </tr> </table> <input type="checkbox"/> Certificate of Authorization or Waiver (COA) <input type="checkbox"/> None <input type="checkbox"/> Unknown	Standard	Special	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Restricted	<input type="checkbox"/> Aerobatic	<input type="checkbox"/> Limited	<input type="checkbox"/> Balloon	<input type="checkbox"/> Provisional	<input type="checkbox"/> Commuter	<input type="checkbox"/> Special Flight	<input type="checkbox"/> Transport	<input type="checkbox"/> Experimental	<input type="checkbox"/> Utility	<input type="checkbox"/> Special Light-Sport		<input type="checkbox"/> Experimental Light-Sport	Landing Gear <i>(Check all that apply)</i> <input type="checkbox"/> Retractable <input type="checkbox"/> Tricycle <input type="checkbox"/> Tailwheel <input type="checkbox"/> Amphibian <input type="checkbox"/> High Skid <input type="checkbox"/> Emergency Float <input type="checkbox"/> Skid <input type="checkbox"/> Float <input type="checkbox"/> Ski <input type="checkbox"/> Hull <input type="checkbox"/> Ski/Wheel <input type="checkbox"/> Other Launch/Recovery System <input type="checkbox"/> None <input type="checkbox"/> Unknown	Engine Type (Select one) <input checked="" type="radio"/> Reciprocating <input type="radio"/> Liquid Rocket <input type="radio"/> Turbo Shaft <input type="radio"/> Solid Rocket <input type="radio"/> Turbo Prop <input type="radio"/> Hybrid Rocket <input type="radio"/> Turbo Jet <input type="radio"/> None <input type="radio"/> Turbo Fan <input type="radio"/> Unknown <input type="radio"/> Electric Fuel System Type (Reciprocating) <input checked="" type="radio"/> Carburetor <input type="radio"/> Fuel-Injected
Standard	Special																		
<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Restricted																		
<input type="checkbox"/> Aerobatic	<input type="checkbox"/> Limited																		
<input type="checkbox"/> Balloon	<input type="checkbox"/> Provisional																		
<input type="checkbox"/> Commuter	<input type="checkbox"/> Special Flight																		
<input type="checkbox"/> Transport	<input type="checkbox"/> Experimental																		
<input type="checkbox"/> Utility	<input type="checkbox"/> Special Light-Sport																		
	<input type="checkbox"/> Experimental Light-Sport																		

Engine	Engine Manufacturer	Engine Model/Series	Manufacturer's Serial Number	Date of Mfg. <i>mm/dd/yyyy</i>	Rated Power <input checked="" type="radio"/> Horsepower or <input type="radio"/> lbs of Thrust	Total Time (hours)	Time Since: Inspection (hours)	Time Since: Overhaul (hours)
Eng. 1	Continental	O-300-A	10333-D-5-A	1955	145	3967	3.8	1884.7
Eng. 2	---							
Eng. 3	---							
Eng. 4	---							

Last Inspection Type <input type="radio"/> 100-Hour <input type="radio"/> Continuous Airworthiness <input type="radio"/> AAIP <input type="radio"/> Conditional Inspection <input checked="" type="radio"/> Annual <input type="radio"/> Unknown Date Last Inspection: <u>12/03/2019</u> <i>mm/dd/yyyy</i> Airframe Total Time: <u>3967.9</u> hrs hours measured at <i>(Select one)</i> <input checked="" type="radio"/> Last Inspection <input type="radio"/> Time of Accident/Incident	Propeller 1 <input checked="" type="radio"/> Fixed Pitch <input type="radio"/> Controllable Pitch <input type="radio"/> Ground Adjustable Manufacturer: <u>McCaughey</u> Model: <u>1A172/MDM7653</u> Propeller 2 <input type="radio"/> Fixed Pitch <input type="radio"/> Controllable Pitch <input type="radio"/> Ground Adjustable Manufacturer: _____ Model: _____
Type of Maintenance Program (Select one) <input checked="" type="radio"/> Annual <input type="radio"/> Conditional (Amateur-built only) <input type="radio"/> Manufacturer's Inspection Program <input type="radio"/> Other Approved Inspection Program (AAIP) <input type="radio"/> Continuous Airworthiness <input type="radio"/> Other, specify: _____	ELT Installed: <input checked="" type="radio"/> Yes <input type="radio"/> No If Yes: ELT Manufacturer: <u>Emerging Lifesaving</u> Model or Part No.: <u>ELT406GPS</u> TSO No.: <input type="radio"/> OC91 (121.5 MHz) <input type="radio"/> OC91a (121.5 MHz) <input checked="" type="radio"/> C126 (406 MHz) Was ELT still mounted in aircraft? <input checked="" type="radio"/> Yes <input type="radio"/> No Was ELT still connected to antenna? <input checked="" type="radio"/> Yes <input type="radio"/> No Did ELT Activate? <input type="radio"/> Yes <input checked="" type="radio"/> No If activated: Did ELT Aid in Locating Aircraft: <input type="radio"/> Yes <input checked="" type="radio"/> No If not activated: Indicate Reason: <input type="checkbox"/> Impact Damage <input type="checkbox"/> Fire Damage <input type="checkbox"/> Battery Expired/Damaged <input checked="" type="checkbox"/> Unknown
Description of Fire Extinguishing System <input type="radio"/> None <input checked="" type="radio"/> Specify: <u>Hand held</u>	Additional Equipment (Check all that apply) <input type="checkbox"/> ADS-B <input type="checkbox"/> Airframe Parachute <input type="checkbox"/> Angle of Attack Indicator <input type="checkbox"/> Autopilot <input type="checkbox"/> Data Recorder <input checked="" type="checkbox"/> Electronic Flight Bag or Handheld Device <input type="checkbox"/> Electronic Multifunction Display <input type="checkbox"/> Electronic Primary Flight Display <input type="checkbox"/> Handheld GPS <input type="checkbox"/> Heads Up Display <input type="checkbox"/> Onboard Weather <input type="checkbox"/> Satellite Tracking Device <input checked="" type="checkbox"/> Stall Warning System <input type="checkbox"/> Video Recording Device <input checked="" type="checkbox"/> Other, Specify: <u>None</u>

OWNER/OPERATOR INFORMATION**Registered Aircraft Owner**Name: Montana Flying ServiceFractional Ownership Aircraft: Yes NoCity: [REDACTED]State: MTZIP: 59808Country: USA**Operator of Aircraft** Same As Registered OwnerName: Bruce DoeringDoing Business As: Montana Flying ServiceAir Carrier/Operator Designator (4 Character Code): --- Same Address as Registered OwnerCity: MissoulaState: MTZIP: 59808Country: USA**Operating Certificates Held***(Check all that apply)*

- None
 Flag Carrier Operating Certificate (FAR 121)
 Supplemental
 Air Cargo
 Foreign Air Carriers (FAR 129)
 Rotorcraft External Load (FAR 133)
 Commuter Air Carrier (FAR 135)
 On-Demand Air Taxi (FAR 135)
 Commercial Air Tour (FAR 136)
 Agricultural Aircraft (FAR 137)
 Pilot School (FAR 141)
 Certificate of Authorization or Waiver (COA)
 Commercial Space Transportation
 Experimental Permit
 Commercial Space Transportation License
 Other Operator of Large Aircraft

Regulation Flight Conducted Under

- FAR 91 FAR 129 FAR 415
 FAR 103 FAR 133 FAR 431
 FAR 121 FAR 135 FAR 435
 FAR 125 FAR 137 FAR 437
- FAR 91 Special Flight
 Non-US, Commercial
 Non-US, Non-commercial
- Public Aircraft *(Select one)*
 Armed Forces
 Federal
 State
 Local
 Unknown

Revenue Operation for FAR 121, 125, 129, 135*(Select one for each group)*

- Scheduled or Commuter Domestic
 Non-Scheduled or Air Taxi International
- Passenger
 Cargo
 Mail Contract Only

Purpose of Flight for FAR 91, 103, 133, 137*(Select one)*

- Aerial Application Firefighting Unknown
 Aerial Observation Flight Test
 Air Drop Glider Tow
 Air Race/Show Instructional
 Banner Tow Other Work Use
 Business Personal
 Executive/Corporate Positioning
 External Load Skydiving
 Ferry

Revenue Sightseeing Flight Yes No**Air Medical Flight** Yes No**AIRPORT INFORMATION** (Fill in if accident/incident occurred on approach, landing, takeoff, departure, or within 3 miles of an airport)Airport Name: Missoula InternationalAirport Identifier: KMSOProximity to Airport: Off Airport/Airstrip On Airport/Airstrip N/ADistance From Airport Center: 700' smDirection From Airport: On Airport degrees trueAirport Elevation: 3206' ft. msl**Runway Information**Runway ID: 12 (L/R/C) Length: 9501" ft Width: 150' ft**Runway/Landing Surface** *(Check all that apply)*

- Asphalt Grass/Turf Macadam Water
 Concrete Gravel Metal/Wood
 Dirt Ice Snow Unknown

Condition of Runway/Landing Surface *(Check all that apply)*

- Dry Snow-Compacted Water-Calm
 Holes Snow-Crusted Water-Choppy
 Ice Covered Snow-Dry Water-Glassy
 Rough Snow-Wet Wet
 Rubber Deposits Soft
 Slush-Covered Vegetation Unknown

Approach/Departure Segment *(Select one)*

- Taxi VFR Departure On Instrument Approach Downwind Low Approach
 Takeoff IFR Departure Procedure/Clearance Landing Base Go Around
 Initial Climb Final Aborted Landing (after touchdown)
 Crosswind Unknown

IFR Approach *(Check all that apply)*

- None
 ADF/NDB PAR MLS Practice
 SDF Sidestep LDA GPS
 VOR/TVOR ILS ASR
 VOR/DME Localizer Only Visual
 TACAN LOC-back course Contact
 RNAV Circling Unknown

VFR Approach *(Check all that apply)*

- None
 Traffic Pattern Stop and Go
 Straight-In Touch and Go
 Valley/Terrain Following Simulated Forced Landing
 Go Around Forced Landing
 Full Stop Precautionary Landing
 Unknown

"FLIGHT CREWMEMBER 2" INFORMATION

"Flight Crewmember 2" Responsibilities at the Time of Accident/Incident
 Pilot Co-Pilot Student Pilot Flight Instructor Check Pilot Flight Engineer Other Flight Crew

"Flight Crewmember 2" was pilot flying Yes No

"Flight Crewmember 2" Identification
 First Name: Douglas City of Residence: Missoula
 Middle Initial: K State: Montana ZIP: 59802
 Last Name: Womack Country: United States
 Age at time of Accident/Incident: 68 Date of Birth: [REDACTED] mm/dd/yyyy
 Certificate Number: [REDACTED]

Degree of Injury <input checked="" type="radio"/> None <input type="radio"/> Fatal <input type="radio"/> Minor <input type="radio"/> Unknown <input type="radio"/> Serious	Seat Occupied <input checked="" type="radio"/> Left <input type="radio"/> Front <input type="radio"/> Unknown <input type="radio"/> Right <input type="radio"/> Rear <input type="radio"/> Center <input type="radio"/> Single	Restraint Type		Inflatable Restraints <input checked="" type="checkbox"/> Not Installed <input type="checkbox"/> Installed <input type="checkbox"/> Not Deployed <input type="checkbox"/> Deployed <input type="checkbox"/> Unknown
		Available <input type="radio"/> None <input type="radio"/> Lap only <input type="radio"/> 3-point <input checked="" type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown	Used <input type="radio"/> None <input type="radio"/> Lap only <input type="radio"/> 3-point <input checked="" type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown	
Pilot Certificate(s) (Check all that apply) <input type="checkbox"/> None <input checked="" type="checkbox"/> Flight Instructor <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> US Military <input checked="" type="checkbox"/> Private <input type="checkbox"/> Recreational <input type="checkbox"/> Airline Transport <input type="checkbox"/> Foreign <input type="checkbox"/> Student <input type="checkbox"/> Sport <input type="checkbox"/> Flight Engineer				

Principal Occupation <input type="radio"/> Pilot <input checked="" type="radio"/> Other <input type="radio"/> Unknown	Medical Certificate <input type="radio"/> None <input type="radio"/> Class 3 <input type="radio"/> Class 1 <input type="radio"/> Driver's License (Sport Pilot only) <input type="radio"/> Class 2 <input checked="" type="radio"/> Unknown	Medical Certificate Validity <input checked="" type="radio"/> Without limitations/waivers <input type="radio"/> Unknown <input type="radio"/> With limitations/waivers <input type="radio"/> N/A <input type="radio"/> Special Issuance	Date of Last Medical <u>05/14/2019</u> mm/dd/yyyy
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Medical Certificate Limitations
 Basic Medical Certificate

Medical Certificate Special Issuance
 N/A

Date of Last Flight Review or Equivalent, Including FAR 121/135 Checks: <u>04/26/2016</u> mm/dd/yyyy	Flight Review Aircraft Make: <u>Piper Arrow</u> Model: <u>PA28R-200</u>
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Airplane Rating(s) (Check all that apply) <input type="checkbox"/> None <input checked="" type="checkbox"/> Single-Engine Land <input type="checkbox"/> Single-Engine Sea <input checked="" type="checkbox"/> Multiengine Land <input type="checkbox"/> Multiengine Sea	Other Aircraft Rating(s) (Check all that apply) <input type="checkbox"/> None <input type="checkbox"/> Airship <input type="checkbox"/> Balloon <input type="checkbox"/> Glider <input type="checkbox"/> Gyroplane <input type="checkbox"/> Helicopter <input type="checkbox"/> Powered Lift	Instrument Rating(s) (Check all that apply) <input type="checkbox"/> None <input checked="" type="checkbox"/> Airplane <input type="checkbox"/> Helicopter <input type="checkbox"/> Powered Lift	Instructor Rating(s) (Check all that apply) <input type="checkbox"/> None <input checked="" type="checkbox"/> Airplane Single-Engine <input type="checkbox"/> Airplane Multi-Engine <input type="checkbox"/> Gyroplane <input type="checkbox"/> Powered Lift <input type="checkbox"/> Instrument Airplane <input type="checkbox"/> Instrument Helicopter <input type="checkbox"/> Helicopter <input type="checkbox"/> Glider <input type="checkbox"/> Sport
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Type Ratings
 Commercial Pilot - Airplane Single and Multiengine Land, Instrument Airplane
 Flight Instructor - Airplane Single Land
 Ground Instructor - Advanced

Student Endorsements (Include dates)

Flight Time (Enter appropriate number of hours in each box)	All Aircraft	This Make & Model	Airplane Single Engine	Airplane Multiengine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air
						Actual	Simulated			
Total Time	1071.8	2.6	1002.4	69.4	52.2	111.2	88.8			
Pilot in Command (PIC)	580.8	0	947.3	38.4	48.6	103.3	73.2			
Time as Instructor	66.8	0	65.8	0	0	0	1.9			
This Make/Model					0	0	0			
Last 90 Days	3.3	0	3.3	0	0	0	0			
Last 30 Days	0	0	0	0	0	0	0			
Last 24 Hours	0	0	0	0	0	0	0			

ADDITIONAL FLIGHT CREWMEMBERS (Exclusive of cabin crew, complete the following information)

Crew Name and Address		Seat Occupied		Injury
First Name: _____	City of Residence: _____	<input type="radio"/> Left	<input type="radio"/> Front	<input type="radio"/> None
Middle Initial: _____	State: _____ ZIP: _____	<input type="radio"/> Center	<input type="radio"/> Rear	<input type="radio"/> Minor
Last Name: _____	Country: _____	<input type="radio"/> Right	<input type="radio"/> Single	<input type="radio"/> Serious
			<input type="radio"/> Unknown	<input type="radio"/> Fatal
				<input type="radio"/> Unknown
Pilot Certificate(s) (Check all that apply)		Restraint Type:		Inflatable Restraints
<input type="checkbox"/> None	<input type="checkbox"/> Flight Instructor	<input type="checkbox"/> Commercial	<input type="checkbox"/> US Military	<input type="checkbox"/> Not Installed <input type="checkbox"/> Installed <input type="checkbox"/> Not Deployed <input type="checkbox"/> Deployed <input type="checkbox"/> Unknown
<input type="checkbox"/> Private	<input type="checkbox"/> Recreational	<input type="checkbox"/> Airline Transport	<input type="checkbox"/> Foreign	
<input type="checkbox"/> Student	<input type="checkbox"/> Sport	<input type="checkbox"/> Flight Engineer		
Type Rating/Endorsement for Accident/Incident Aircraft? <input type="checkbox"/> Yes <input type="checkbox"/> No		Total Flight Time at the Time of this Accident/Incident: _____ hrs		
		Available	Used	
		<input type="radio"/> None	<input type="radio"/> None	
		<input type="radio"/> Lap Only	<input type="radio"/> Lap Only	
		<input type="radio"/> 3-point	<input type="radio"/> 3-point	
		<input type="radio"/> 4-point	<input type="radio"/> 4-point	
		<input type="radio"/> 5-point	<input type="radio"/> 5-point	
		<input type="radio"/> Unknown	<input type="radio"/> Unknown	

Crew Name and Address		Seat Occupied		Injury
First Name: _____	City of Residence: _____	<input type="radio"/> Left	<input type="radio"/> Front	<input type="radio"/> None
Middle Initial: _____	State: _____ ZIP: _____	<input type="radio"/> Center	<input type="radio"/> Rear	<input type="radio"/> Minor
Last Name: _____	Country: _____	<input type="radio"/> Right	<input type="radio"/> Single	<input type="radio"/> Serious
			<input type="radio"/> Unknown	<input type="radio"/> Fatal
				<input type="radio"/> Unknown
Pilot Certificate(s) (Check all that apply)		Restraint Type:		Inflatable Restraints
<input type="checkbox"/> None	<input type="checkbox"/> Flight Instructor	<input type="checkbox"/> Commercial	<input type="checkbox"/> US Military	<input type="checkbox"/> Not Installed <input type="checkbox"/> Installed <input type="checkbox"/> Not Deployed <input type="checkbox"/> Deployed <input type="checkbox"/> Unknown
<input type="checkbox"/> Private	<input type="checkbox"/> Recreational	<input type="checkbox"/> Airline Transport	<input type="checkbox"/> Foreign	
<input type="checkbox"/> Student	<input type="checkbox"/> Sport	<input type="checkbox"/> Flight Engineer		
Type Rating/Endorsement for Accident/Incident Aircraft? <input type="checkbox"/> Yes <input type="checkbox"/> No		Total Flight Time at the Time of this Accident/Incident: _____ hrs		
		Available	Used	
		<input type="radio"/> None	<input type="radio"/> None	
		<input type="radio"/> Lap Only	<input type="radio"/> Lap Only	
		<input type="radio"/> 3-point	<input type="radio"/> 3-point	
		<input type="radio"/> 4-point	<input type="radio"/> 4-point	
		<input type="radio"/> 5-point	<input type="radio"/> 5-point	
		<input type="radio"/> Unknown	<input type="radio"/> Unknown	

PASSENGER(S) / OTHER PERSONNEL (Include cabin crew; continue on separate sheet if necessary)

Name and Address	Seat	Injury	Restraint Type		Inflatable Restraints	Age
First Name: _____ City: _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____ <input type="radio"/> Crew <input type="radio"/> Passenger <input type="radio"/> Other	<input type="radio"/> Left <input type="radio"/> Center <input type="radio"/> Right <input type="radio"/> Unknown Row: _____	<input type="radio"/> None <input type="radio"/> Minor <input type="radio"/> Serious <input type="radio"/> Fatal <input type="radio"/> Unknown	Available <input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown	Used <input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown	<input type="checkbox"/> Not Installed <input type="checkbox"/> Installed <input type="checkbox"/> Not Deployed <input type="checkbox"/> Deployed <input type="checkbox"/> Unknown	<input type="checkbox"/> Under 5 years If Under 5, <input type="checkbox"/> Child Restraint <input type="checkbox"/> Lap-Held <input type="checkbox"/> Unknown
First Name: _____ City: _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____ <input type="radio"/> Crew <input type="radio"/> Passenger <input type="radio"/> Other	<input type="radio"/> Left <input type="radio"/> Center <input type="radio"/> Right <input type="radio"/> Unknown Row: _____	<input type="radio"/> None <input type="radio"/> Minor <input type="radio"/> Serious <input type="radio"/> Fatal <input type="radio"/> Unknown	Available <input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown	Used <input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown	<input type="checkbox"/> Not Installed <input type="checkbox"/> Installed <input type="checkbox"/> Not Deployed <input type="checkbox"/> Deployed <input type="checkbox"/> Unknown	<input type="checkbox"/> Under 5 years If Under 5, <input type="checkbox"/> Child Restraint <input type="checkbox"/> Lap-Held <input type="checkbox"/> Unknown
First Name: _____ City: _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____ <input type="radio"/> Crew <input type="radio"/> Passenger <input type="radio"/> Other	<input type="radio"/> Left <input type="radio"/> Center <input type="radio"/> Right <input type="radio"/> Unknown Row: _____	<input type="radio"/> None <input type="radio"/> Minor <input type="radio"/> Serious <input type="radio"/> Fatal <input type="radio"/> Unknown	Available <input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown	Used <input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown	<input type="checkbox"/> Not Installed <input type="checkbox"/> Installed <input type="checkbox"/> Not Deployed <input type="checkbox"/> Deployed <input type="checkbox"/> Unknown	<input type="checkbox"/> Under 5 years If Under 5, <input type="checkbox"/> Child Restraint <input type="checkbox"/> Lap-Held <input type="checkbox"/> Unknown
First Name: _____ City: _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____ <input type="radio"/> Crew <input type="radio"/> Passenger <input type="radio"/> Other	<input type="radio"/> Left <input type="radio"/> Center <input type="radio"/> Right <input type="radio"/> Unknown Row: _____	<input type="radio"/> None <input type="radio"/> Minor <input type="radio"/> Serious <input type="radio"/> Fatal <input type="radio"/> Unknown	Available <input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown	Used <input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown	<input type="checkbox"/> Not Installed <input type="checkbox"/> Installed <input type="checkbox"/> Not Deployed <input type="checkbox"/> Deployed <input type="checkbox"/> Unknown	<input type="checkbox"/> Under 5 years If Under 5, <input type="checkbox"/> Child Restraint <input type="checkbox"/> Lap-Held <input type="checkbox"/> Unknown

FLIGHT ITINERARY INFORMATION

Last Departure Point Airport ID: <u>KMSO</u> City: <u>Missoula</u> State: <u>MT</u> Country: <u>USA</u>	Time of Departure Time: <u>13:45</u> Time Zone: <u>MST</u>	Destination Airport ID: <u>Same</u> City: _____ State: _____ Country: _____	Type Flight Plan Filed <input checked="" type="radio"/> None <input type="radio"/> VFR/IFR <input type="radio"/> Company VFR <input type="radio"/> IFR <input type="radio"/> Military VFR <input type="radio"/> Unknown <input type="radio"/> VFR Activated? <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown
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Type of ATC Clearance/Service (Check all that apply)

<input type="checkbox"/> None	<input type="checkbox"/> Special VFR	<input type="checkbox"/> Special IFR	<input type="checkbox"/> VFR Flight Following	<input type="checkbox"/> Cruise
<input checked="" type="checkbox"/> VFR	<input type="checkbox"/> IFR	<input type="checkbox"/> VFR On Top	<input type="checkbox"/> Traffic Advisory	<input type="checkbox"/> Unknown / NA

Airspace where the accident/incident occurred (Check all that apply)

<input type="checkbox"/> Class A	<input type="checkbox"/> Class G	<input type="checkbox"/> Military Operations Area (MOA)	<input type="checkbox"/> Special
<input type="checkbox"/> Class B	<input type="checkbox"/> Demo Area	<input type="checkbox"/> Airport Advisory Area	<input type="checkbox"/> Air Traffic Control Area
<input type="checkbox"/> Class C	<input type="checkbox"/> Warning Area	<input type="checkbox"/> Jet Training Area	<input type="checkbox"/> Unknown
<input checked="" type="checkbox"/> Class D	<input type="checkbox"/> Prohibited Area	<input type="checkbox"/> TRSA	
<input type="checkbox"/> Class E	<input type="checkbox"/> Restricted Area	<input type="checkbox"/> FAR 93	

Altitude of In-Flight Occurrence: 3206' ft msl

WEATHER INFORMATION AT THE ACCIDENT/INCIDENT SITE

Source of Pilot Weather Information (Check all that apply) <table style="width: 100%;"> <tr> <td><input type="checkbox"/> National Weather Service</td> <td><input type="checkbox"/> Company</td> </tr> <tr> <td><input type="checkbox"/> Flight Service Station</td> <td><input type="checkbox"/> Military</td> </tr> <tr> <td><input checked="" type="checkbox"/> TV/Radio</td> <td><input checked="" type="checkbox"/> Internet</td> </tr> <tr> <td><input checked="" type="checkbox"/> Automated Report</td> <td><input type="checkbox"/> None</td> </tr> <tr> <td><input type="checkbox"/> Commercial Weather Service (DUATS)</td> <td><input type="checkbox"/> Unknown</td> </tr> <tr> <td><input type="checkbox"/> On-Board Weather</td> <td></td> </tr> </table>	<input type="checkbox"/> National Weather Service	<input type="checkbox"/> Company	<input type="checkbox"/> Flight Service Station	<input type="checkbox"/> Military	<input checked="" type="checkbox"/> TV/Radio	<input checked="" type="checkbox"/> Internet	<input checked="" type="checkbox"/> Automated Report	<input type="checkbox"/> None	<input type="checkbox"/> Commercial Weather Service (DUATS)	<input type="checkbox"/> Unknown	<input type="checkbox"/> On-Board Weather		Weather Observation Facility Facility ID: <u>KMSO</u> Observation Time: _____ Time Zone: _____ Distance from Accident Site: <u>0</u> nm Direction from Accident Site: _____ degrees true
<input type="checkbox"/> National Weather Service	<input type="checkbox"/> Company												
<input type="checkbox"/> Flight Service Station	<input type="checkbox"/> Military												
<input checked="" type="checkbox"/> TV/Radio	<input checked="" type="checkbox"/> Internet												
<input checked="" type="checkbox"/> Automated Report	<input type="checkbox"/> None												
<input type="checkbox"/> Commercial Weather Service (DUATS)	<input type="checkbox"/> Unknown												
<input type="checkbox"/> On-Board Weather													

Basic Conditions <input checked="" type="radio"/> VMC <input type="radio"/> IMC <input type="radio"/> Unknown	Light Condition <input type="radio"/> Dawn <input type="radio"/> Dusk <input type="radio"/> Dark Night <input type="radio"/> Unknown <input checked="" type="radio"/> Day <input type="radio"/> Night <input type="radio"/> Bright Night	
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Sky/Lowest Cloud Condition <input checked="" type="radio"/> Clear <input type="radio"/> Thin Broken <input type="radio"/> Few <input type="radio"/> Thin Overcast <input type="radio"/> Partial Obscuration <input type="radio"/> Unknown <input type="radio"/> Scattered Lowest Cloud Condition Height <u>5,000'</u> ft agl	Ceiling <input type="radio"/> None (Clear) <input type="radio"/> Obscured <input type="radio"/> Broken <input type="radio"/> Indefinite <input checked="" type="radio"/> Overcast <input type="radio"/> Unknown Ceiling Height <u>5,000'</u> ft agl	Temperature: <u>-1</u> (C) or <u>30</u> (F) Dew Point: <u>-8</u> (C) or <u>18</u> (F) Altimeter Setting: <u>30.16</u> in. Hg or _____ MB
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Wind Direction <input type="checkbox"/> Variable -or- Direction: _____ degrees true	Wind Speed <input checked="" type="checkbox"/> Calm <input type="checkbox"/> Light and Variable -or- Speed: _____ kts	Wind Gusts <input checked="" type="checkbox"/> Not Gusting -or- Speed: _____ kts	Visibility <u>10</u> miles RVR: _____ feet RVV: _____ miles Density Altitude: <u>1,825</u> ft
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Intensity of Precipitation <input type="radio"/> Light <input type="radio"/> Moderate <input type="radio"/> Heavy <input checked="" type="radio"/> N/A <input type="radio"/> Unknown	Type of Precipitation (Check all that apply) <table style="width: 100%;"> <tr> <td><input checked="" type="checkbox"/> None</td> <td><input type="checkbox"/> Drizzle</td> <td><input type="checkbox"/> Freezing Rain</td> </tr> <tr> <td><input type="checkbox"/> Rain</td> <td><input type="checkbox"/> Ice Pellets</td> <td><input type="checkbox"/> Snow Shower</td> </tr> <tr> <td><input type="checkbox"/> Snow</td> <td><input type="checkbox"/> Snow Pellets</td> <td><input type="checkbox"/> Ice Pellets Shower</td> </tr> <tr> <td><input type="checkbox"/> Hail</td> <td><input type="checkbox"/> Snow Grains</td> <td><input type="checkbox"/> Freezing Drizzle</td> </tr> <tr> <td><input type="checkbox"/> Rain Showers</td> <td><input type="checkbox"/> Ice Crystals</td> <td></td> </tr> </table>	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Drizzle	<input type="checkbox"/> Freezing Rain	<input type="checkbox"/> Rain	<input type="checkbox"/> Ice Pellets	<input type="checkbox"/> Snow Shower	<input type="checkbox"/> Snow	<input type="checkbox"/> Snow Pellets	<input type="checkbox"/> Ice Pellets Shower	<input type="checkbox"/> Hail	<input type="checkbox"/> Snow Grains	<input type="checkbox"/> Freezing Drizzle	<input type="checkbox"/> Rain Showers	<input type="checkbox"/> Ice Crystals		Restriction to Visibility (Check all that apply) <table style="width: 100%;"> <tr> <td><input checked="" type="checkbox"/> None</td> <td><input type="checkbox"/> Fog</td> </tr> <tr> <td><input type="checkbox"/> Blowing Dust</td> <td><input type="checkbox"/> Ground Fog</td> </tr> <tr> <td><input type="checkbox"/> Blowing Sand</td> <td><input type="checkbox"/> Haze</td> </tr> <tr> <td><input type="checkbox"/> Blowing Snow</td> <td><input type="checkbox"/> Ice Fog</td> </tr> <tr> <td><input type="checkbox"/> Blowing Spray</td> <td><input type="checkbox"/> Smoke</td> </tr> <tr> <td><input type="checkbox"/> Dust</td> <td><input type="checkbox"/> Unknown</td> </tr> </table>	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Fog	<input type="checkbox"/> Blowing Dust	<input type="checkbox"/> Ground Fog	<input type="checkbox"/> Blowing Sand	<input type="checkbox"/> Haze	<input type="checkbox"/> Blowing Snow	<input type="checkbox"/> Ice Fog	<input type="checkbox"/> Blowing Spray	<input type="checkbox"/> Smoke	<input type="checkbox"/> Dust	<input type="checkbox"/> Unknown
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Icing Forecast <table style="width: 100%;"> <tr> <th>Amount</th> <th>Type</th> </tr> <tr> <td><input checked="" type="radio"/> None</td> <td><input type="radio"/> N/A</td> </tr> <tr> <td><input type="radio"/> Trace</td> <td><input type="radio"/> Rime</td> </tr> <tr> <td><input type="radio"/> Light</td> <td><input type="radio"/> Clear</td> </tr> <tr> <td><input type="radio"/> Moderate</td> <td><input type="radio"/> Mixed</td> </tr> <tr> <td><input type="radio"/> Severe</td> <td><input type="radio"/> Unknown</td> </tr> <tr> <td><input type="radio"/> Unknown</td> <td></td> </tr> </table>	Amount	Type	<input checked="" type="radio"/> None	<input type="radio"/> N/A	<input type="radio"/> Trace	<input type="radio"/> Rime	<input type="radio"/> Light	<input type="radio"/> Clear	<input type="radio"/> Moderate	<input type="radio"/> Mixed	<input type="radio"/> Severe	<input type="radio"/> Unknown	<input type="radio"/> Unknown		Icing Actual <table style="width: 100%;"> <tr> <th>Amount</th> <th>Type</th> </tr> <tr> <td><input checked="" type="radio"/> None</td> <td><input type="radio"/> N/A</td> </tr> <tr> <td><input type="radio"/> Trace</td> <td><input type="radio"/> Rime</td> </tr> <tr> <td><input type="radio"/> Light</td> <td><input type="radio"/> Clear</td> </tr> <tr> <td><input type="radio"/> Moderate</td> <td><input type="radio"/> Mixed</td> </tr> <tr> <td><input type="radio"/> Severe</td> <td><input type="radio"/> Unknown</td> </tr> <tr> <td><input type="radio"/> Unknown</td> <td></td> </tr> </table>	Amount	Type	<input checked="" type="radio"/> None	<input type="radio"/> N/A	<input type="radio"/> Trace	<input type="radio"/> Rime	<input type="radio"/> Light	<input type="radio"/> Clear	<input type="radio"/> Moderate	<input type="radio"/> Mixed	<input type="radio"/> Severe	<input type="radio"/> Unknown	<input type="radio"/> Unknown		Turbulence <table style="width: 100%;"> <tr> <th>Type</th> <th>Severity</th> </tr> <tr> <td><input checked="" type="checkbox"/> None</td> <td><input type="checkbox"/> Light</td> </tr> <tr> <td><input type="checkbox"/> Clear Air</td> <td><input type="checkbox"/> Moderate</td> </tr> <tr> <td><input type="checkbox"/> Terrain-Induced</td> <td><input type="checkbox"/> Severe</td> </tr> <tr> <td><input type="checkbox"/> Convective Turbulence</td> <td><input type="checkbox"/> Extreme</td> </tr> </table>	Type	Severity	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Light	<input type="checkbox"/> Clear Air	<input type="checkbox"/> Moderate	<input type="checkbox"/> Terrain-Induced	<input type="checkbox"/> Severe	<input type="checkbox"/> Convective Turbulence	<input type="checkbox"/> Extreme
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NOTAMs (D and FDC), AIRMETs, SIGMETs, PIREPs in effect at the time of the accident/incident:
N/A

DAMAGE TO AIRCRAFT AND OTHER PROPERTY**Aircraft Damage**

- None Substantial
 Minor Destroyed
 Unknown Unknown

Aircraft Fire

- None Both Ground and In-Flight
 In-Flight Fire at Unknown Time
 On-Ground Unknown

Aircraft Explosion

- None Both Ground and In-Flight
 In-Flight Explosion at Unknown Time
 On-Ground Unknown

Description of Damage to Aircraft and Other Property *(Use additional sheet if necessary)*

Ground loop. Damage to right wing, right horizontal stabilizer, right main gear and fuselage. Airport property was not damaged.

NARRATIVE HISTORY OF FLIGHT *(Please type or print in ink)*

Describe what occurred in chronological order, including circumstances leading to and nature of accident/incident. Describe terrain and include wreckage distribution sketch if pertinent. Attach extra sheets if needed. State departure time and location, services obtained, and intended destination. Provide as much detail as possible.

The day prior to this incident CFI Doug Womack and I flew .9 hours practicing 5 take off and Landings in this C-170 at MSO. He was working toward a tailwheel endorsement. The morning of 12/28 we spent 2 hours in ground training viewing Damian DelGaizo's tailwheel 101 video and talking about taxiing, TO and Landings.

We topped off the fuel tanks and taxied out to taxiway G for a runway 12 departure. I was in the right seat working the radio, Doug in the left seat on the controls, no one else was on board.

The takeoff roll was normal up to approx 50 mph, at that point we started to veer sharply to the left of the runway. I said "Abort." I believe the right wing was flying, left main wheel still on the ground. As we exited the runway into the dirt is when the throttle was brought back and the ground loop started. After the plane came to stop, we secured the engine and departed the plane out our respective doors. No fuel was leaking from the aircraft. Tower must have been watching as they called the crash crew to the area. I took pictures of the plane, talked to a representative of the NTSB, called NorthStar for a tow to our hangar and provided Security with my pilot certificate for a picture.

RECOMMENDATION (How could this accident/incident have been prevented?)

Operator/Owner Safety Recommendation

. It is unclear to me why the aircraft initially veered left. I did not detect any mechanical malfunction; nor did I detect a wind event. It simply felt as though the A/C was steered left. There was not any time for me to correct. We had just spent 2 hours on tailwheel ground training. The only solution that comes to mind would be to conduct a more rigorous assessment of the students capacity to make the transition from tricycle to conventional gear.

MECHANICAL MALFUNCTION/FAILURE (If more space is needed, continue on separate sheet)

Was there Mechanical Malfunction/Failure? Yes No
 (If yes, list the name of the part, manufacturer, part no., serial no., and describe the failure.)

N/A

Total Time/Cycles
On Part

_____ Hours

_____ Cycles

Time Since This Part
Inspected/Overhauled

_____ Hours

FUEL & SERVICES INFORMATION

Fuel on Board at Last Takeoff
 (Convert from pounds, as necessary)

Full Tanks 37 Gallons

Fuel Type

- 80/87 115/145 Jet B Other, specify _____
 100 Low Lead Jet A JP8
 100/130 Jet A-1 Automotive

Other Services, if Any, Prior to Departure

None

EVACUATION OF AIRCRAFT

Was an emergency evacuation of the aircraft performed? Yes No

Method of Exit – Describe how the occupants exited and how many occupants evacuated each location

Climbed out normally

OTHER AIRCRAFT – COLLISION (If air or ground collision occurred, complete this section for other aircraft)

Aircraft Registration Number

N/A

Manufacturer: _____

Model: _____

Damage to Other Aircraft

- Destroyed Minor
 Substantial None

Registered Owner of Other Aircraft

Name: _____
 City: _____
 State: _____ ZIP: _____
 Country: _____

Pilot of Other Aircraft

Name: _____
 City: _____
 State: _____ ZIP: _____
 Country: _____

ADDITIONAL INFORMATION (Please type or print in ink)

Use this space if additional space is needed for any answers.

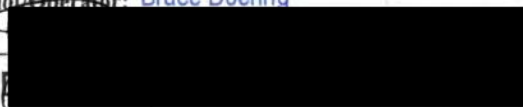
I HEREBY CERTIFY THAT THE ABOVE INFORMATION IS COMPLETE AND ACCURATE TO THE BEST OF MY KNOWLEDGE

Date of this Report

01/03/2020

mm/dd/yyyy

Name of Pilot/Operator: Bruce Doering

Signature: 

-- or --

If a Person Other than Pilot/Operator is Filing Report

Name: _____

Title: _____

Signature: _____

-- or -- Check here to electronically sign this document

FOR NTSB USE ONLY

NTSB Accident/Incident No.
WPR20CA053

Reviewed by NTSB Regional Office
WPR

Name of Investigator
E Simpson

Date Report Received
1/3/20