

**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: Grover State: WY  
 ZIP: 83122 Country: United States  
 Latitude: 42.80 Longitude: -110.95  
*(Enter in decimal degrees or degrees:minutes:seconds)*

**Accident/Incident Date/Time**  
 Date: 08/10/2020 Local Time: 1330  
*mm/dd/yyyy* Time Zone: MST  
**Collision with Other Aircraft:**  Midair  On-ground  None

**AIRCRAFT INFORMATION**

**Registration Number:** N298WY  
**Manufacturer:** Aviat  
**Model:** Experimental  
**Serial Number:** NA  
**Year of Manufacture:** 2018  
**Amateur-Built:**  Yes  No *If Yes:*  Kit/Plans  Original Design Make: A-1C-200 modified

IFR-Equipped and Certified  
 Commercial Space Flight  
 Unmanned Aircraft  
**Maximum Gross Weight:** 2250 lbs  
**Weight at Time of Accident/Incident:** 2190 lbs  
**Number of Seats:** 2 Flight Crew Seats: 2  
 Cabin Crew Seats: \_\_\_\_\_ Passenger Seats: \_\_\_\_\_  
**Number of Engines:** 1

**Category of Aircraft**  
 Airplane  
 Balloon  
 Blimp/Dirigible  
 Glider  
 Gyroplane  
 Helicopter  
 Powered Lift  
 Rocket  
 Ultralight  
 Unknown

**Type of Airworthiness Certificate**  
*(Check all that apply)*  
**Standard** **Special**  
 Normal  Restricted  
 Aerobatic  Limited  
 Balloon  Provisional  
 Commuter  Special Flight  
 Transport  Experimental  
 Utility  Special Light-Sport  
 Experimental Light-Sport  
 Certificate of Authorization or Waiver (COA)  
 None  Unknown

**Landing Gear**  
*(Check all that apply)*  
 Retractable  
 Tricycle  Tailwheel  
 Amphibian  High Skid  
 Emergency Float  Skid  
 Float  Ski  
 Hull  Ski/Wheel  
 Other Launch/Recovery System  
 None  Unknown

**Engine Type** *(Select one)*  
 Reciprocating  Liquid Rocket  
 Turbo Shaft  Solid Rocket  
 Turbo Prop  Hybrid Rocket  
 Turbo Jet  None  
 Turbo Fan  Unknown  
 Electric  
**Fuel System Type** *(Reciprocating)*  
 Carburetor  Fuel-Injected

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)	Overhaul (hours)
Eng. 1	Lycoming	IO-360-C3B6	L-697-80E	02/01/2018	210	73.5		NA
Eng. 2								
Eng. 3								
Eng. 4								

**Last Inspection Type**  
 100-Hour  Continuous Airworthiness  
 AAIP  Conditional Inspection  
 Annual  Unknown  
**Date Last Inspection:** 07/29/2020  
*mm/dd/yyyy*  
**Airframe Total Time:** 73.5 hrs  
 hours measured at *(Select one)*  
 Last Inspection  Time of Accident/Incident

**Propeller 1**  Fixed Pitch  
 Controllable Pitch  
 Ground Adjustable  
 Manufacturer: Hartzell  
 Model: HC-C2YR-1N/NG8301-3

**Propeller 2**  Fixed Pitch  
 Controllable Pitch  
 Ground Adjustable  
 Manufacturer: \_\_\_\_\_  
 Model: \_\_\_\_\_

**Type of Maintenance Program** *(Select one)*  
 Annual  
 Conditional (Amateur-built only)  
 Manufacturer's Inspection Program  
 Other Approved Inspection Program (AAIP)  
 Continuous Airworthiness  
 Other, specify: \_\_\_\_\_

**ELT Installed:**  Yes  No  
*If Yes:*  
**ELT Manufacturer:** ACK Technologies Inc.  
**Model or Part No.:** E-04  
**TSO No.:**  C91 (121.5 MHz)  C91a (121.5 MHz)  
 C126 (406 MHz)  
**Was ELT still mounted in aircraft?**  Yes  No  
**Was ELT still connected to antenna?**  Yes  No  
**Did ELT Activate?**  Yes  No  
*If activated:*  
**Did ELT Aid in Locating Aircraft?**  Yes  No  
*If not activated:*  
**Indicate Reason:**  Impact Damage  
 Fire Damage  
 Battery Expired/Damaged  
 Unknown

**Additional Equipment** *(Check all that apply)*  
 ADS-B  
 Airframe Parachute  
 Angle of Attack Indicator  
 Autopilot  
 Data Recorder  
 Electronic Flight Bag or Handheld Device  
 Electronic Multifunction Display  
 Electronic Primary Flight Display  
 Handheld GPS  
 Heads Up Display  
 Onboard Weather  
 Satellite Tracking Device  
 Stall Warning System  
 Video Recording Device  
 Other, Specify: \_\_\_\_\_

**Description of Fire Extinguishing System**  
 None  
 Specify: \_\_\_\_\_

**OWNER/OPERATOR INFORMATION****Registered Aircraft Owner**Name: Aviat Aircraft Inc.City: AftonFractional Ownership Aircraft:  Yes  NoState: WY ZIP: 83110Country: United States**Operator of Aircraft** Same As Registered Owner Same Address as Registered Owner

Name: \_\_\_\_\_

City: \_\_\_\_\_

Doing Business As: \_\_\_\_\_

State: \_\_\_\_\_ ZIP: \_\_\_\_\_

Air Carrier/Operator Designator (4 Character Code): \_\_\_\_\_

Country: \_\_\_\_\_

**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: \_\_\_\_\_

Distance From Airport Center: \_\_\_\_\_ sm

Airport Identifier: \_\_\_\_\_

Direction From Airport: \_\_\_\_\_ degrees true

Proximity to Airport:  Off Airport/Airstrip     On Airport/Airstrip     N/A

Airport Elevation: \_\_\_\_\_ ft. msl

**Runway Information**

Runway ID: \_\_\_\_\_ (L/R/C) Length: \_\_\_\_\_ ft Width: \_\_\_\_\_ 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     Crosswind     Unknown     Final     Aborted Landing (after touchdown)

**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: \_\_\_\_\_ City of Residence: \_\_\_\_\_  
 Middle Initial: \_\_\_\_\_ State: \_\_\_\_\_ ZIP: \_\_\_\_\_  
 Last Name: \_\_\_\_\_ Country: \_\_\_\_\_  
 Age at time of Accident/Incident: \_\_\_\_\_ Date of Birth: \_\_\_\_\_ *mm/dd/yyyy*  
 Certificate Number: \_\_\_\_\_

<b>Degree of Injury</b> <input type="radio"/> None <input type="radio"/> Fatal <input type="radio"/> Minor <input type="radio"/> Unknown <input type="radio"/> Serious	<b>Seat Occupied</b> <input 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	<b>Restraint Type</b> <table style="width:100%;"> <tr> <th style="text-align: left;">Available</th> <th style="text-align: left;">Used</th> </tr> <tr> <td><input type="radio"/> None</td> <td><input type="radio"/> None</td> </tr> <tr> <td><input type="radio"/> Lap only</td> <td><input type="radio"/> Lap only</td> </tr> <tr> <td><input type="radio"/> 3-point</td> <td><input type="radio"/> 3-point</td> </tr> <tr> <td><input type="radio"/> 4-point</td> <td><input type="radio"/> 4-point</td> </tr> <tr> <td><input type="radio"/> 5-point</td> <td><input type="radio"/> 5-point</td> </tr> <tr> <td><input type="radio"/> Unknown</td> <td><input type="radio"/> Unknown</td> </tr> </table>	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	<b>Inflatable Restraints</b> <input type="checkbox"/> Not Installed <input type="checkbox"/> Installed <input type="checkbox"/> Not Deployed <input type="checkbox"/> Deployed <input type="checkbox"/> Unknown
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																
<b>Pilot Certificate(s)</b> <i>(Check all that apply)</i> <input type="checkbox"/> None <input type="checkbox"/> Flight Instructor <input type="checkbox"/> Commercial <input type="checkbox"/> US Military <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																	

<b>Principal Occupation</b> <input type="radio"/> Pilot <input type="radio"/> Other <input type="radio"/> Unknown	<b>Medical Certificate</b> <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 type="radio"/> Unknown	<b>Medical Certificate Validity</b> <input 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	<b>Date of Last Medical</b> _____ <i>mm/dd/yyyy</i>
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**Medical Certificate Limitations**

\_\_\_\_\_

**Medical Certificate Special Issuance**

\_\_\_\_\_

<b>Date of Last Flight Review or Equivalent, Including FAR 121/135 Checks:</b> _____ <i>mm/dd/yyyy</i>	<b>Flight Review Aircraft</b> Make: _____ Model: _____
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<b>Airplane Rating(s)</b> <i>(Check all that apply)</i> <input type="checkbox"/> None <input type="checkbox"/> Single-Engine Land <input type="checkbox"/> Single-Engine Sea <input type="checkbox"/> Multiengine Land <input type="checkbox"/> Multiengine Sea	<b>Other Aircraft Rating(s)</b> <i>(Check all that apply)</i> <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	<b>Instrument Rating(s)</b> <i>(Check all that apply)</i> <input type="checkbox"/> None <input type="checkbox"/> Airplane <input type="checkbox"/> Helicopter <input type="checkbox"/> Powered Lift	<b>Instructor Rating(s)</b> <i>(Check all that apply)</i> <input type="checkbox"/> None <input 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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<b>Type Ratings</b> _____	<b>Student Endorsements</b> <i>(Include dates)</i> _____
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Flight Time <i>(Enter appropriate number of hours in each box)</i>	All Aircraft	This Make & Model	Airplane Single Engine	Airplane Multiengine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air
						Actual	Simulated			
Total Time										
Pilot in Command (PIC)										
Time as Instructor										
This Make/Model										
Last 90 Days										
Last 30 Days										
Last 24 Hours										

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

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

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

**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	<b>Available</b> <b>Used</b> <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	<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="radio"/> Child Restraint <input type="radio"/> Lap-Held <input type="radio"/> 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	<b>Available</b> <b>Used</b> <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	<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="radio"/> Child Restraint <input type="radio"/> Lap-Held <input type="radio"/> 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	<b>Available</b> <b>Used</b> <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	<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="radio"/> Child Restraint <input type="radio"/> Lap-Held <input type="radio"/> 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	<b>Available</b> <b>Used</b> <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	<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="radio"/> Child Restraint <input type="radio"/> Lap-Held <input type="radio"/> Unknown

## FLIGHT ITINERARY INFORMATION

<b>Last Departure Point</b> Airport ID: <u>KAFO</u> City: <u>Afton</u> State: <u>WY</u> Country: <u>United States</u>	<b>Time of Departure</b> Time: <u>1216</u> Time Zone: <u>MST</u>	<b>Destination</b> Airport ID: <u>KAFO</u> City: <u>Afton</u> State: <u>WY</u> Country: <u>United States</u>	<b>Type Flight Plan Filed</b> <input checked="" type="radio"/> None <input type="radio"/> Company VFR <input type="radio"/> Military VFR <input type="radio"/> VFR <input type="radio"/> VFR/IFR <input type="radio"/> IFR <input type="radio"/> Unknown 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 checked="" type="checkbox"/> None	<input type="checkbox"/> Special VFR	<input type="checkbox"/> Special IFR	<input type="checkbox"/> VFR Flight Following	<input type="checkbox"/> Cruise
<input 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 checked="" 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 type="checkbox"/> Class D	<input type="checkbox"/> Prohibited Area	<input type="checkbox"/> TRSA	
<input checked="" type="checkbox"/> Class E	<input type="checkbox"/> Restricted Area	<input type="checkbox"/> FAR 93	

**Altitude of In-Flight Occurrence:** 15000 ft msl

## WEATHER INFORMATION AT THE ACCIDENT/INCIDENT SITE

<b>Source of Pilot Weather Information</b> (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 type="checkbox"/> TV/Radio</td> <td><input checked="" type="checkbox"/> Internet</td> </tr> <tr> <td><input 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 type="checkbox"/> TV/Radio	<input checked="" type="checkbox"/> Internet	<input 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		<b>Weather Observation Facility</b> Facility ID: <u>KAFO</u> Observation Time: <u>1216</u> Time Zone: <u>MST</u> Distance from Accident Site: _____ 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 type="checkbox"/> TV/Radio	<input checked="" type="checkbox"/> Internet												
<input 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													

<b>Basic Conditions</b> <input checked="" type="radio"/> VMC <input type="radio"/> IMC <input type="radio"/> Unknown	<b>Light Condition</b> <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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<b>Sky/Lowest Cloud Condition</b> <input type="radio"/> Clear <input type="radio"/> Thin Broken <input checked="" type="radio"/> Few <input type="radio"/> Thin Overcast <input type="radio"/> Partial Obscuration <input type="radio"/> Unknown <input type="radio"/> Scattered <b>Lowest Cloud Condition Height</b> <u>Estimate 10,000</u> ft agl	<b>Ceiling</b> <input checked="" type="radio"/> None (Clear) <input type="radio"/> Obscured <input type="radio"/> Broken <input type="radio"/> Indefinite <input type="radio"/> Overcast <input type="radio"/> Unknown <b>Ceiling Height</b> _____ ft agl	<b>Temperature:</b> <u>24</u> (C) or _____ (F) <b>Dew Point:</b> <u>10</u> (C) or _____ (F) <b>Altimeter Setting:</b> <u>30.21</u> in. Hg or _____ MB
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<b>Wind Direction</b> <input type="checkbox"/> Variable -or- Direction: <u>330</u> degrees true	<b>Wind Speed</b> <input type="checkbox"/> Calm <input type="checkbox"/> Light and Variable -or- Speed: <u>5</u> kts	<b>Wind Gusts</b> <input checked="" type="checkbox"/> Not Gusting -or- Speed: _____ kts	<b>Visibility</b> <u>unrestricted</u> miles RVR: _____ feet RVV: _____ miles <b>Density Altitude:</b> _____ ft
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<b>Intensity of Precipitation</b> <input type="radio"/> Light <input type="radio"/> Moderate <input type="radio"/> Heavy <input checked="" type="radio"/> N/A <input type="radio"/> Unknown	<b>Type of Precipitation</b> (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		<b>Restriction to Visibility</b> (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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<b>Icing Forecast</b> <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		<b>Icing Actual</b> <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		<b>Turbulence</b> <b>Type</b> (Check all that apply) <table style="width: 100%;"> <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>	<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:**

None

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

- None       Substantial  
 Minor       Destroyed  
 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)*

The aircraft was observed in a flat spin at impact from above while in a parachute.

**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.

**PRIOR TYPE SPECIFIC SPIN TEST REPORTS**

Prior to the unrecoverable flat spin event on August 10, 2020 a 20 year history of spin testing conducted in prior A1 spin test programs program indicated prompt and correct recovery by test pilots with "no tendency to go flat or develop into an unusual spin" reported at similar weights and farther aft in C.G., (see 2007 below).

1987 The spin data at the most rearward C.G. reports that all spins were recovered in ¾ of a turn or less without exceeding limitations, however this was a previous wing design.

2005 An updated wing design was tested to the rear C.G. of 80.0 inches, the same as the event, and 2045lbs. These tests included spins with control inputs against the spin both with and without flaps. It is reported "All spins were acceptable after an accelerated entry." Test comments indicate, "Aft CG spins are easier to achieve. Spins will only last one turn. Recovery from all spins was quick and correct" in all aspects.

2007 Under the new design wing with a higher gross weight of 2247lbs and C.G. of 81.2" AFT spins are reported normal and recovery is standard. No adverse conditions were found in any tests conducted. No tendency to go flat or develop into an unusual spin.

**BACKGROUND**

The event occurred on August 10, 2020 early afternoon while spin testing an A-1C-200 "Husky" prototype aircraft with the following modifications. The prototype modifications included a 215 Horsepower IO-390-C3B6 Lycoming FAA certified engine, an 80" HC-C2YR-1N/NG8301-3 Hartzell FAA certified propeller, and an experimental flight control configuration. The experimental flight controls included a rudder system with added centering springs, and the aileron system with increased travel of roughly 30%.

It should be noted that Hartzell STC SA11177SC has authorized the installation of the 80" HC-C2YR-1N/NG8301-3 propeller on the 200 horsepower Lycoming IO-360-A1D6 FAA certified engine installed on the Model A-1C-200. These propellers have been delivered on A-1C-200 aircraft since 2014.

The engine's rated 35 horsepower increase over the original 180 horsepower is enough to require spin testing per FAA Advisory Circular (AC)23-24T dated August 24, 2005, "Airworthiness Compliance Checklists for Common Part 23 Supplemental Type Certificates (STC) Projects" specifically on page 16, paragraph 13.d.(2) "Airplanes modified by increasing the installed horsepower (maximum takeoff power) by more than 10% or 25 horsepower, whichever is less, over the original type certificated airplane installed horsepower rating, will require spin testing." The original installed horsepower rating is 180 horsepower per Type Certificate Data Sheet A22NM Model A-1 approved May 1, 1987 with O-360-C1G or O-360-A1P Lycoming engines. Thus, a Project Specific Certification Plan (PSCP) Rev. B report AAI-2017-100-001 and Company Flight Test Plan report AAI-2017-100-011 were created including a spin matrix submitted by the applicant with cooperation and guidance of the FAA Aircraft Certification Branch to demonstrate compliance with AC23-24T, FAR23.221, and AC-23-8C Chapter 2 Subpart B-Flight, Section 8. Spinning.

All testing occurred from the factory at Afton airport while operating under an Experimental for Research and Development FAA Airworthiness Certificate and associated limitations.

**THIS SPIN PROGRAM**

The aircraft rigging was measured by Quality on August 3, 2020. Rigging dimensions were recorded as follows:

Tail; Horizontal tail was level within -0.1 degree.

Rudder was set to 25 degrees left and right tolerance of 25+-2.

Vertical stab was 89.9 or -0.1 degree.

Elevator travel was 20 up tolerance of 20, and 15 degree down



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

Operator/Owner Safety Recommendation

Flight control loads instrumentation along with Alpha and Beta instrumentation (Angle of Attack and Side Slip) during stall and spin testing will aid in quantifying flight control authority and effectiveness during spin build up testing from forward CG to aft CG. These can be compared with the test aircraft moments of inertia.

**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.)*

**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)*

50.0 \_\_\_\_\_ 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**

Aircraft weighed as described.

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

08/24/2020  
*mm/dd/yyyy*

**Name of Pilot/Operator:** Eric Achen

**Signature:** \_\_\_\_\_

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

**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.**  
WPR20CA266

**Reviewed by NTSB Regional Office**  
WPR

**Name of Investigator**  
HICKS

**Date Report Received**  
24AUG2020