

**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: Reigle Fld, [REDACTED] Palmyra State: PA
 ZIP: 17078 Country: United States of America
 Latitude: N40:17:16 Longitude: W76:34:48
(Enter in decimal degrees or degrees:minutes:seconds)

Accident/Incident Date/Time
 Date: 05/03/2018 Local Time: 15:56
mm/dd/yyyy Time Zone: EST
Collision with Other Aircraft: Midair On-ground None

AIRCRAFT INFORMATION

Registration Number: N914BB
Manufacturer: Bernie Berger M
Model: Pulsar Series III
Serial Number: P9802-0550
Year of Manufacture: 2002
Amateur-Built: Yes *If Yes:* Kit/Plans Original Design Make: Pulsar Series III
 No

IFR-Equipped and Certified
 Commercial Space Flight
 Unmanned Aircraft
Maximum Gross Weight: 1325 lbs
Weight at Time of Accident/Incident: 1147 lbs
Number of Seats: 2 Flight Crew Seats: 1
 Cabin Crew Seats: - Passenger Seats: 1
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
 Normal
 Aerobatic
 Balloon
 Commuter
 Transport
 Utility
 Certificate of Authorization or Waiver (COA)
 None
Special
 Restricted
 Limited
 Provisional
 Special Flight
 Experimental
 Special Light-Sport
 Experimental Light-Sport
 Unknown

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

Engine Type *(Select one)*
 Reciprocating
 Turbo Shaft
 Turbo Prop
 Turbo Jet
 Turbo Fan
 Electric
 Liquid Rocket
 Solid Rocket
 Hybrid Rocket
 None
 Unknown
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	Rotax	914UL	4417883		100	771.6	46	268
Eng. 2								
Eng. 3								
Eng. 4								

Last Inspection Type
 100-Hour
 AAIP
 Annual
 Continuous Airworthiness
 Conditional Inspection
 Unknown
Date Last Inspection: 07/09/2017
mm/dd/yyyy
Airframe Total Time: 771.6 hrs
 hours measured at *(Select one)*
 Last Inspection Time of Accident/Incident

Propeller 1
 Fixed Pitch
 Controllable Pitch
 Ground Adjustable
 Manufacturer: Ivoprop
 Model: Medium Propeller

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: Ameri-King Corp.
Model or Part No.: AK-450
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:

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: Garmin GNS 430
Portable ADS-B In

Description of Fire Extinguishing System
 None
 Specify: Portable, Hand-Held

OWNER/OPERATOR INFORMATION**Registered Aircraft Owner**Name: Geoffrey J. JeramCity: Newport NewsFractional Ownership Aircraft: Yes NoState: VA ZIP: 23608Country: United States of America**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: Reigle FieldDistance From Airport Center: 0.2 smAirport Identifier: 58NDirection From Airport: 300 degrees trueProximity to Airport: Off Airport/Airstrip On Airport/Airstrip N/AAirport Elevation: 489 ft. msl**Runway Information**Runway ID: 31 (L/R/C) Length: 1955 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 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: _____ City of Residence: _____
 Middle Initial: _____ State: _____ ZIP: _____
 Last Name: _____ Country: _____
 Age at time of Accident/Incident: _____ Date of Birth: _____ *mm/dd/yyyy*
 Certificate Number: _____

Degree of Injury <input type="radio"/> None <input type="radio"/> Fatal <input type="radio"/> Minor <input type="radio"/> Unknown <input type="radio"/> Serious	Seat Occupied <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	Restraint Type <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	Inflatable Restraints <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																

Pilot Certificate(s) *(Check all that apply)*

<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	

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

Medical Certificate Special Issuance

Date of Last Flight Review or Equivalent, Including FAR 121/135 Checks: _____ <i>mm/dd/yyyy</i>	Flight Review Aircraft Make: _____ Model: _____
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Airplane Rating(s) <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	Other Aircraft Rating(s) <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	Instrument Rating(s) <i>(Check all that apply)</i> <input type="checkbox"/> None <input type="checkbox"/> Airplane <input type="checkbox"/> Helicopter <input type="checkbox"/> Powered Lift	Instructor Rating(s) <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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Type Ratings _____ _____ _____	Student Endorsements <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)

Crew Name and Address	Seat Occupied	Injury
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
Pilot Certificate(s) (Check all that apply) <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	Restraint Type: 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	Inflatable Restraints <input type="checkbox"/> Not Installed <input type="checkbox"/> Installed <input type="checkbox"/> Not Deployed <input type="checkbox"/> Deployed <input type="checkbox"/> Unknown
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	

Crew Name and Address	Seat Occupied	Injury
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
Pilot Certificate(s) (Check all that apply) <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	Restraint Type: 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	Inflatable Restraints <input type="checkbox"/> Not Installed <input type="checkbox"/> Installed <input type="checkbox"/> Not Deployed <input type="checkbox"/> Deployed <input type="checkbox"/> Unknown
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	

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="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	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="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	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="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	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="radio"/> Child Restraint <input type="radio"/> Lap-Held <input type="radio"/> Unknown

FLIGHT ITINERARY INFORMATION

Last Departure Point Airport ID: <u>N94</u> City: <u>Carlisle</u> State: <u>PA</u> Country: <u>USA</u>	Time of Departure Time: <u>14:57</u> Time Zone: <u>EST</u>	Destination Airport ID: <u>N94</u> City: <u>Carlisle</u> State: <u>PA</u> Country: <u>USA</u>	Type Flight Plan Filed <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 type="checkbox"/> None	<input type="checkbox"/> Special VFR	<input type="checkbox"/> Special IFR	<input checked="" 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 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: _____ 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 type="checkbox"/> TV/Radio</td> <td><input 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 checked="" 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 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 checked="" type="checkbox"/> On-Board Weather		Weather Observation Facility Facility ID: _____ Observation Time: _____ Time Zone: _____ 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 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 checked="" 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 _____ ft agl	Ceiling <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 Ceiling Height _____ ft agl	Temperature: _____ (C) or <u>80</u> (F) Dew Point: _____ (C) or _____ (F) Altimeter Setting: _____ in. Hg or _____ MB
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Wind Direction <input type="checkbox"/> Variable -or- Direction: <u>~ 250</u> degrees true	Wind Speed <input type="checkbox"/> Calm <input type="checkbox"/> Light and Variable -or- Speed: <u>~ 8</u> kts	Wind Gusts <input type="checkbox"/> Not Gusting -or- Speed: _____ kts	Visibility <u>10+</u> miles RVR: _____ feet RVV: _____ miles Density Altitude: _____ ft
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Intensity of Precipitation <input type="radio"/> Light <input type="radio"/> Moderate <input type="radio"/> Heavy <input 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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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)*

One destroyed propeller blade. Nose gear collapsed beneath aircraft bottom. Main gear bent rearward about 45 degrees at its two frame mounts. Damage to fuselage composite on belly near main undercarriage mount points. Damage to fuselage composite where nose gear crushed into belly (under right seat footwell). Right wingtip light plexiglass broken. Other possible damage possible to electrical wiring, and other systems mounted to cabin floor.

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.

On May 3, 2018, I intended to pilot N914BB from Carlisle Airport (N94) to Grimes Field (8N1), a distance of about 45 nm, and return within about 90 minutes. My preflight of the aircraft revealed no discrepancies. The engine oil level fell near the lower edge of the flat section of the oil reservoir dipstick, inside the lower bound of normal oil capacity for the engine and aircraft. Fueled to 26 gallons 93 octane MOGAS (of 27.5 usable). The weather was VMC throughout the flight, with clear skies and wind from the Southwest at about 5 to 10 knots across the area.

I took off from Carlisle Airport (N94) at 14:57 local (18:57 UTC) and arrived over at Grimes Field about 30 minutes later. I made one low approach and then approached and landed on runway 29. Without stopping the engine, I paused off the runway to program my return flight plan and leaned from the cockpit to visually check my nosewheel and fairing after the grass field landing. Both appeared normal and secure. I took off from Grimes runway 29 at 15:39 local (19:39 UTC).

During take-off and climb to 3,500 feet, I noticed that my engine provided about 32 to 33 psi Manifold Pressure, less than the normal continuous maximum of 35 psi. This was my first abnormal engine indication of the day. The power still maintained propeller speed at the normal 5500 RPM. There were no other abnormal engine indications, so I decided to continue to Carlisle Airport. I contacted Harrisburg Approach for flight following and clearance through the Harrisburg airspace. Harrisburg directed that I maintain 3,500 or above. About 14 minutes after take-off from Grimes, about 6 miles south of Muir AAF (MUI) and 3 miles north of Reigle Field (58N), I noticed that engine oil pressure was in the 30's (psi) and trending downward. Although, within limits, this was well below the engine's normal pressure of about 60 psi. As oil pressure dropped to 30psi, I advised Harrisburg Approach about my low oil indication and announced that I intended to divert to Hershey airport (meaning Reigle field) as a precaution. Harrisburg acknowledged as I turned southward, reduced power, and descended toward Reigle Field. With the aircraft maneuvering normally, under Harrisburg airspace, and with normal engine indications during the descent, except for the low oil pressure, I did not declare an emergency and did not need priority handling.

I visually identified Reigle Field by sighting its runway 31 as I overflew it southward. By this time, I had nearly reached traffic pattern altitude and had changed frequency from Harrisburg to Reigle's 122.8 Unicom. I retained my flight following squawk at Harrisburg's request. On Unicom, I announced my arrival and my progress around the traffic pattern to runway 31, but never received a reply. Neither did I see any aircraft flying near Reigle field or moving upon its runway or taxiways. As I turned left into the left downwind leg for runway 31, I observed a few seconds of white smoke coming from my engine and passing across my left wing. I believe I saw second puff of smoke several seconds later. I retarded throttle to idle position to decelerate during a continuous shallow descent onto base leg. I deployed half-flaps (about 5 seconds of electric flap actuation). As I turned to final leg about a mile from the runway, my airspeed was about 110 mph, when it should have been 90-100 mph and I recognized that the airplane carried too much energy for final approach. I ensured the throttle was full out, but by its sound, the engine seemed to operate at about 30% or more power. I judged that I could make the runway and, thinking of the possibility of an engine fire after the engine smoke I saw, I decided to not go around. I turned off the ignition to eliminate engine power and glide to the runway. This would have been about 5 to 10 seconds before touchdown.

I touched down at about a quarter distance into the runway, but lifted off briefly. I held the flaps-up switch as I planted the aircraft on the pavement by the runway mid-point and braked hard. The aircraft decelerated but continued beyond the end of the runway, up a shallow knoll, and down into a plowed dirt field. About 20 meters into the field, the nose wheel dug into the dirt and the aircraft came to rest with a nose down attitude. This was about 59 minutes after my take-off from Carlisle Airport (N94).

Once stopped, I turned off the master power, checked for any urgencies, such as fire, fuel spills, or movement. There were none. I turned off the secondary fuel pump and moved the fuel selector switch to closed. I dismantled normally. Some minutes later, after people arrived with a report that the aircraft's ELT was transmitting, I accessed the aft avionics bay, behind the seat-back, and turned off the ELT. I also disconnected the positive terminal of the battery to reduce the likelihood of electrical fire. The wings appeared secure and completely intact, but the aircraft came to rest with the right wing low and its right wing tank was slowly dripping fuel from the fuel vent at the wing tip. When the fire department personnel arrived, they accommodated my request to provide a portable catch basin to capture the leaking fuel.

The nose gear had collapsed rearward, but remained connected its mount at the base of the firewall, such that the nose wheel and its fairing had pierced belly of the fuselage, a few inches into the footwell in front of the right seat. The main gear mounts had bent rearward about 20 degrees. I believe the engine and propeller had stopped during deceleration on the runway with the propeller vertical, such that the bottom blade broke when the nose wheel collapsed.



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

Operator/Owner Safety Recommendation

TENTATIVE conclusion and recommendation, based on this flight and previous observations of this aircraft.

The Rotax 914 engine installation in N914BB, which conformed to Rotax 914 installation guidance, may leave too small a margin between minimum allowable level of oil capacity and the level where the engine oil system blows out excess oil as overflow. The oil reservoir should be more voluminous to allow a greater volume of oil expansion and contraction due to heat, oil aeration, or other effects without expelling normal capacity as excess during flight operations. The Rotax 914 oil system in this aircraft tended to expel capacity above the mid-normal range - even when using the Rotax recommended Aeroshell oil. If the engine consumes or leaks oil during flight, after it expels a portion of the nominal capacity, it may result in low oil volume that leads to low oil pressure in flight.

Based on experience with this flight, I suspect that the loss of manifold pressure at high power levels, that is, a reduction from the design maximum manifold pressure below the 38 psi transient or 35 psi continuous, is an indicator of low oil capacity that precedes low oil pressure indications.

I do not have a recommendation for the symptom of low- to mid-range engine power even with the throttle pulled full aft (lowest idle). My best guess, but a low probability one, is that a worn flake of engine exhaust wrap interfered with the throttle attachment to the engine. Several flights and weeks earlier, while examining the engine with the cowlings off, I found a large flake of engine exhaust wrap lodged where the throttle cable attached to the engine. I wondered whether the flake of exhaust wrap may have affected throttle responsiveness, but I hadn't noticed any abnormal throttle behavior during the flights immediately previous to that discovery.

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.)*

I am not certain that any mechanical malfunction or failure occurred during flight.

I believe the low oil pressure was due to low oil capacity, but I do not know whether or how the engine lost oil since the preflight only 60 minutes (40 minutes of flight time) previous to the indication. I do not

**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)*26 Gallons**Fuel Type** 80/87 115/145 Jet B Other, specify Automotive 93 octane 100 Low Lead Jet A JP8 100/130 Jet A-1 Automotive**Other Services, if Any, Prior to Departure****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

The canopy unlatches at three points and the occupant slides it forward in its track. The occupant dismounts by raising himself off the seat, stepping onto the wing-walk, and stepping off the wing rearward.

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 05/13/2018 <i>mm/dd/yyyy</i>	Name of Pilot/Operator: Geoffrey J. Jeram Signature: _____ -- or -- <input type="checkbox"/> 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. GAA18CA258	Reviewed by NTSB Regional Office GAA	Name of Investigator Kathryn Benhoff	Date Report Received 5/13/2018
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