

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: Cloquet State: MN

ZIP: 55720 Country: USA

Latitude: 46-42-04.0 Longitude: 092-30-12.8

(Enter in decimal degrees or degrees:minutes:seconds)

Accident/Incident Date/Time

Date: 09/30/2016 Local Time: ~1430

mm/dd/yyyy

Time Zone: CDT

Collision with Other Aircraft: ☐ Midair ☐ On-ground ☒ None

AIRCRAFT INFORMATION

Registration Number: N1528H

Manufacturer: Cessna

Model: C177RG

Serial Number: 177RG0704

Year of Manufacture: 1975

Amateur-Built: ☐ Yes ☒ No If Yes: ☐ Kit/Plans ☐ Original Design Make: _____

☒ IFR-Equipped and Certified

☐ Commercial Space Flight

☐ Unmanned Aircraft

Maximum Gross Weight: 2800 lbs

Weight at Time of Accident/Incident: ~2500 lbs

Number of Seats: 4 Flight Crew Seats: 2

Cabin Crew Seats: N/A Passenger Seats: 2

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

Special

- ☐ Restricted
- ☐ Limited
- ☐ Provisional
- ☐ Special Flight
- ☐ Experimental
- ☐ Special Light-Sport
- ☐ Experimental Light-Sport

☐ Certificate of Authorization or Waiver (COA)

☒ None

☐ Unknown

Landing Gear

(Check all that apply)

☒ Retractable

- ☒ Tricycle
- ☐ Amphibian
- ☐ Emergency Float
- ☐ Float
- ☐ Hull
- ☐ Tailwheel
- ☐ High Skid
- ☐ Skid
- ☐ Ski
- ☐ Ski/Wheel
- ☐ 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 ☒ Horsepower or ☐ lbs of Thrust	Total Time (hours)	Time Since: Inspection (hours)	Overhaul (hours)
Eng. 1	<u>Lycoming</u>	<u>IO360-A1B6D</u>	<u>L-18530-51A</u>	<u>06/04/1993</u>	<u>200</u>	<u>Unkn</u>	<u>31.1</u>	<u>1350</u>
Eng. 2								
Eng. 3								
Eng. 4								

Last Inspection Type

- ☐ 100-Hour
- ☐ AAIP
- ☒ Annual
- ☐ Continuous Airworthiness
- ☐ Conditional Inspection
- ☐ Unknown

Date Last Inspection: 01/27/2016
mm/dd/yyyy

Airframe Total Time: 9668 hrs

hours measured at *(Select one)*

☐ Last Inspection ☒ Time of Accident/Incident

Type of Maintenance Program *(Select one)*

- ☐ Annual
- ☐ Conditional (Amateur-built only)
- ☐ Manufacturer's Inspection Program
- ☐ Other Approved Inspection Program (AAIP)
- ☐ Continuous Airworthiness
- ☐ Other, specify: _____

Description of Fire Extinguishing System

- ☐ None
- ☐ Specify: _____

Propeller 1

- ☐ Fixed Pitch
- ☒ Controllable Pitch
- ☐ Ground Adjustable

Manufacturer: Hartzel

Model: HC-C34R-1RF

Propeller 2

- ☐ Fixed Pitch
- ☐ Controllable Pitch
- ☐ Ground Adjustable

Manufacturer: _____

Model: _____

ELT Installed: ☒ Yes ☐ No

If Yes:

ELT Manufacturer: Ameri-King

Model or Part No.: AK-451-2

TSO No.: ☐ OC91 (121.5 MHz) ☐ OC91a (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: Panel mounted VFR GPS

OWNER/OPERATOR INFORMATION**Registered Aircraft Owner**Name: Aero-Environmental Consulting LLCCity: CookState: MNZIP: 55723Fractional Ownership Aircraft: ☐ Yes ☒ NoCountry: USA**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: Cloquet Carlton County AirportDistance From Airport Center: 0.5 smAirport Identifier: COQDirection From Airport: 360 degrees trueProximity to Airport: ☒ Off Airport/Airstrip ☐ On Airport/Airstrip ☐ N/AAirport Elevation: 1275 ft. msl**Runway Information**Runway ID: 17 (L/R/C) Length: 4002 ft Width: 75 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 ☐ 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 1” Responsibilities at the Time of Accident/Incident

☒ Pilot ☐ Co-Pilot ☐ Student Pilot ☐ Flight Instructor ☐ Check Pilot ☐ Flight Engineer ☐ Other Flight Crew

“Flight Crewmember 1” Identification

First Name: David

City of Residence: Cook

Middle Initial: A

State: MN ZIP: 55723

Last Name: Witt

Country: USA

Age at time of Accident/Incident: 69 Date of Birth: *mm/dd/yyyy*

Certificate Number: _____

Degree of Injury ☒ None ☐ Fatal ☐ Minor ☐ Unknown ☐ Serious	Seat Occupied ☒ Left ☐ Front ☐ Unknown ☐ Right ☐ Rear ☐ Center ☐ Single	Restraint Type Available ☐ None ☐ Lap only ☒ 3-point ☐ 4-point ☐ 5-point ☐ Unknown Used ☐ None ☐ Lap only ☒ 3-point ☐ 4-point ☐ 5-point ☐ Unknown	Inflatable Restraints ☒ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown
Pilot Certificate(s) <i>(Check all that apply)</i> ☐ None ☐ Flight Instructor ☐ Commercial ☐ US Military ☐ Private ☐ Recreational ☐ Airline Transport ☐ Foreign ☐ Student ☐ Sport ☐ Flight Engineer			
Principal Occupation ☐ Pilot ☒ Other ☐ Unknown	Medical Certificate ☐ None ☐ Class 3 ☐ Class 1 ☐ Driver's License (Sport Pilot only) ☒ Class 2 ☐ Unknown	Medical Certificate Validity ☐ Without limitations/waivers ☐ Unknown ☒ With limitations/waivers ☐ N/A ☐ Special Issuance	Date of Last Medical <u>04/26/2016</u> <i>mm/dd/yyyy</i>

Must wear corrective lenses.

Medical Certificate Special Issuance

Date of Last Flight Review or Equivalent, Including FAR 121/135 Checks: <u>06/23/2016</u> <i>mm/dd/yyyy</i>	Flight Review Aircraft Make: <u>Cessna</u> Model: <u>C177RG</u>
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Airplane Rating(s) <i>(Check all that apply)</i> ☐ None ☒ Single-Engine Land ☐ Single-Engine Sea ☐ Multiengine Land ☐ Multiengine Sea	Other Aircraft Rating(s) <i>(Check all that apply)</i> ☒ None ☐ Airship ☐ Balloon ☐ Glider ☐ Gyroplane ☐ Helicopter ☐ Powered Lift	Instrument Rating(s) <i>(Check all that apply)</i> ☒ None ☐ Airplane ☐ Helicopter ☐ Powered Lift	Instructor Rating(s) <i>(Check all that apply)</i> ☒ None ☐ Airplane Single-Engine ☐ Airplane Multi-Engine ☐ Gyroplane ☐ Powered Lift ☐ Instrument Airplane ☐ Instrument Helicopter ☐ Helicopter ☐ Glider ☐ Sport
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Type Ratings Complex endorsement 04/28/2010	Student Endorsements <i>(Include dates)</i>
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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	828	389	828		3		4			
Pilot in Command (PIC)	828	389	828		3		4			
Time as Instructor										
This Make/Model										
Last 90 Days	10	10	10							
Last 30 Days	3	3	3							
Last 24 Hours	2	2	2							

ADDITIONAL FLIGHT CREWMEMBERS (Exclusive of cabin crew, complete the following information)									
Crew Name and Address					Seat Occupied		Injury		
First Name: <u>N/A</u> City of Residence: _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____					☐ Left ☐ Front ☐ Center ☐ Rear ☐ Right ☐ Single ☐ Unknown		☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown		
Pilot Certificate(s) (Check all that apply) ☐ None ☐ Private ☐ Student ☐ Flight Instructor ☐ Recreational ☐ Sport ☐ Commercial ☐ Airline Transport ☐ Flight Engineer ☐ US Military ☐ Foreign					Restraint Type: Available ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown Used ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown		Inflatable Restraints ☐ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown		
Type Rating/Endorsement for Accident/Incident Aircraft? ☐ Yes ☐ 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: _____					☐ Left ☐ Front ☐ Center ☐ Rear ☐ Right ☐ Single ☐ Unknown		☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown		
Pilot Certificate(s) (Check all that apply) ☐ None ☐ Private ☐ Student ☐ Flight Instructor ☐ Recreational ☐ Sport ☐ Commercial ☐ Airline Transport ☐ Flight Engineer ☐ US Military ☐ Foreign					Restraint Type: Available ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown Used ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown		Inflatable Restraints ☐ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown		
Type Rating/Endorsement for Accident/Incident Aircraft? ☐ Yes ☐ 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: <u>N/A</u> City : _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____ ☐ Crew ☐ Passenger ☐ Other			☐ Left ☐ Center ☐ Right ☐ Unknown Row: _____	☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown	Available ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown	Used ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown	☐ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown	☐ Under 5 years <i>If Under 5,</i> ☐ Child Restraint ☐ Lap-Held ☐ Unknown	
First Name: _____ City : _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____ ☐ Crew ☐ Passenger ☐ Other			☐ Left ☐ Center ☐ Right ☐ Unknown Row: _____	☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown	Available ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown	Used ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown	☐ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown	☐ Under 5 years <i>If Under 5,</i> ☐ Child Restraint ☐ Lap-Held ☐ Unknown	
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FLIGHT ITINERARY INFORMATION

Last Departure Point Airport ID: <u>CQM</u> City: <u>Cook</u> State: <u>MN</u> Country: <u>USA</u>	Time of Departure Time: <u>~1300</u> Time Zone: <u>CDT</u>	Destination Airport ID: <u>04W</u> City: <u>Hinckley</u> State: <u>MN</u> Country: <u>USA</u>	Type Flight Plan Filed ☒ None ☐ VFR/IFR ☐ Company VFR ☐ IFR ☐ Military VFR ☐ Unknown ☐ VFR Activated? ☐ Yes ☐ No ☐ Unknown
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Type of ATC Clearance/Service (Check all that apply)				
☒ None	☐ Special VFR	☐ Special IFR	☐ VFR Flight Following	☒ Cruise
☒ VFR	☐ IFR	☐ VFR On Top	☐ Traffic Advisory	☐ Unknown / NA

Airspace where the accident/incident occurred (Check all that apply)			Altitude of In-Flight Occurrence: <u>~3500</u> ft msl
☐ Class A	☐ Class G	☐ Military Operations Area (MOA)	☐ Special
☐ Class B	☐ Demo Area	☐ Airport Advisory Area	☐ Air Traffic Control Area
☐ Class C	☐ Warning Area	☐ Jet Training Area	☐ Unknown
☐ Class D	☐ Prohibited Area	☐ TRSA	
☒ Class E	☐ Restricted Area	☐ FAR 93	

WEATHER INFORMATION AT THE ACCIDENT/INCIDENT SITE

Source of Pilot Weather Information (Check all that apply)	Weather Observation Facility
☒ National Weather Service ☐ Flight Service Station ☒ TV/Radio ☐ Automated Report ☐ Commercial Weather Service (DUATS) ☒ On-Board Weather	Facility ID: <u>COQ</u> Observation Time: <u>~1400</u> Time Zone: <u>CDT</u> Distance from Accident Site: <u>15</u> nm Direction from Accident Site: <u>360</u> degrees true
☐ Company ☐ Military ☒ Internet ☐ None ☐ Unknown	

Basic Conditions ☒ VMC ☐ IMC ☐ Unknown	Light Condition ☐ Dawn ☐ Dusk ☐ Dark Night ☐ Unknown ☒ Day ☐ Night ☐ Bright Night
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Sky/Lowest Cloud Condition ☐ Clear ☐ Thin Broken ☒ Few ☐ Thin Overcast ☐ Partial Obscuration ☐ Unknown ☐ Scattered	Ceiling ☒ None (Clear) ☐ Obscured ☐ Broken ☐ Indefinite ☐ Overcast ☐ Unknown	Temperature: _____ (C) or <u>~65</u> (F) Dew Point: _____ (C) or <u>~50</u> (F) Altimeter Setting: <u>30.08</u> in. Hg or _____ MB
Lowest Cloud Condition Height <u>8,000</u> ft agl	Ceiling Height <u>>12,000</u> ft agl	

Wind Direction ☐ Variable -or- Direction: <u>100</u> degrees true	Wind Speed ☐ Calm ☐ Light and Variable -or- Speed: <u><5</u> kts	Wind Gusts ☒ Not Gusting -or- Speed: _____ kts	Visibility <u>>10</u> miles RVR: _____ feet RVV: _____ miles Density Altitude: _____ ft
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Intensity of Precipitation ☐ Light ☐ Moderate ☐ Heavy ☒ N/A ☐ Unknown	Type of Precipitation (Check all that apply)	Restriction to Visibility (Check all that apply)
	☒ None ☐ Drizzle ☐ Freezing Rain ☐ Rain ☐ Ice Pellets ☐ Snow Shower ☐ Snow ☐ Snow Pellets ☐ Ice Pellets Shower ☐ Hail ☐ Snow Grains ☐ Freezing Drizzle ☐ Rain Showers ☐ Ice Crystals	☒ None ☐ Fog ☐ Blowing Dust ☐ Ground Fog ☐ Blowing Sand ☐ Haze ☐ Blowing Snow ☐ Ice Fog ☐ Blowing Spray ☐ Smoke ☐ Dust ☐ Unknown

Icing Forecast	Icing Actual	Turbulence																																						
<table border="0"> <tr> <th>Amount</th> <th>Type</th> </tr> <tr> <td>☒ None</td> <td>☐ N/A</td> </tr> <tr> <td>☐ Trace</td> <td>☐ Rime</td> </tr> <tr> <td>☐ Light</td> <td>☐ Clear</td> </tr> <tr> <td>☐ Moderate</td> <td>☐ Mixed</td> </tr> <tr> <td>☐ Severe</td> <td>☐ Unknown</td> </tr> <tr> <td>☐ Unknown</td> <td></td> </tr> </table>	Amount	Type	☒ None	☐ N/A	☐ Trace	☐ Rime	☐ Light	☐ Clear	☐ Moderate	☐ Mixed	☐ Severe	☐ Unknown	☐ Unknown		<table border="0"> <tr> <th>Amount</th> <th>Type</th> </tr> <tr> <td>☒ None</td> <td>☐ N/A</td> </tr> <tr> <td>☐ Trace</td> <td>☐ Rime</td> </tr> <tr> <td>☐ Light</td> <td>☐ Clear</td> </tr> <tr> <td>☐ Moderate</td> <td>☐ Mixed</td> </tr> <tr> <td>☐ Severe</td> <td>☐ Unknown</td> </tr> <tr> <td>☐ Unknown</td> <td></td> </tr> </table>	Amount	Type	☒ None	☐ N/A	☐ Trace	☐ Rime	☐ Light	☐ Clear	☐ Moderate	☐ Mixed	☐ Severe	☐ Unknown	☐ Unknown		<table border="0"> <tr> <th>Type (Check all that apply)</th> <th>Severity</th> </tr> <tr> <td>☒ None</td> <td>☐ Light</td> </tr> <tr> <td>☐ Clear Air</td> <td>☐ Moderate</td> </tr> <tr> <td>☐ Terrain-Induced</td> <td>☐ Severe</td> </tr> <tr> <td>☐ Convective Turbulence</td> <td>☐ Extreme</td> </tr> </table>	Type (Check all that apply)	Severity	☒ None	☐ Light	☐ Clear Air	☐ Moderate	☐ Terrain-Induced	☐ Severe	☐ Convective Turbulence	☐ 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

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)*

Potential damage to all components of the entire tail section behind the rear baggage compartment. Also, engine mount resulting from nose gear impact with steep side of the ditch where the aircraft stopped. Pictures of the aircraft damage are available upon request (or from FAA MSP FSDO inspector, Allan Thilmany).

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 VFR flight originated from Cook Municipal Airport, MN (CQM) at approximately 1300 CDT on September 30, 2016 with clear sky and light east wind. A standard preflight was performed prior to starting the engine that indicated all systems were normal and ready for flight. With full fuel tanks (60 gallons) and after taxiing to the departure end of the runway a standard run-up was performed showing all engine and prop functions were normal and ready for take-off.

After departing from CQM runway 13, I performed a normal climb to 4,000 feet MSL on a southbound heading.

After proceeding south for about 30 minutes at 4,000 feet MSL, I climbed to 5,500 MSL and proceeded in cruise configuration for approximately 15 minutes I started to hear a slight non-standard engine sound (a slight ticking sound). Checking the oil pressure gauge, I noted it showed the pressure was just below the green arch, but above the critical low level line on the gauge. At that time, I decided to make a precautionary landing at COQ to check the engine. At approximately 10 miles from COQ the engine noise had become louder so I pulled the throttle back to about 15 inches of MP to lower the pressures in the engine. Following that, I tried to reduce the prop RPM, but no change in RPM occurred indicating a lack of oil pressure in the prop governor. When I was less than 10 miles from COQ, and had the airport in sight, I started a decent for landing while perceiving louder knocking from the engine. At about the same time, I noted the oil pressure was dropping too below the critical low pressure line on the gauge. At about 5 miles from COQ and at about 3,500 feet MSL (2,000 feet AGL) the oil pressure continued to drop to zero and the engine was knocking quite loudly. At approximately 2.5 – 3 miles from COQ the engine failed completely including full propeller stop. I only had time to make a very short radio call to COQ that I had the complete engine failure and was landing!

I immediately pitched for best glide with flaps up, because there were approximately 60-foot-high trees along the north end of the field north of Airport Road that I had to get over to land on the field (by then it was obvious I was not going to be able to glide to COQ's RW 17). As soon as I knew I could clear the trees, I lowered the landing gear and got full down and locked. There was no time to lower the flaps (which could have destabilized my established decent to landing) so I shut off the master and ignition switch for landing.

Almost immediately, I was into my shallow flare for the landing. The touchdown was very smooth. After rolling out over a slight rise in field, I saw that I was quickly approaching the north side ditch along Airport Road (the north property boundary of COQ). Unfortunately, due to the green vegetation of the field the brakes were not as effective as on a hard surface runway and the forward momentum of the plane caused it to slowly go down into the ditch and the nose gear stopped the plane when it struck the steep roadside of the ditch. After full stop the nose gear and the co-pilot side main gear were resting on the ground and the pilot side main gear was elevated about two feet above the ground surface of the ditch. This caused the weight of the plane to buckle and twist the tail section aft of the baggage compartment and along the copilot side of the tail section at the stabilator.

Overall the forced landing was very smooth, in fact, as pilot and only occupant, I didn't even have any G-forces significant enough to cause my three-point seatbelt/shoulder harness to tighten on me nor did the final stop cause me to be forced forward (i.e. absolutely no injuries).

Upon exiting the aircraft calls were made to notify the FAA/FSDO, insurance company, etc. After receiving authorization from the MSP FSDO to move the aircraft, we towed the aircraft out of the ditch and connected a tow bar to the nose gear and pulled the plane to the airport apron and tied it down. It remains tied down on the apron at COQ for inspection and assessment of damages by the FAA, NTSB and insurance representatives.

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

Operator/Owner Safety Recommendation

It is unknown how the actual engine failure could have been prevented. However in hindsight, if I would have stayed at my higher cruise altitude ~5,500 MSL until the engine failure occurred I could have glided to RW 17 at COQ. As events actually occurred I had descended to ~3,500 MSL in anticipation of a precautionary landing at COQ.

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 engine failure with full propeller stop. Probable cause (but not verified) is a catastrophic failure of the camshaft.

Total Time/Cycles On Part

~1350 Hours

Cycles

Time Since This Part Inspected/Overhauled

~1350 Hours

FUEL & SERVICES INFORMATION**Fuel on Board at Last Takeoff***(Convert from pounds, as necessary)*

60 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****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

Normal exit from pilot's door.

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

10/27/2016

mm/dd/yyyy

Name of Pilot/Operator: David A. Witt

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.
CEN16LA391

Reviewed by NTSB Regional Office
CEN

Name of Investigator
J. Brannen

Date Report Received
10/27/2016