

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: ROMAN State: MT
 ZIP: 59864 Country: USA
 Latitude: 47.48 N Longitude: 114.06 W
 (Enter in decimal degrees or degrees:minutes:seconds)

Accident/Incident Date/Time

Date: 7/6/2017 Local Time: 5:00 PM
 mm/dd/yyyy Time Zone: MST

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

AIRCRAFT INFORMATION

Registration Number: 442 DR

Manufacturer: ROBINSON

Model: R44 RAVEN 2

Serial Number: 10428

Year of Manufacture: 7/15/2004

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

☐ IFR-Equipped and Certified
☐ Commercial Space Flight
☐ Unmanned Aircraft

Maximum Gross Weight: 2500 lbs

Weight at Time of Accident/Incident: 2006.6 lbs

Number of Seats: 4 Flight Crew Seats: _____

Cabin Crew Seats: _____ Passenger Seats: _____

Number of Engines: _____

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
- ☐ Other Launch/Recovery System
- ☐ None
- ☐ Tailwheel
- ☒ High Skid
- ☐ Skid
- ☐ Ski
- ☐ Ski/Wheel
- ☐ 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/Serial	Manufacturer's Serial Number	Date of Mfg. mm/dd/yyyy	Rated Power ☒ Horsepower or ☐ lbs of Thrust	Total Time (hours)	Time Since: Inspection (hours)	Overhaul (hours)
Eng. 1	LYCOMING	I0540A61A5	L2949948A	05/04/2004	205 BHP 2178 RPM	246.8	6.8	ROTORS REPLACED 10/16/15
Eng. 2								
Eng. 3								
Eng. 4								

Last Inspection Type

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

Date Last Inspection: 8/01/2016
 mm/dd/yyyy

Airframe Total Time: 246.8 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: ROBINSON

Model: CD16-7 (6110, 6140)

Propeller 2

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

Manufacturer: ROBINSON

Model: CD29-3 (4583, 4586)

ELT Installed: ☒ Yes ☐ No

If Yes:

ELT Manufacturer: POINTER, INC.

Model or Part No.: 3000-10

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 Low RPM WARNING
- ☐ Video Recording Device
- ☐ Other, Specify: _____

OWNER/OPERATOR INFORMATION			
Registered Aircraft Owner Name: <u>TRI LOCK USA, INC.</u>		City: <u>RONAKI</u> State: <u>MT</u> ZIP: <u>59864</u> Country: <u>USA</u>	
Fractional Ownership Aircraft: ☐ Yes ☒ No			
Operator of Aircraft ☐ Same As Registered Owner Name: <u>DAN E. CORCORAN</u> Doing Business As: <u>N/A</u> Air Carrier/Operator Designator (4 Character Code): _____		☒ Same Address as Registered Owner City: _____ State: _____ ZIP: _____ Country: _____	
Operating Certificates Held <i>(Check all that apply)</i> ☒ 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 <i>(Select one)</i> ☐ Armed Forces ☐ Federal ☐ State ☐ Local ☐ Unknown	Revenue Operation for FAR 121, 125, 129, 135 <i>(Select one for each group)</i> ☐ Scheduled or Commuter ☐ Non-Scheduled or Air Taxi ☐ Domestic ☐ International ☐ Passenger ☐ Cargo ☐ Mail Contract Only	
Revenue Sightseeing Flight ☐ Yes ☒ No	Air Medical Flight ☐ Yes ☒ No	Purpose of Flight for FAR 91, 103, 133, 137 <i>(Select one)</i> ☐ Aerial Application ☐ Aerial Observation ☐ Air Drop ☐ Air Race/Show ☐ Banner Tow ☐ Business ☐ Executive/Corporate ☐ External Load ☐ Ferry ☐ Firefighting ☐ Flight Test ☐ Glider Tow ☐ Instructional ☐ Other Work Use ☒ Personal ☐ Positioning ☐ Skydiving ☐ Unknown	
AIRPORT INFORMATION <i>(Fill in if accident/incident occurred on approach, landing, takeoff, departure, or within 3 miles of an airport)</i>			
Airport Name: _____ Airport Identifier: _____ Proximity to Airport: ☐ Off Airport/Airstrip ☐ On Airport/Airstrip ☐ N/A		Distance From Airport Center: _____ sm Direction From Airport: _____ degrees true Airport Elevation: _____ ft. msl	
Runway Information Runway ID: _____ (L/R/C) Length: _____ ft Width: _____ ft		Condition of Runway/Landing Surface <i>(Check all that apply)</i> ☐ Dry ☐ Holes ☐ Ice Covered ☐ Rough ☐ Rubber Deposits ☐ Slush-Covered ☐ Snow-Compacted ☐ Snow-Crusted ☐ Snow-Dry ☐ Snow-Wet ☐ Soft ☐ Vegetation ☐ Water-Calm ☐ Water-Choppy ☐ Water-Glassy ☐ Wet ☐ Unknown	
Runway/Landing Surface <i>(Check all that apply)</i> ☐ Asphalt ☐ Concrete ☐ Dirt ☐ Grass/Turf ☐ Gravel ☐ Ice ☐ Macadam ☐ Metal/Wood ☐ Snow ☐ Water ☐ Unknown			
Approach/Departure Segment <i>(Select one)</i> ☐ Taxi ☐ Takeoff ☐ Initial Climb ☐ VFR Departure ☐ IFR Departure Procedure/Clearance ☐ On Instrument Approach ☐ Landing ☐ Downwind ☐ Base ☐ Final ☐ Crosswind ☐ Low Approach ☐ Go Around ☐ Aborted Landing (after touchdown) ☐ Unknown			
IFR Approach <i>(Check all that apply)</i> ☐ None ☐ ADF/NDB ☐ SDF ☐ VOR/TVOR ☐ VOR/DME ☐ TACAN ☐ PAR ☐ Sidestep ☐ ILS ☐ Localizer Only ☐ LOC-back course ☐ RNAV ☐ MLS ☐ LDA ☐ ASR ☐ Visual ☐ Contact ☐ Circling ☐ Practice ☐ GPS ☐ Unknown		VFR Approach <i>(Check all that apply)</i> ☐ None ☐ Traffic Pattern ☐ Straight-In ☐ Valley/Terrain Following ☐ Go Around ☐ Full Stop ☐ Stop and Go ☐ Touch and Go ☐ Simulated Forced Landing ☐ Forced Landing ☐ Precautionary Landing ☐ Unknown	

"FLIGHT CREWMEMBER 1" INFORMATION																																																																																																				
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"Flight Crewmember 1" was pilot flying ☒ Yes ☐ No																																																																																																				
"Flight Crewmember 1" Identification First Name: <u>DAN</u> Middle Initial: <u>E.</u> Last Name: <u>CORCORAN</u> City of Residence: <u>ROMAN</u> State: <u>MT</u> ZIP: <u>59864</u> Country: <u>USA</u> Age at time of Accident/Incident: <u>68</u> Date of Birth: [REDACTED] mm/dd/yyyy Certificate Number: [REDACTED]																																																																																																				
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																																																																																													
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Principal Occupation ☐ Pilot ☒ Other ☐ Unknown		Medical Certificate ☐ None ☒ Class 3 ☐ Class 1 ☐ Driver's License (Sport Pilot only) ☐ Class 2 ☐ Unknown			Medical Certificate Limitations <u>GLASSES AVAILABLE FOR NEAR VISION</u>																																																																																															
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"Flight Crewmember 2" was pilot flying ☐ Yes ☐ No																																																																																																				
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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: _____		☐ Left ☐ Front ☐ Center ☐ Rear ☐ Right ☐ Single ☐ Unknown ☐ 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 ☐ 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>BRAD</u> City: <u>BUTTON WILLOW</u> Middle Initial: _____ State: <u>CA</u> ZIP: <u>93206</u> Last Name: <u>BONE</u> Country: <u>USA</u> ☐ Crew ☒ Passenger ☐ Other	☒ Left ☐ Center ☐ Right ☐ Unknown Row: <u>1</u>	☒ 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 If Under 5, ☐ 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 If Under 5, ☐ 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 If Under 5, ☐ 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 If Under 5, ☐ Child Restraint ☐ Lap-Held ☐ Unknown

FLIGHT ITINERARY INFORMATION				
Last Departure Point Airport ID: <u>750</u> City: <u>ROHAN</u> State: <u>MT</u> Country: <u>USA</u>	Time of Departure Time: <u>4:00PM</u> Time Zone: <u>MST</u>	Destination Airport ID: <u>750</u> City: <u>ROHAN</u> State: <u>MT</u> Country: <u>USA</u>	Type Flight Plan Filed ☒ None ☐ Company VFR ☐ Military VFR ☐ VFR ☐ VFR/IFR ☐ IFR ☐ Unknown Activated? ☐ Yes ☐ No ☐ Unknown	
Type of ATC Clearance/Service (Check all that apply) ☒ None ☐ VFR ☐ Special VFR ☐ IFR ☐ Special IFR ☐ VFR On Top ☐ VFR Flight Following ☐ Traffic Advisory ☐ Cruise ☐ Unknown / NA				
Airspace where the accident/incident occurred (Check all that apply) ☐ Class A ☐ Class B ☐ Class C ☐ Class D ☒ Class E ☐ Class G ☐ Demo Area ☐ Warning Area ☐ Prohibited Area ☐ Restricted Area ☐ Military Operations Area (MOA) ☐ Airport Advisory Area ☐ Jet Training Area ☐ TRSA ☐ FAR 93 ☐ Special ☐ Air Traffic Control Area ☐ Unknown				Altitude of In-Flight Occurrence: _____ ft msl
WEATHER INFORMATION AT THE ACCIDENT/INCIDENT SITE				
Source of Pilot Weather Information (Check all that apply) ☐ National Weather Service ☐ Flight Service Station ☐ TV/Radio ☐ Automated Report ☐ Commercial Weather Service (DUATS) ☐ On-Board Weather ☐ Company ☐ Military ☐ Internet ☐ None ☐ Unknown		Weather Observation Facility Facility ID: _____ Observation Time: _____ Time Zone: _____ Distance from Accident Site: _____ nm Direction from Accident Site: _____ degrees true		
Basic Conditions ☒ VMC ☐ IMC ☐ Unknown	Light Condition ☐ Dawn ☒ Day ☐ Dusk ☐ Night ☐ Dark Night ☐ Bright Night ☐ Unknown			
Sky/Lowest Cloud Condition ☒ Clear ☐ Few ☐ Partial Obscuration ☐ Scattered ☐ Thin Broken ☐ Thin Overcast ☐ Unknown Lowest Cloud Condition Height _____ ft agl	Ceiling ☒ None (Clear) ☐ Broken ☐ Overcast ☐ Obscured ☐ Indefinite ☐ Unknown Ceiling Height _____ ft agl	Temperature: _____ (C) or _____ (F) Dew Point: _____ (C) or _____ (F) Altimeter Setting: _____ in. Hg or _____ MB		
Wind Direction ☐ Variable -or- Direction: <u>N/A</u> degrees true	Wind Speed ☒ Calm ☐ Light and Variable -or- Speed: _____ kts	Wind Gusts ☒ Not Gusting -or- Speed: _____ kts	Visibility <u>10+</u> miles RVR: _____ feet RVV: _____ miles Density Altitude: _____ ft	
Intensity of Precipitation ☐ Light ☐ Moderate ☐ Heavy ☒ N/A ☐ Unknown	Type of Precipitation (Check all that apply) ☒ None ☐ Rain ☐ Snow ☐ Hail ☐ Rain Showers ☐ Drizzle ☐ Ice Pellets ☐ Snow Pellets ☐ Snow Grains ☐ Ice Crystals ☐ Freezing Rain ☐ Snow Shower ☐ Ice Pellets Shower ☐ Freezing Drizzle		Restriction to Visibility (Check all that apply) ☒ None ☐ Blowing Dust ☐ Blowing Sand ☐ Blowing Snow ☐ Blowing Spray ☐ Dust ☐ Fog ☐ Ground Fog ☐ Haze ☐ Ice Fog ☐ Smoke ☐ Unknown	
Icing Forecast Amount ☒ None ☐ Trace ☐ Light ☐ Moderate ☐ Severe ☐ Unknown Type ☒ N/A ☐ Rime ☐ Clear ☐ Mixed ☐ Unknown	Icing Actual Amount ☒ None ☐ Trace ☐ Light ☐ Moderate ☐ Severe ☐ Unknown Type ☒ N/A ☐ Rime ☐ Clear ☐ Mixed ☐ Unknown		Turbulence Type (Check all that apply) ☒ None ☐ Clear Air ☐ Terrain-Induced ☐ Convective Turbulence Severity ☐ Light ☐ Moderate ☐ Severe ☐ Extreme	
NOTAMs (D and FDC), AIRMETs, SIGMETs, PIREPs in effect at the time of the accident/incident: <u>NONE</u>				

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)

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.

At 3 pm on 7/6/2017 my passenger Brad Bone agreed to meet at my house which is located at [REDACTED]. We met as agreed and proceeded to the Ronan Municipal Airport. We arrived at the hanger at 4:20 pm and began the preflight. My passenger Brad said he would be comfortable with door off operation, and we took the doors off. I remember distinctly emphasizing the tail rotor inspection when demonstrating parts of the preflight to Brad. Then we dollyed the helicopter over to the fuel pumps and filled both tanks of the aircraft. Brad took the dolly back to the hanger and I finished the preflight. At approximately 01200, zulu, on July 6, 2017 we completed our warmup and lifted off and made our traffic call and proceeded across the runway at 100 feet AGL. We received our area information from the traffic advisory of the Ronan Airport. When we cleared the flight pattern we proceeded in a North Easterly direction to my home on Addy Lane. We circled the house in a counter clockwise direction to allow Brad to take some photos. We then proceeded north to Finely Point peninsula Flathead Lake at about 400 feet AGL just off shore we then circled around in a clockwise fashion and went off shore around Polson at 400 feet AGL. Then turned Southwest at the bridge went slightly down river and then due South over the landfill and observing the dam on the top side. We turn southeast and went directly to McDonald Lake reservoir. After approaching the dam at McDonald Lake reservoir we proceeded directly East across the lake. On reaching the end of the lake we made a left standing turn and proceeded directly West back across the lake. We then proceeded in a North slightly Westerly direction at approximately 70 kn. At 350 -400 feet AGL. After passing the Kicking Horse Job Core approximately ¾ mile we saw what appeared to be a bear. We then slowed to approximately 35 kn and made a wide turn and saw the cow that we had thought was a bear. We had been traveling 350 to 400 feet AGL, and might have lowered to 300 to 350 feet AGL in the turn. At approximately 300 degrees of the 360 degree turn we experienced a significant loss of tail rotor control. The helicopter began to slowly swing to the right and I remember commenting to my passenger Brad that we had lost tail rotor authority. I observed no warning lights or alarms prior to the helicopter spinning. Winds were calm. I immediately flatten the blades and engaged in left pedal. It seemed that the left pedal input had some effect but the effect diminished as the helicopter began to spin. I remember at about 4 to 5 feet AGL I raised the collective and tried to stick to level on the ground. The next thing I remember is standing beside the pickup and asking to be assisted into the back seat on my stomach. I heard a trailer unhitch and we were off to Ronan Municipal hospital. I do remember being concerned about the leaking fuel I don't remember what my instructions were to those that were trying to help.

Note: After calling John O'Neil, who witnessed the incident, to thank him for his help and his wife taking me to the hospital he said that there was a two second high whine before the helicopter began to spin and that it spun twice before disappearing from his sight into the trees. He heard the crash and ran over to the helicopter and while he was running to the helicopter he heard the engine shut down although I don't remember shutting it down. He later assisted in getting some of the warning lights and buzzers turned off. He also has some very helpful information and photos concerning the location of the tail rotor props which were severed from the aircraft. John's phone number [REDACTED]

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

Operator/Owner Safety Recommendation

WITHOUT KNOWING THE EXACT CAUSE OF THE ACCIDENT I AM AT A LOSS AS HOW TO PREVENT IT.

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

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

UNKNOWN AT THIS TIME BUT IT WOULD SEEM THE TAIL ROTOR SHAFT BEARINGS FAILED
ROBINSON PART # C1813 SERIAL # 5511 INSTALLED 10/16/15 AT 229 HOURS

**Total Time/Cycles
On Part***17.8* Hours

Cycles

**Time Since This Part
Inspected/Overhauled***17.8* Hours**FUEL & SERVICES INFORMATION****Fuel on Board at Last Takeoff**
(Convert from pounds, as necessary)*50.1*

Gallons

Fuel Type☐ 80/87☐ 115/145☐ Jet B☐ Other, specify _____☒ 100 Low Lead☐ Jet A☐ JP8☐ 100/130☐ Jet A-1☐ Automotive**Other Services, if Any, Prior to Departure***NONE***EVACUATION OF AIRCRAFT****Was an emergency evacuation of the aircraft performed?** ☒ Yes ☐ No

Me My passenger, Brad, exited the helicopter of his own volition and ran from the crash. He returned when he saw me not moving a great deal. Either I shut the engine down on my own or he encouraged me to do so. Later they said I helped them shut down the electrical system. Brad and John extracted me from the helicopter and assisted me to John's pickup and then his wife transported me to the hospital. It was told me later John O'Neil recovered the leaking fuel with five gallon buckets he cut in half for the occasion.

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.

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

Date of this Report

07/20/2017
mm/dd/yyyyName of Pilot/Operator: DAN E. CORCORAN

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.

WPR17LA143

Reviewed by NTSB Regional Office

WPR - Federal Way, WA

Name of Investigator

S. Stein

Date Report Received

July 20, 2017