NATIONAL TRANSPORTATION SAFETY BOARD
NTSB Form 6120.1
PILOT/OPERATOR AIRCRAFT ACCIDENT/INCIDENT REPORT

Email the pilot/operator aircraft accident/incident report to the investigator-in-charge of your accident/incident. If email is not available, mail the report per the instructions below.

If your accident/incident occurred in Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Pennsylvania, Maryland, Delaware, Virginia, West Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Mississippi, Alabama, Georgia, Florida, the District of Columbia, Puerto Rico, or the US Virgin Islands, send the form to: NTSB, ERA, 45065 Riverside Parkway, Ashburn, VA 20147.

If your accident/incident occurred in Ohio, Michigan, Indiana, Wisconsin, Illinois, Minnesota, Iowa, Missouri, Arkansas, Louisiana, North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, Texas, Colorado, or New Mexico, send the form to: NTSB, CEN, 4760 Oakland Street, Suite 500, Denver, CO 80239.

If your accident/incident occurred in Montana, Wyoming, Idaho, Utah, Arizona, Nevada, Washington, Oregon, California, Hawaii, or the territories of Guam or American Samoa, send the form to: NTSB, WPR, 505 South 336th Street, Suite 540, Federal Way, WA 98003.

If your accident/incident occurred in Alaska, send the form to: NTSB, ANC, 222 West 7th Avenue, Room 216, Box 11, Anchorage, AK 99513.

Rules pertaining to notification of aircraft accidents and incidents, as well as overdue aircraft are found in 49 *Code of Federal Regulations* (CFR) Part 830 http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&tpl=/ecfrbrowse/Title49/49cfr830_main_02.tpl. These rules state the authority of the NTSB, define accidents, incidents, injuries, and other terms, and provide procedures for initial and immediate notification of accidents and incidents by aircraft pilots/operators.

A. APPLICABILITY

The pilot/operator of an aircraft shall send a report to the office listed above, based on accident/incident location; immediate notification is required by 49 CFR 830.5(a). **The report shall be filed within 10 days after an accident for which notification is required by Section 830.5, or after 7 days if an overdue aircraft is still missing.**

An aircraft accident, as defined in 49 CFR 830.2, is determined as an occurrence that involves a fatality or serious injury, or substantial damage to the aircraft. For occurrences that do not involve a fatality, the determination that the occurrence is an accident can be appealed by writing to the Director, Office of Aviation Safety, NTSB, 490 L'Enfant Plaza, S.W., Washington, D.C. 20594.

The NTSB uses this form for aircraft accident prevention activities and for statistical purposes. NTSB regulations (49 CFR Part 830) require that ALL questions be answered completely and accurately. Completion of this form will take approximately 60 minutes. The NTSB does not guarantee the privacy of any information provided in this form. You need not complete this form unless it displays a valid OMB control number, in accordance with 5 C.F.R. § 1320.5(b), which applies to this collection of information.

B. DEFINITIONS

1. "Aircraft Accident" means an occurrence associated with the operation of an aircraft that takes place between the time any person boards the aircraft with the intention of flight and all such persons have disembarked, and in which any person suffers death, or serious injury, or in which the aircraft receives substantial damage. For purposes of this form, the definition of "aircraft accident" includes "unmanned aircraft accident," as defined at 49 CFR 830.2.

2. "Substantial Damage" means damage or failure that adversely affects the structural strength, performance or flight characteristics of the aircraft, and that would normally require major repair or replacement of the affected component. NOTE: Engine failure or damage limited to an engine if only one engine fails or is damaged, bent fairing or cowling, dented skin, small puncture holes in the skin or fabric, ground damage to rotor or propeller blades, and damage to landing gear, wheels, tires, flaps, engine accessories, brakes, or wing tips are not considered "substantial damage" for purposes of this report.

3. "Operator" means any person who causes or authorizes the operation of an aircraft, such as the owner, lessee, or bailee of an aircraft.

4. "Fatal Injury" means any injury that results in death within thirty (30) days of the accident.

5. "Serious Injury" means any injury that (1) requires hospitalization for more than 48 hours, commencing within 7 days from the date the injury was received; (2) results in a fracture of any bone (except simple fracture of fingers, toes, or nose); (3) causes severe hemorrhages, nerve, muscle, or tendon damage; (4) involves injury to any internal organ; or (5) involves second- or third-degree burns, or any burns affecting more than 5 percent of the body surface.

INSTRUCTIONS TO PILOTS/OPERATORS FOR COMPLETING THIS FORM

It is necessary that ALL questions on this report be answered completely and accurately.

If more space is needed, continue on a blank sheet of paper.

Nearest City/Place: Use the name of the nearest community in the state where the accident/incident occurred.

Date/Time: Indicate the date and local time of the event. Be sure to indicate the time zone.

Phase of Operation: Indicate the phase of operation during which the accident/incident occurred.

Aircraft Information: Enter aircraft make and model information as indicated on the aircraft registration certificate, including series. If the involved aircraft is certified as "amateur-built," include the name of the producer of the kit or plans, unless an NTSB employee instructs otherwise.

Maximum Gross Weight: Enter the certificated maximum gross weight for the aircraft involved in the occurrence. This should be the same as the maximum gross weight indicated on the aircraft weight and balance documents.

Engine: Enter engine make and model information as indicated on the engine data plate.

Type of Fire Extinguishing System: If a fire extinguishing system was used to fight an aircraft fire, specify the type(s) of extinguishing system(s) used. Examples include handheld extinguisher, engine fire bottle, cargo/baggage compartment fire suppression system, or airport emergency ground equipment.

Owner/Operator Information: Enter the owner information as shown on the registration certificate. Commercial operators, enter the operator information, including "doing business as" when applicable, as shown on the operator certificate.

Revenue Sightseeing Flight: Indicate whether the accident aircraft was conducting **revenue** sightseeing operations under 14 CFR Part 91 at the time of the accident.

Air Medical Flight: Indicate whether the accident flight was being conducted for the purpose of carrying medical personnel, patient(s), or organs.

Public Aircraft: Federal, state or local government flight operations such as official travel, law-enforcement, low-level observation, aerial application, firefighting, search and rescue, biological or geological resource management, or aeronautical research. Indicate whether the flight was conducted by the armed forces, federal, state, or local government.

Purpose of Flight: 14 CFR Parts 91, 103, 133, 136, and 137: Indicate the type of operation that was being conducted at the time of the occurrence using the following definitions:

AERIAL APPLICATION--Operations using an aircraft to perform aerial application or dispersion of any substance. Examples include agricultural, health, forestry, cloud seeding, firefighting, insect control, etc.

AERIAL OBSERVATION--These flights include aerial mapping/ photography, patrol, search and rescue, hunting, highway traffic advisory, ranching, surveillance, oil and mineral exploration, criminal pursuit, fish spotting, etc.

AIR DROP--Aerial operations, other than aerial application, that are intended to release items in flight.

AIR RACE/SHOW--Includes any flight operations conducted as part of an organized air race or public demonstration.

BUSINESS--includes all personal flying without a paid professional crew for reasons associated with furthering a business, including transportation to and from business meetings or work. This does not include corporate/executive operations, air taxi, or commuter operations.

EXECUTIVE/CORPORATE--Company flying with a paid, professional crew.

FERRY--Non-revenue flight under a special flight or "ferry" permit. Refer to 14 CFR 21.197 for details of special flight permit issuance.

FLIGHT TEST--Flight for the purpose of investigating the flight characteristics of an aircraft/aircraft component or evaluating an applicant for a pilot certificate or rating.

INSTRUCTIONAL--Flying while under the supervision of a flight instructor or receiving air carrier training. Personal proficiency flight operations and personal flight reviews, as required by federal air regulations, are excluded.

OTHER WORK USE--Miscellaneous flight operations conducted for compensation or hire such as construction work (not 14 CFR Part 135 operation), parachuting, aerial advertising, towing gliders, etc.

PERSONAL--Flying for personal reasons (excludes business transportation) including pleasure or personal transportation. This also includes practice or proficiency flights performed under flight instructor supervision and not part of an approved flight training program.

POSITIONING--Non-revenue flight conducted for the primary purpose of relocating the aircraft. Examples include moving the aircraft to a maintenance facility or to load passengers or cargo etc.

UNKNOWN--Use only if the primary purpose of flight is not known.

Other Aircraft--Collision: For all accidents involving a collision with another aircraft, including parked aircraft, check "Collision with other aircraft" under Basic Information and complete this section indicating details about the OTHER aircraft involved in the collision.

Airport Information: Complete this section if the accident/incident occurred on approach, landing, takeoff, departure, or within 3 statute miles of an airport. Please refer to the FAA Airport/Facility Directory or other official source for airport information.

Airport Identifier: Provide the official 3 or 4 character airport identifier number.

Runway: Indicate the number of the runway used, including L, R, or C if applicable.

Runway/Landing Surface: Indicate the type of intended runway/landing surface (do not indicate surface conditions). If the surface type was mixed, check all that apply.

Condition of Runway/Landing Surface: Indicate the condition of the intended runway/landing surface. If multiple conditions existed at the time of the accident, check all that apply.

Weather Information at the Accident/Incident Site: Indicate the weather conditions reported at the accident/incident site at the time of occurrence. If no weather reporting was available for the accident/incident site, indicate the reported conditions at the nearest reporting site. Specify the weather reporting site identifier, the observation time, and distance from the accident/ incident.

Sky/Lowest Cloud Condition: Indicate the height above ground level of the lowest cloud condition present at the time of the accident/incident and whether coverage was reported as few, scattered, broken or overcast. Also indicate the height above ground level and coverage of the lowest cloud ceiling present at the time of the accident/incident (reported as broken or overcast).

NOTAMs *(D and FDC), AIRMETs, SIGMETs, PIREPs*: Describe all NOTAMs (distant (D) or Flight Data Center (FDC), if known), AIRMETs, SIGMETs, and PIREPs in effect near the accident/incident.

Flight Crewmember Information: Indicate the category that best describes the capacity served by this flight crewmember at the time of the accident. The designators "Flight Crewmember 1" and "Flight Crewmember 2" do not refer to a specific pilot position or responsibility. If more than one pilot is aboard, they may be entered in any order and their capacity entered as appropriate.

Degree of Injury: See Definitions on the top half of Page 1 of the instructions. Minor injury is not defined. If an injury does not meet the criteria for another injury category, select Minor.

Date of Last Flight Review or Equivalent: Enter the date of the most recent flight review, or equivalent, completed by this pilot. Refer to 14 CFR 61.56 for accepted equivalents.

Type Ratings: List all type ratings on the pilot certificate. If the pilot holds no type ratings indicate "none." If the pilot holds a pilot certificate other than student and was flying an aircraft requiring an endorsement, enter the type and date of any logbook endorsement(s) for that aircraft. See 14 CFR 61 for examples of required endorsements.

Student Endorsements: If the pilot holds a student pilot certificate, enter all solo endorsements and dates on the student pilot certificate.

Flight Time: Complete the flight time matrix. Solo flight time should be included as "Pilot-in-Command (PIC)" and all dual flight instruction given should be included as "Time as Instructor."

Additional Flight Crewmembers: Complete this section if there were more than two required flight crewmembers on the aircraft. This also includes a check airman performing official duties but does not include cabin crew. State the capacity served by each included crewmember at the time of the accident.

Passenger(s)/Other Personnel: Enter identification and injury severity information for all passengers, cabin crew, and other personnel involved in the accident. See Page 1 of the instructions for the official definition of injury levels.

Several questions throughout the form allow for multiple responses; when appropriate, choose all responses that apply.

These instructions only pertain to major issue areas covered by NTSB Form 6120.1 *Pilot/Operator Aircraft Accident/Incident Report*. For additional definitions of questions and responses, please refer to www.ntsb.gov.

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: RDU Airport - Ramp State:

ZIP: Country:

Latitude: Longitude:

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

Accident/Incident Date/Time

Date: 01/23/23 *mm/dd/yyyy* Local Time: 18:40

Time Zone: Eastern

Collision with Other Aircraft: ○ Midair ○ On-ground ◉ None

AIRCRAFT INFORMATION

Registration Number: N747PK

Manufacturer: Piper

Model: PA-28-180

Serial Number: 28-4647

Year of Manufacture: 1968

Amateur-Built: ○ Yes ◉ No *If Yes:* ○ Kit/Plans ○ Original Design Make:

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

Maximum Gross Weight: 2400 lbs

Weight at Time of Accident/Incident: 2156 lbs

Number of Seats: 4 Flight Crew Seats: 2

Cabin Crew Seats: 0 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	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. *mm/dd/yyyy*	Rated Power ◉ Horsepower or ○ lbs of Thrust	Total Time (hours)	Time Since: Inspection (hours)	Time Since: Overhaul (hours)
Eng. 1	Lycoming	O&VO-360 SER	L-12036-36-A		180			
Eng. 2								
Eng. 3								
Eng. 4								

Last Inspection Type

◉ 100-Hour	○ Continuous Airworthiness
○ AAIP	○ Conditional Inspection
○ Annual	○ Unknown

Date Last Inspection: 09/27/2022 *mm/dd/yyyy*

Airframe Total Time: 5988.4 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: Hand Fire Extinguisher between pilot and co-pilot.

Propeller 1 ◉ Fixed Pitch ○ Controllable Pitch ○ Ground Adjustable
Manufacturer: Sensenich
Model: M76E

Propeller 2 ○ Fixed Pitch ○ Controllable Pitch ○ Ground Adjustable
Manufacturer:
Model:

ELT Installed: ◉ Yes ○ No
If Yes:
ELT Manufacturer:
Model or Part No.:
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:

OWNER/OPERATOR INFORMATION

Registered Aircraft Owner

Name: Ben Brittle, Raleigh Flying Club LLC

Fractional Ownership Aircraft: ○ Yes ◉ No

City: 101 Wicklow Place

State: NC ZIP: 27517

Country: USA

Operator of Aircraft ☐ *Same As Registered Owner* ☐ *Same Address as Registered Owner*

Name: Mark Chemacki

Doing Business As:

Air Carrier/Operator Designator (4 Character Code):

City: 1005 Edenburghs Keep Dr

State: NC ZIP: 27545

Country: USA

Operating Certificates Held *(Check all that apply)*

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

Regulation Flight Conducted Under

◉ FAR 91 ○ FAR 129 ○ FAR 415
○ FAR 103 ○ FAR 133 ○ FAR 431
○ FAR 121 ○ FAR 135 ○ FAR 435
○ FAR 125 ○ FAR 137 ○ FAR 437

○ FAR 91 Special Flight
○ Non-US, Commercial
○ Non-US, Non-commercial

○ Public Aircraft *(Select one)*
○ Armed Forces
○ Federal
○ State
○ Local

○ Unknown

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

○ Scheduled or Commuter ○ Domestic
○ Non-Scheduled or Air Taxi ○ International

○ Passenger
○ Cargo
○ Mail Contract Only

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

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

Revenue Sightseeing Flight
○ Yes ◉ No

Air Medical Flight
○ Yes ◉ No

AIRPORT INFORMATION (Fill in if accident/incident occurred on approach, landing, takeoff, departure, or within 3 miles of an airport)

Airport Name: Raleigh-Durham International Airport
Airport Identifier: RDU
Proximity to Airport: ○ Off Airport/Airstrip ◉ On Airport/Airstrip ○ N/A

Distance From Airport Center: 0 sm
Direction From Airport: degrees true
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 ○ 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 1" INFORMATION

"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" was pilot flying [☑] Yes [ ] No

"Flight Crewmember 1" Identification

First Name: Mark
Middle Initial:
Last Name: Chemacki
Age at time of Accident/Incident: 48 Date of Birth: [redacted]974 *mm/dd/yyyy*
Certificate Number: [redacted]
City of Residence: Knightdale
State: NC ZIP: 27545
Country: USA

Degree of Injury
(●) None ( ) Fatal ( ) Minor ( ) Unknown ( ) Serious

Seat Occupied
(●) Left ( ) Front ( ) Unknown ( ) Right ( ) Rear ( ) Center ( ) Single

Restraint Type

Available	Used
( ) None	( ) None
(●) Lap only	(●) Lap only
( ) 3-point	( ) 3-point
( ) 4-point	( ) 4-point
( ) 5-point	( ) 5-point
( ) Unknown	( ) Unknown

Inflatable Restraints
[☑] Not Installed [ ] Installed [ ] Not Deployed [ ] Deployed [ ] Unknown

Pilot Certificate(s) *(Check all that apply)*
[ ] None [☑] Private [ ] Student [ ] Flight Instructor [ ] Recreational [ ] Sport [ ] Commercial [ ] Airline Transport [ ] Flight Engineer [ ] US Military [ ] Foreign

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
10/29/2021 *mm/dd/yyyy*

Medical Certificate Limitations
None

Medical Certificate Special Issuance
None

Date of Last Flight Review or Equivalent, Including FAR 121/135 Checks: 04/26/2022 *mm/dd/yyyy*

Flight Review Aircraft
Make: Piper
Model: P28A

Airplane Rating(s) *(Check all that apply)*
[ ] None [☑] Single-Engine Land [ ] Single-Engine Sea [ ] Multiengine Land [ ] Multiengine Sea

Other Aircraft Rating(s) *(Check all that apply)*
[ ] None [ ] Airship [ ] Balloon [ ] Glider [ ] Gyroplane [ ] Helicopter [ ] Powered Lift

Instrument Rating(s) *(Check all that apply)*
[ ] None [☑] Airplane [ ] Helicopter [ ] Powered Lift

Instructor Rating(s) *(Check all that apply)*
[☑] None [ ] Airplane Single-Engine [ ] Airplane Multi-Engine [ ] Gyroplane [ ] Powered Lift [ ] Instrument Airplane [ ] Instrument Helicopter [ ] Helicopter [ ] Glider [ ] Sport

Type Ratings

Student Endorsements *(Include dates)*

Flight Time *(Enter appropriate number of hours in each box)*	All Aircraft	This Make & Model	Airplane Single Engine	Airplane Multiengine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air
						Actual	Simulated			
Total Time	224	48	224	0	26	7	47	0	0	0
Pilot in Command (PIC)	159	44	159	0	15	7	47	0	0	0
Time as Instructor	0	0	0	0	0	0	0	0	0	0
This Make/Model					6	4	5			
Last 90 Days	11	11	11	0	3	3	0	0	0	0
Last 30 Days	0	0	0	0	0	0	0	0	0	0
Last 24 Hours	0	0	0	0	0	0	0	0	0	0

"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

◉ None ○ Fatal
○ Minor ○ Unknown
○ Serious

Seat Occupied

○ Left ○ Front ○ Unknown
◉ Right ○ Rear
○ Center ○ Single

Restraint Type

Available	Used
○ None	○ None
◉ Lap only	◉ Lap only
○ 3-point	○ 3-point
○ 4-point	○ 4-point
○ 5-point	○ 5-point
○ Unknown	○ Unknown

Inflatable Restraints

☑ Not Installed
☐ Installed
☐ Not Deployed
☐ Deployed
☐ Unknown

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

☑ 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

_____
mm/dd/yyyy

Medical Certificate Limitations

Medical Certificate Special Issuance

Date of Last Flight Review or Equivalent, Including FAR 121/135 Checks: _____ *mm/dd/yyyy*

Flight Review Aircraft

Make: _____

Model: _____

Airplane Rating(s) *(Check all that apply)*

☐ None
☐ Single-Engine Land
☐ Single-Engine Sea
☐ Multiengine Land
☐ Multiengine Sea

Other Aircraft Rating(s) *(Check all that apply)*

☐ None
☐ Airship
☐ Balloon
☐ Glider
☐ Gyroplane
☐ Helicopter
☐ Powered Lift

Instrument Rating(s) *(Check all that apply)*

☐ None
☐ Airplane
☐ Helicopter
☐ Powered Lift

Instructor Rating(s) *(Check all that apply)*

☐ None ☐ Instrument Airplane
☐ Airplane Single-Engine ☐ Instrument Helicopter
☐ Airplane Multi-Engine ☐ Helicopter
☐ Gyroplane ☐ Glider
☐ Powered Lift ☐ Sport

Type Ratings

Student Endorsements *(Include dates)*

Flight Time *(Enter appropriate number of hours in each box)*	**All Aircraft**	**This Make & Model**	**Airplane Single Engine**	**Airplane Multiengine**	**Night**	**Instrument**		**Rotorcraft**	**Glider**	**Lighter Than Air**
						Actual	**Simulated**			
Total Time										
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: ____	○ Left ○ Center ○ Right ○ Front ○ Rear ○ 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 ○ Center ○ Right ○ Front ○ Rear ○ 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: Jill City: Nightdale Middle Initial: ____ State: NC ZIP: 27545 Last Name: Pluim Country: USA ○ 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
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: RDU
City:
State:
Country:

Time of Departure
Time: 18:40
Time Zone: EST

Destination
Airport ID: KHNZ
City:
State:
Country:

Type Flight Plan Filed
(●) None ( ) VFR/IFR
( ) Company VFR ( ) IFR
( ) Military VFR ( ) Unknown
( ) VFR
Activated? ( ) Yes (●) No ( ) Unknown

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)*
☐ 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

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 ☐ Company
☐ Flight Service Station ☐ Military
☐ TV/Radio ☐ Internet
☐ Automated Report ☐ None
☐ Commercial Weather Service (DUATS) ☐ Unknown
☐ On-Board Weather

Weather Observation Facility
Facility ID: RDU
Observation Time: 18:40
Time Zone: EST
Distance from Accident Site: 0 nm
Direction from Accident Site: 0 degrees true

Basic Conditions
(●) VMC
( ) IMC
( ) Unknown

Light Condition
( ) Dawn (●) Dusk ( ) Dark Night ( ) Unknown
( ) Day ( ) Night ( ) Bright Night

Sky/Lowest Cloud Condition
(●) Clear ( ) Thin Broken
( ) Few ( ) Thin Overcast
( ) Partial Obscuration ( ) Unknown
( ) Scattered

Lowest Cloud Condition Height
_____ ft agl

Ceiling
(●) None (Clear) ( ) Obscured
( ) Broken ( ) Indefinite
( ) Overcast ( ) 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: 300 degrees true

Wind Speed
☐ Calm
☐ Light and Variable
-or-
Speed: 9 kts

Wind Gusts
☐ Not Gusting
-or-
Speed: 15 kts

Visibility 10 miles
RVR: _____ feet
RVV: _____ miles
Density Altitude: 0500 ft

Intensity of Precipitation
( ) Light
( ) Moderate
( ) Heavy
(●) N/A
( ) Unknown

Type of Precipitation *(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

Restriction to Visibility *(Check all that apply)*
☑ None ☐ Fog
☐ Blowing Dust ☐ Ground Fog
☐ Blowing Sand ☐ Haze
☐ Blowing Snow ☐ Ice Fog
☐ Blowing Spray ☐ Smoke
☐ Dust ☐ 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:

DAMAGE TO AIRCRAFT AND OTHER PROPERTY

Aircraft Damage		Aircraft Fire		Aircraft Explosion	
○ None	◉ Substantial	○ None	○ Both Ground and In-Flight	◉ None	○ Both Ground and In-Flight
○ Minor	○ Destroyed	○ In-Flight	○ Fire at Unknown Time	○ In-Flight	○ Explosion at Unknown Time
	○ Unknown	◉ On-Ground	○ Unknown	○ On-Ground	○ Unknown

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

Aircraft Cowl and Engine compartment melted / burned. Smoke damage to cabin of aircraft. My understanding is that they are totaling the aircraft.

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 and location, services obtained, and intended destination. Provide as much detail as possible.

Here is the detailed report of what happened tonight 01/23/23

My fiancee (Jill) and I arrived at RDU around 5:50 pm. I was night current and current with the aircraft but wanted to renew both before they ran out on a quick flight with three landings. We headed to N747PK and I started my external pre-checks around 6:00 pm. I first checked the fuel in each wing. Both were at 17gallons (IE, the tabs). I then turned on the master and turned on nav lights, beacon, and landing lights. All operated normally. I then turned off the master and verified Hobbs time. I then sumped the tanks starting with the right tank, the engine fuel sump, and then the left wing. I verified the fuel was light blue for 100LL, then using the filter I poured the sumped fuel back into the left tank. Starting on the left wing I checked flaps, airleons, tires, looked at break pads, and looked over the wing. I removed the chalks and removed the tie-down. I went to the tail where I inspected the elevator and rudder and removed its tie-down. I then went to the right wing and I checked flaps, airleons, tires, break pads, and looked over the wing. I removed the chalks and tie-down. Next I checked the oil, and the aircraft was sitting at 4 quarts. I knew 4 quarts was the minimum the flight club liked (I was told between 4 and 6 was optimal) even though the owners manually states 2 quarts minimum. So I went to the baggage compartment to add some oil. There wasn't any there... I knew I was doing a very short currency flight so I made a note to ask someone to put oil in the aircraft when I landed. I the checked the prop for nicks, cracks, etc. I pulled on the alternator belt to make sure it was tight, and I visually looked at the strut and front tire. I removed the final chalk and I told Jill external checks were complete and I went into the plane. She followed me in and jumped in the right seat.

It was approximately 6:15 at this point, and I turned on my stratux and mounted it on the left window behind my shoulder using suction cups. I then put my iPad Mount on the yoke and put my iPad in it. I verified ForeFlight correctly saw the Stratux (I verified ForeFlight's db was up to date before I left my house). I put my safety belt on, and verified Jill's belt was secure. I then gave her the passenger brief (I talk about it before each of our flights). I verified the circuit breakers, that the fuel selector was on the right tank. I then grabbed the checklist and verified that I had completed initial, exterior, and interior checks. I asked her if she was all set, to which she said yes. I then yelled clear out the Window

It was approximately 6:20 at this point. I primed the engine 4 times, set the mixture to full rich, advanced the throttle 1/2 an inch. I turned on the nav and strobe lights then the master. I cranked the starter for about 10-15 seconds and the engine didn't even attempt to turn over. I waited a minute or so and primed it 5 times this time. I moved the throttle to full then closed then about 1/2 an inch. I tried the starter another 10-15 seconds. The engine acted like it was about to fire up once on this attempt. I waited about a minute and primed two more times. I then advanced the throttle between 1/4 and 3/4 while trying to start it. The engine kept acting like it was going to start but after about 20 seconds i stopped trying. I was concerned I might've flooded the engine so on my fourth attempt I waited 5 minutes, advanced the throttle to full and mixture to idle / cutoff and I cranked it. I smelled an oily smokey smell and asked Jill to open the door and see if she smelled or could see anything. She said she saw smoke, to which I told her to exit the aircraft. I saw a glow on the left side reflecting from the cement. I told her the engine was on fire and asked her to stand back and I was going to try starting the engine with the fuel selector off to try and suck the fire into the engine block. She rushed to leave and fell getting off the wing, scraping her leg and elbow and she has a bump on wrist. She verbally keeps saying she's ok though :) (I didn't know about this until we got inside Signature). While she was departing, I turned off the fuel and verified the mixture was still cut off. I cranked the engine about 5 seconds before the cabin started filling with smoke. I inhaled some of it, and it was oily. I grabbed my flight bag and fire extinguisher and departed the aircraft as quickly as possible.

I first pulled the safety pin from the extinguisher and tried aiming it on the fire through the cowling on the left front side of the aircraft, and while doing that with my right hand I dialed signature to ask for help with an engine fire using my left hand. I placed the call at 6:39 and while talking to them finished expelling the extinguisher. A few minutes later a couple people from ground ops approached and asked us to get away from the plane. They said they smelled an electrical burning smell (whereas I never smelled electrical burning but more oily). They said help should be here soon. I took a picture of the plane on fire at 6:43. At 6:45 the fire department arrived and I took an additional picture of the plane while they put out the fire. The smoke was grey colored

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

Operator/Owner Safety Recommendation

This article came out the day after the accident:
https://www.aopa.org/news-and-media/all-news/2023/january/24/training-and-safety-tip-cold-temperature-engine-starts?utm_source=ft&utm_medium=email

The aircraft does not have a engine block heater, plugging it in should make it start much easier during cold weather.

As the aircraft to be towed to a heated hanger

Ultimately, be careful on how many times to prime the aircraft 1 - 3 times max per the POH and then repeat the restart cycle 2-3 times before waiting 30minutes before trying again.

Pilot education: At the time of the incident I thought flooding a plane was no more dangerous than flooding a car. It would make the vehicle harder to start, but ultimately it wasn't risky. I also felt that the highest risk was pushing the starter too hard.

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)

34 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

My fiancee and I both excited quickly once we discovered the fire.

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

01/29/2023

mm/dd/yyyy

Name of Pilot/Operator: Mark Chemacki

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.	Reviewed by NTSB Regional Office	Name of Investigator	Date Report Received
ERA23LA118	AS-ERA	Lynn Spencer	1/30/2023

Full statement from page 9:

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I also want to add that I flew this plane to Michigan over thanksgiving break coming back that Monday. I also flew it several times during other cold weather and each time this aircraft was exceedingly hard to start if the engine hadn't been started recently and the weather was cold. All the other aircraft start within one or two attempts.