

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.

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.

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 cowlings, 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.

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.ntsbgov.

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: Waxhaw State: NC
 ZIP: 28173 Country: U.S.A.
 Latitude: N34.51.83 Longitude: W80.44.88
(Enter in decimal degrees or degrees minutes seconds)

Accident/Incident Date/Time

Date: 08/02/2021 Local Time: 1320
mm/dd/yyyy Time Zone: EDT

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

AIRCRAFT INFORMATION

Registration Number: N3090U

Manufacturer: Cessna

Model: 172 E

Serial Number: 17250690

Year of Manufacture: 1963

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

☒ IFR-Equipped and Certified

☐ Commercial Space Flight

☐ Unmanned Aircraft

Maximum Gross Weight: 2300 lbs

Weight at Time of Accident/Incident: 2000 lbs

Number of Seats: 4 Flight Crew Seats: 1

Cabin Crew Seats: _____ Passenger Seats: 3

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 ☐ Tailwheel
☐ Amphibian ☐ High Skid
☐ Emergency Float ☐ Skid
☐ Float ☐ Ski
☐ Hull ☐ Ski/Wheel
☐ Other Launch/Recovery System
☐ None ☐ Unknown

Engine Type *(Select one)*

- ☒ Reciprocating ☐ Liquid Rocket
☐ Turbo Shaft ☐ Solid Rocket
☐ Turbo Prop ☐ Hybrid Rocket
☐ Turbo Jet ☐ None
☐ Turbo Fan ☐ Unknown
☐ Electric

Fuel System Type *(Reciprocating)*

- ☒ Carburetor ☐ Fuel-Injected

Engine	Engine Manufacturer	Engine Model/Series	Manufacturer's Serial Number	Date of Mfg. <i>mm/dd/yyyy</i>	Rated Power ☒ Horsepower or ☐ lbs of Thrust	Total Time (hours)	Time Since: Inspection (hours)	Overhaul (hours)
Eng 1	Continental	O-300-D	34744D-6-D	Aug 1966	145	5418.19	117.54	834.08
Eng 2								
Eng 3								
Eng 4								

Last Inspection Type

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

Date Last Inspection: 05/01/2021
mm/dd/yyyy

Airframe Total Time: 5458.92 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: CO2 extinguisher underneath pilot's seat

Propeller 1

- ☒ Fixed Pitch
☐ Controllable Pitch
☐ Ground Adjustable

Manufacturer: McCauley

Model: 1C172/EM7652

Propeller 2

- ☐ Fixed Pitch
☐ Controllable Pitch
☐ Ground Adjustable

Manufacturer: _____

Model: _____

ELT Installed: ☒ Yes ☐ No

If Yes

ELT Manufacturer: ACK

Model or Part No.: E-04

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: _____

OWNER/OPERATOR INFORMATION**Registered Aircraft Owner**Name: Wings Over Waxhaw Flying ClubCity: WaxhawState: NCZIP: 28173Fractional Ownership Aircraft: ☐ Yes ☒ NoCountry: U.S.A.**Operator of Aircraft**☐ Same As Registered Owner☐ Same Address as Registered OwnerName: Timothy ReedCity: WaxhawDoing Business As: N/AState: NCZIP: 28173Air Carrier/Operator Designator (4 Character Code): N/ACountry: U.S.A.**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: JAARS-Townsend AirportDistance From Airport Center: 0.4 smAirport Identifier: N52Direction From Airport: 045 degrees trueProximity to Airport: ☒ Off Airport/Airstrip ☐ On Airport/Airstrip ☐ N/AAirport Elevation: 601 ft. msl**Runway Information**Runway ID: 04 (L/R/C) Length: 3300 ft Width: 40 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" 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: Timothy

City of Residence: Waxhaw

Middle Initial: J

State: NC ZIP: 28173

Last Name: Reed

Country: U.S.A.

Age at time of Accident/Incident: 28 Date of Birth: mm/dd/yyyy

Certificate Number: mm/dd/yyyy

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) (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

09/12/2018
 mm/dd/yyyy

Medical Certificate Limitations

Must wear lenses for distant, have glasses for near vision.

Medical Certificate Special Issuance

N/A

Date of Last Flight Review or Equivalent, Including FAR 121/135 Checks:

09/23/2020
 mm/dd/yyyy

Flight Review Aircraft

Make: Cessna

Model: 172 E

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

N/A

Student Endorsements (Include dates)

N/A

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	1566.0	828.9	1564.7	0	42.9	22.7	89.6	1.3	0	0
Pilot in Command (PIC)	1490.9	820.0	1490.9	0	38.9	7.4	60.4	0	0	0
Time as Instructor	987.5	615.0	987.5	0	29	0.2	2.5	0	0	0
This Make/Model					32.1	19.5	53.4			
Last 90 Days	5.2	4.2	5.2	0	0	0	0	0	0	0
Last 30 Days	2.7	2.7	2.7	0	0	0	0	0	0	0
Last 24 Hours	1.0	1.0	1.0	0	0	0	0	0	0	0

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

City of Residence:

State: ZIP:

Country:

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 ☐ Unknown		☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown		
Pilot Certificate(s) (Check all that apply) ☐ None ☐ Flight Instructor ☐ Commercial ☐ US Military ☐ Private ☐ Recreational ☐ Airline Transport ☐ Foreign ☐ Student ☐ Sport ☐ Flight Engineer					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		
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: <u>N/A</u> 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 ☐ Flight Instructor ☐ Commercial ☐ US Military ☐ Private ☐ Recreational ☐ Airline Transport ☐ Foreign ☐ Student ☐ Sport ☐ Flight Engineer					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		
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>Ryan</u> City: <u>Concord</u> Middle Initial: _____ State: <u>NC</u> ZIP: <u>28027</u> Last Name: <u>Kerzner</u> Country: <u>U.S.A.</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: <u>Peter</u> City: <u>Indianola</u> Middle Initial: _____ State: <u>MS</u> ZIP: <u>38751</u> Last Name: <u>Lessmann</u> Country: <u>U.S.A.</u> ☐ Crew ☒ Passenger ☐ Other			☐ Left ☐ Center ☒ Right ☐ Unknown Row: <u>2</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: <u>Timothy</u> City: <u>Waxhaw</u> Middle Initial: <u>J</u> State: <u>NC</u> ZIP: <u>28173</u> Last Name: <u>Reed</u> Country: <u>U.S.A.</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	

FLIGHT ITINERARY INFORMATION

Last Departure Point Airport ID: <u>N52</u> City: <u>Waxhaw</u> State: <u>NC</u> Country: <u>USA</u>	Time of Departure Time: <u>1320</u> Time Zone: <u>EDT</u>	Destination Airport ID: <u>N52</u> City: <u>Waxhaw</u> State: <u>NC</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)

☐ 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: <u>580-630</u> ft msl
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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: KEQY
 Observation Time: 021653Z
 Time Zone: GMT
 Distance from Accident Site: 10.5 nm
 Direction from Accident Site: 034 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: 29.4 (C) or 85 (F)

Dew Point: 13.9 (C) or 57 (F)

Altimeter Setting: 30.03 in Hg
 or 1016.6 MB

Wind Direction

☒ Variable

-or-
Direction: _____ degrees true

Wind Speed

☐ Calm
☐ Light and Variable

-or-
Speed: 6 kts

Wind Gusts

☒ Not Gusting

-or-
Speed: _____ kts

Visibility: CLEAR miles

RVR: _____ feet

RVV: _____ miles

Density Altitude: 2473 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	Type
☒ None	☒ N/A
☐ Trace	☐ Rime
☐ Light	☐ Clear
☐ Moderate	☐ Mixed
☐ Severe	☐ Unknown
☐ Unknown	

Icing Actual

Amount	Type
☒ None	☒ N/A
☐ Trace	☐ Rime
☐ Light	☐ Clear
☐ Moderate	☐ Mixed
☐ Severe	☐ Unknown
☐ Unknown	

Turbulence

Type (Check all that apply)	Severity
☒ None	☐ Light
☐ Clear Air	☐ Moderate
☐ Terrain-Induced	☐ Severe
☐ Convective Turbulence	☐ Extreme

NOTAMS (D and FDC), AIRMETs, SIGMETs, PIREPs in effect at the time of the accident/incident:

No NOTAMS pertinent to N52 found on <https://notams.aim.faa.gov> from the day of the event. No pertinent/applicable AIRMETs, SIGMETs, or PIREPs remembered from aviationweather.gov prior to my flight - unable to access historical AIRMET/SIGMET/PIREP information.

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

- ☐ None ☒ Substantial
☐ Minor ☐ Destroyed
☐ Unknown

Aircraft Fire

- ☒ None ☐ Both Ground and In-Flight
☐ In-Flight ☐ Fire at Unknown Time
☐ On-Ground ☐ Unknown

Aircraft Explosion

- ☒ None ☐ Both Ground and In-Flight
☐ In-Flight ☐ Explosion at Unknown Time
☐ On-Ground ☐ Unknown

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

The FSDO investigator can likely speak to this more in-depth. After I left the aircraft, I only returned once. The right wingtip fairing was torn off by a tree. Then the left tree struck a tree and sheared off. Then the nose struck a stump whereupon the aircraft nosed over and came to rest in a vertical position with its top surface leaning against a tree. To my knowledge, the only property damaged were trees.

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.

0830: I arrive at the airport to check weather and arrange my flight sheets for the day. N3090U was up on an IFR flight at the time with another flying-club member who (presumably) topped off the tanks after their flight.

0900: Chuck Daly gives a pilot briefing to myself and Rachael Stoner emphasizing child safety and safety of flight operations. During this briefing, he stated his suggested abort points for takeoff on both runways and the point at which a go-around should be performed for all aircraft. For takeoff from runway 04, he stated the first taxiway would be the abort point. At that time, I elected the windsock on the corner fence prior to that taxi-way to be my abort point.

0930: The passengers arrived for a camp-event and basic safety briefing.

1000: Rachael Stoner and I took the campers to the T-hangars to weigh in. I recorded these numbers in my flight binder (Mike Guidice of the Charlotte FSDO has a photo of this page). During this time, we performed adverse loading checks to ensure that we would at no point be outside of the weight and balance envelope for either aircraft. Rachael took screenshots of these checks on her iPad and emailed a few to Chuck Daly. No potential combination of passengers were outside of the manufacturers' envelopes.

10:30: I took 5 passengers and explained to them how I was performing the preflight inspection of the C-172. Rachael did the same with 5 passengers at the Cherokee 160. At that time, we had roughly 35 gallons (210lbs) of fuel on board.

11:00-12:00: I started up the airplane to take two loads of two passengers on 25 minute flights up around Bow-water. I performed a pre-takeoff runup in accordance with the checklist on-board supplied by the flying club. I went over the bold items for the engine anomaly on the ground and engine failure at low altitude. The climb was typical for this particular 172. Most 172s I have flown (later models, specifically N and M models) rotate with no additional control force of the pilot. This 172E, however, requires positive back-pressure to enter ground-effect. After gaining ground effect, the aircraft will "sag" for 2-3 seconds before a positive rate of climb can be established. Every time I have flown this N3090U it has acted that particular way. During the climb, a ground observer (Dan Stoner) noted that the climb was shallower than the Cherokee 160 and suggested I talk with Rachael about making sure I took lighter passengers and less fuel. I did not fuel the airplane before lunch for this reason. Prior to leaving the airport complex for lunch, I chained/chocked/secured the aircraft and locked the doors. Over lunch, I approached her and discussed the possibility, but she did not seem interested in changing the passenger order/assignments as we were within acceptable limits in our adverse loading checks.

12:45: I arrived back at the airport complex and went to the computer where I checked weather using aviationweather.gov and then ran some conservative numbers for the airplane. I used the current weight and balance form for N3090U on the flying club website to calculate weight & balance. Then, I used the Cessna operator's manual and used 110% of the figures for 2300lbs. The 10% was because we were 20 degrees warmer than the "stock" conditions from the chart. Upon completion of my calculations (I wrote them on a sticky note and put it in my flight binder - Mike Guidice has a photo of this note) and talked with Dan Stoner about the flight. We discussed the need to not add fuel for the first flight of the afternoon (I had three flights planned) and remain as light as possible. I had two passengers for this flight, one was 85 pounds and one was 115 pounds. I weigh 230lbs. In the course of my preflight, I dipped the tanks and found 12 gallons in the left tank and 13 gallons in the right wing for a total of 100LL on board, which comes to 150lbs of fuel. I gave my passengers a standard briefing and then we got into the airplane.

13:00: We started up and taxied to the runup area for Runway 4. The Cherokee 160 had been experiencing some lead fouling on the plugs, so I was especially interested in doing my magneto checks. There was a smooth 50rpm drop on both mags at 1600 RPM, no differential. No carb ice was noted upon application of carb heat. Engine oil and pressure were in the green. After running through the entire preflight, I read aloud the bold items on the emergency checklist for an emergency above 800' AGL.

(report continued on page 11)

RECOMMENDATION (How could this accident/incident have been prevented?)**Operator/Owner Safety Recommendation**

Unsure at this point how the accident could have been prevent. Prevention requires knowledge of causation. However, I think that leaning the mixture for max rpm at takeoff could have slightly assisted, though the POH does not recommend that procedure until 5000' DA. The other thing that may have helped was an earlier abort point. That way, even if it was a mechanical issue, I would have had more time to react. From liftoff to zero motion, the flight was roughly 19 seconds by my calculation. From liftoff to touchdown, it was closer to 16 seconds. Having an earlier abort point would at least have given me more reaction time available, especially given the known "sag" characteristic of this particular airplane, which delayed reaction time to likely 13-14 seconds or less.

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.)

Unsure at this juncture. Awaiting information from the NTSB analysis of the wreckage. Although I cannot say it with any great certainty, the engine may have been slightly rougher than normal upon full power application.

**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)

25 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

N/A

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

3 occupants exited through the right passenger door (which was open), then stepped out onto the wing-strut, then to the ground.

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.

NARRATIVE HISTORY OF FLIGHT (continued):

13:15 - We made our call and lined up at the very end of Runway 4. I paused to note and verbalize the wind (headwind, tops of the trees near us showed some light movement. The windsock at the corner of the fence showed a slight left-crosswind and the windsock on top of the T-hangar showed straight down the runway). I applied full throttle and observed the tachometer in the top end of the green arc, oil pressure and temperature in the green. I released the brakes and kept the elevator neutral. As we accelerated, I called out "airspeed alive" and then two seconds or so later we reached 60mph, at which point I called out "rotate" and applied back pressure. The airplane came up into ground effect and stayed there momentarily, at which point I perceived a very sluggish climb. I looked at my airspeed indicator and verified 80mph, Vy. Even though the terrain was beginning to rise, I kept forward pressure on the yoke to maintain 80. As I was not getting the performance I expected, I momentarily increased back-pressure to transition towards Vx and reached the speed of 75mph, but did not observe any improvement in climb angle. During this, I was referencing the trees at the end of the runway and noted that they were getting closer and I was not able to observe any more trees beyond. From my experience with clouds and ridge-crossings, I knew that this meant I was not going to clear the tree-tops. At that moment, I reduced power to idle momentarily, thinking I would land on the end of the runway and rollout in the grass. My glide angle, however, would put me in the grass overrun and crashing into the fence. I remember thinking that crashing into a chain-link fence and posts would likely cause a very nasty deceleration and injury. Upon that thought, I increased throttle to full and selected the grass lawn on the side of the house off the departure end. Once I knew the fence was cleared, I reduced throttle to idle and touched down on the gravel drive. My last thought before I touched down was "disposable structure", as I tried to think about shearing off the wings rather than hitting the cabin. I remember rolling on the grass, then a jerk to the left, and then a quick flip onto the nose of the airplane. In the next few seconds that followed, somehow my backseat passenger disembarked and helped my front-seat passenger disembark as well. I took off my helmet and then realized my left leg was trapped, as I had a knife in my pocket. I tugged at the pocket until it ripped whereupon I exited. During those few moments, I must have reached down and turned off the master switch. Upon exit, I instructed the passengers to go up the hill away from the wreckage, as the fuel was leaking in large quantities. A minute or so after the landing, I was concerned about the master switch not being off and the possibility of ignition. I returned to the left side of the plane, where I realized that the popped-out windscreen was the only feasible access point. I tugged it the rest of the way open and reached into verify the master switch was off.

13:20- roughly 15:30 - I remained onsite to answer questions. I called ATC to verify no services were used. I called the NTSB to start the immediate notification process. I answered questions for paramedics, fire, and the sheriff's department. I also was contacted by Mike Guidice at that time.

15:30 - roughly 16:10 - I went to JAARS HR to take a urine drug test and breathalyzer test. Breathalyzer returned 0.000, drug test still in process.

16:10 - 17:00 - I returned to answer questions and for Mike Guidice's preliminary investigation.

17:00 - 20:00 - I went to Atrium Health Waxhaw for medical evaluation.

I can provide information on my participation in the internal and FAA investigation process in the days following, upon request.

I HEREBY CERTIFY THAT THE ABOVE INFORMATION IS COMPLETE AND ACCURATE TO THE BEST OF MY KNOWLEDGE**Date of this Report**

08/06/2021

mm/dd/yyyy

Name of Pilot/Operator: Timothy J. Reed**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.**

ERA21LA313

Reviewed by NTSB Regional Office

AS-ERA

Name of Investigator

T.Gunther

Date Report Received

08/06/2021