

NATIONAL TRANSPORTATION SAFETY BOARD • PILOT/OPERATOR AIRCRAFT ACCIDENT/INCIDENT**REPORT** Use this form (Form 6120.1) to report civil and public aircraft accidents and incidents**BASIC INFORMATION****Accident/Incident Location**Nearest City/Place: Plymouth State: INZIP: 46563 Country: USALatitude: N41:21:54 Longitude: W86:18:01

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

Accident/Incident Date/TimeDate: 10/11/2024 Local Time: 16:50
mm/dd/yyyy HH:MMTime Zone: EastCollision with Other Aircraft: ☐ Midair ☐ On-ground ☒ None**AIRCRAFT INFORMATION**Registration Number: N314ACManufacturer: Anthony ColbertModel: Colbert/Rotorway Exec 90Serial Number: 1961Year of Manufacture: 2,004Amateur-Built: ☒ Yes ☐ No If Yes: ☐ Original Design ☒ Kit/PlansMake: Rotorway

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

Maximum Gross Weight: 1,500 lbs.Weight at Time of Accident/Incident: 1,430 lbs.Number of Seats: 2 Flight Crew Seats: _____

Cabin Crew Seats: _____ Passenger Seats: _____

Number of Engines: 1**Category of Aircraft**
(Select one)

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

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	Engine 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	Rotorway International	RW 162	5768		150	232	2	
Eng. 2								
Eng. 3								
Eng. 4								

Last Inspection Type

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

Date of Last Inspection: 10/11/2024
mm/dd/yyyyAirframe Total Time: 232.0 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: _____

Additional Equipment

- ☐
- ADS-B
-
- ☐
- Airframe Parachute
-
- ☐
- Angle of Attack Indicator
-
- ☐
- Autopilot
-
- ☐
- Autopilot/FMS, Model: _____
-
- ☐
- Coupled Flight Director
-
- ☐
- Data Recorder
-
- ☐
- Device Stall Warning System
-
- ☐
- Electronic Flight Bag or Handheld Device
-
- ☐
- Electronic Multifunction Display
-
- ☐
- Electronic Primary Flight Display
-
- ☐
- Flight Management System

- ☐
- Handheld GPS
-
- ☐
- Heads Up Display
-
- ☐
- Night Vision Goggles
-
- ☐
- Onboard Weather
-
- ☐
- Primary Flight Display
-
- ☐
- SAS, Number of Axes: _____ Model: _____
-
- ☐
- Satellite Tracking Device
-
- ☐
- Stall Warning System
-
- ☐
- Video Recording Device
-
- ☐
- Wire Strike Detection
-
- ☐
- Wire Strike Protection
-
- ☐
- Other, Specify: _____

ELT Installed: ☐ Yes ☒ No If Yes:

ELT Manufacturer: _____

Model or Part No.: _____

TSO No.: ☐ OC91 (121.5 MHz) ☐ OC91a (121.5 MHz)
☐ OC126 (406 MHz)Was ELT still mounted in aircraft? ☐ Yes ☐ NoWas ELT still connected to antenna? ☐ Yes ☐ NoDid ELT activate? ☐ Yes ☐ NoIf activated: Did ELT aid in locating aircraft? ☐ Yes ☐ NoIf not activated: Indicate Reason: ☐ Impact Damage☐ Fire Damage ☐ Battery Expired/Damaged ☐ Unknown**Propeller 1** ☐ Fixed Pitch
☐ Controllable Pitch
☐ Ground Adjustable

Manufacturer: _____

Model: _____

Propeller 2 ☐ Fixed Pitch
☐ Controllable Pitch
☐ Ground Adjustable

Manufacturer: _____

Model: _____

OWNER/OPERATOR INFORMATION**Registered Aircraft Owner**

Name: Matthew Gioia
 City: Stafford State: VA
 ZIP: 22556 Country: USA

Fractional Ownership Aircraft: ☐ Yes ☒ No

Operator of Aircraft

☒ The Operator is also the Registered Owner

☒ Same address as Registered Owner

Name: _____
 City: _____ State: _____
 ZIP: _____ Country: _____

Doing Business As: _____

Air Carrier/Operator Designator (4-character code): _____

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 450
☐ 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
☐ 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 ☐ Unknown

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: Plymouth Municipal

Airport Identifier: C65

Proximity to Airport: ☒ Off Airport/Airstrip ☐ On Airport/Airstrip ☐ N/A

Distance From Airport Center: 1.00 sm.

Direction From Airport: 70.00 degrees true

Airport Elevation: 800.00 ft. MSL

Runway Information

Runway ID: 28 Length: 4,400 ft. Width: 75 ft.

Runway/Landing Surface *(Check all that apply)*

- ☒ Asphalt ☐ Grass/Turf ☐ Ice ☐ Snow
☐ Concrete ☐ Gravel ☐ Macadam ☐ Water
☐ Dirt ☐ Helideck ☐ Metal/Wood ☐ Unknown
☐ Elevated Heliport ☐ Helistop ☐ Off-site landing area

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 ☐ Crosswind ☐ Final ☐ Aborted Landing (after touchdown)
☐ Unknown

IFR Approach *(Check all that apply)*

- ☐ None
☐ ADF/NDB ☐ PAR ☐ MLS ☐ Practice
☐ SDF ☐ Sidestep ☐ LDA ☐ GPS
☐ VOR/TVOR ☐ ILS ☐ ASR ☐ Unknown
☐ VOR/DME ☐ Localizer Only ☐ Visual
☐ TACAN ☐ LOC-back course ☐ Contact
☐ RNAV ☐ Circling

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**

☐ Captain ☐ First Officer ☒ 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: Matthew

City of Residence: Stafford

Middle Initial: M

State: VA ZIP: 22556

Last Name: Gioia

Country: USA

Age at time of Accident/Incident: 52

Date of Birth: (mm/dd/yyyy)

Certificate Number:

Degree of Injury

☐ None ☐ Serious
☐ Unknown ☐ Fatal
☒ Minor

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

Supplemental Restraint, specify:

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 ☐ Sport
☐ Student ☐ 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

06/06/2023
 mm/dd/yyyy

Medical Certificate Limitations**Medical Certificate Special Limitations****Personal Flight Equipment** (Check all that apply)

☐ Fire resistant flight suit ☐ Helmet ☐ Laser protective visor/glasses ☐ Personal locator beacon(s) (PLB) ☐ Fire resistant gloves
☐ Helmet visor ☐ Night vision goggles ☐ Personal flotation ☐ Other:

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

04/17/2023
 mm/dd/yyyy

Flight Review Aircraft

Make: Piper

Model: PA-28 Cherokee

Airplane Rating(s)
(Check all that apply)

☒ 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 Multiengine ☐ Helicopter
☐ Gyroplane ☐ Glider
☐ Powered lift ☐ Sport

Type Ratings and Applicable Logbook Endorsements**Student Endorsements** (Include dates)

Flight Time (Enter hours for each box)	All Aircraft	This Make & Model	Airplane Single Engine	Airplane Multiengine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air	Multi-engine Rotorcraft	Tail-wheel
						Actual	Simulated					
Total Time	3,457	2	991	0	735	185	205	2,466	0	0	2,327	0
Pilot in Command (PIC)	2,818	0	895	0	347	156	146	1,922	0	0	1,891	0
Time as Instructor	765	0	0	0	161	8	41	765	0	0	765	0
This Make/Model												
Last 90 Days	18	0	16	0	0	0	0	0	0	0	0	0
Last 30 Days	9	0	7	0	0	0	0	0	0	0	0	0
Last 24 Hours	2	2	0	0	0	0	0	2	0	0	0	0

"FLIGHT CREWMEMBER 2" INFORMATION**"Flight Crewmember 2" Responsibilities at the Time of Accident/Incident**

☐ Captain ☐ First Officer ☐ 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: Gary

City of Residence: Plymouth

Middle Initial: J

State: In ZIP: 46563

Last Name: Cleveland

Country: USA

Age at time of Accident/Incident: 56

Date of Birth: (mm/dd/yyyy)

Certificate Number:

Degree of Injury

☐ None ☐ Serious
☐ Unknown ☐ Fatal
☒ Minor

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 ☐ Sport
☐ Student ☐ Flight Engineer

Supplemental Restraint, specify:

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

09/23/2024
 mm/dd/yyyy

Medical Certificate Limitations

Glasses

Medical Certificate Special Limitations**Personal Flight Equipment** (Check all that apply)

☐ Fire resistant flight suit ☐ Helmet ☐ Laser protective visor/glasses ☐ Personal Locator Beacon(s) (PLB) ☐ Fire resistant gloves
☐ Helmet visor ☐ Night vision goggles ☐ Personal flotation ☐ Other:

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

06/23/2023
 mm/dd/yyyy

Flight Review Aircraft

Make: Robinson R22

Model: Beta

Airplane Rating(s)
(Check all that apply)

☒ 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 Multiengine ☒ Helicopter
☐ Gyroplane ☐ Glider
☐ Powered lift ☐ Sport

Type Ratings and Applicable Logbook Endorsements**Student Endorsements** (Include dates)

Flight Time (Enter hours for each box)	All Aircraft	This Make & Model	Airplane Single Engine	Airplane Multiengine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air	Multi-engine Rotorcraft	Tail-wheel
						Actual	Simulated					
Total Time	3,930	320	430	0	360	0	20	3,500	0	0	0	5
Pilot in Command (PIC)	3,865	320	400	0	350	0	17	3,465	0	0	0	5
Time as Instructor	2,520	108	0	0	210	0	500	2,520	0	0	0	0
This Make/Model					12	0	0					
Last 90 Days	91	3	16	0	15	0	0	75	0	0	0	0
Last 30 Days	37	2	7	0	6	0	0	30	0	0	0	0
Last 24 Hours	4	2	0	0	0	0	0	4	0	0	0	0

ADDITIONAL FLIGHT CREWMEMBERS (Exclusive of cabin crew, complete the following information.)

Additional Crewmember Information		Seat Occupied	Injury
First Name: _____	City of Residence: _____	☐ Left ☐ Rear ☐ Center ☐ Single ☐ Right ☐ Unknown ☐ Front	☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown
Middle Initial: _____	State: _____ Zip: _____		
Last Name: _____	Country: _____		
Personal Flight Equipment (Check all that apply) ☐ Fire resistant flight suit ☐ Helmet ☐ Laser protective visor/glasses ☐ Personal locator beacon(s) (PLB) ☐ Fire resistant gloves ☐ Helmet visor ☐ Night vision goggles ☐ Personal flotation ☐ Other: _____			
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 Supplemental Restraint, specify: _____	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.		

Additional Crewmember Information		Seat Occupied	Injury
First Name: _____	City of Residence: _____	☐ Left ☐ Rear ☐ Center ☐ Single ☐ Right ☐ Unknown ☐ Front	☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown
Middle Initial: _____	State: _____ Zip: _____		
Last Name: _____	Country: _____		
Personal Flight Equipment (Check all that apply) ☐ Fire resistant flight suit ☐ Helmet ☐ Laser protective visor/glasses ☐ Personal Locator Beacon(s) (PLB) ☐ Fire resistant gloves ☐ Helmet visor ☐ Night vision goggles ☐ Personal flotation ☐ Other: _____			
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 Supplemental Restraint, specify: _____	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.)

Number of Passengers _____	Seat	Injury	Restraint Type	Inflatable Restraints	Age
Passenger Information First Name: _____ City: _____ Middle Initial: _____ State: _____ Zip: _____ Last name: _____ Country: _____ ☐ Crew ☐ Passenger ☐ Other Personal Flight Equipment (Check all that apply) ☐ Fire resistant flight suit ☐ Helmet ☐ Laser protective visor/glasses ☐ PLB ☐ Fire resistant gloves ☐ Night vision goggles ☐ Helmet visor ☐ Personal flotation ☐ Other: _____	☐ Left ☐ Center ☐ Right ☐ Unknown Row: _____	☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown	Available Used ☐ None ☐ None ☐ Lap Only ☐ Lap Only ☐ 3-point ☐ 3-point ☐ 4-point ☐ 4-point ☐ 5-point ☐ 5-point ☐ Unknown ☐ Unknown Supplemental Restraint, specify: _____	☐ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown	☐ Under 5 years If under 5 years, ☐ Child Restraint ☐ Lap-Held ☐ Unknown

First Name: _____ City: _____ Middle Initial: _____ State: _____ Zip: _____ Last name: _____ Country: _____ ☐ Crew ☐ Passenger ☐ Other Personal Flight Equipment (Check all that apply) ☐ Fire resistant flight suit ☐ Helmet ☐ Laser protective visor/glasses ☐ PLB ☐ Fire resistant gloves ☐ Night vision goggles ☐ Helmet visor ☐ Personal flotation ☐ Other: _____	☐ Left ☐ Center ☐ Right ☐ Unknown Row: _____	☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown	Available ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown Supplemental Restraint, specify: _____	Used ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown	☐ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown	☐ Under 5 years If under 5 years, ☐ Child Restraint ☐ Lap-Held ☐ Unknown
First Name: _____ City: _____ Middle Initial: _____ State: _____ Zip: _____ Last name: _____ Country: _____ ☐ Crew ☐ Passenger ☐ Other Personal Flight Equipment (Check all that apply) ☐ Fire resistant flight suit ☐ Helmet ☐ Laser protective visor/glasses ☐ PLB ☐ Fire resistant gloves ☐ Night vision goggles ☐ Helmet visor ☐ Personal flotation ☐ Other: _____	☐ Left ☐ Center ☐ Right ☐ Unknown Row: _____	☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown	Available ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown Supplemental Restraint, specify: _____	Used ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown	☐ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown	☐ Under 5 years If under 5 years, ☐ Child Restraint ☐ Lap-Held ☐ Unknown
First Name: _____ City: _____ Middle Initial: _____ State: _____ Zip: _____ Last name: _____ Country: _____ ☐ Crew ☐ Passenger ☐ Other Personal Flight Equipment (Check all that apply) ☐ Fire resistant flight suit ☐ Helmet ☐ Laser protective visor/glasses ☐ PLB ☐ Fire resistant gloves ☐ Night vision goggles ☐ Helmet visor ☐ Personal flotation ☐ Other: _____	☐ Left ☐ Center ☐ Right ☐ Unknown Row: _____	☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown	Available ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown Supplemental Restraint, specify: _____	Used ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown	☐ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown	☐ Under 5 years If under 5 years, ☐ Child Restraint ☐ Lap-Held ☐ Unknown

FLIGHT ITINERARY INFORMATION

Last Departure Point	Time of Departure	Flight Information	Destination	Type Flight Plan Filed
Airport ID: <u>C65</u> City: <u>Plymouth</u> State: <u>IN</u> Country: <u>USA</u>	Time: <u>16:20</u> HH:MM Time Zone: <u>East</u>	Flight Number: _____ Operating as Flight _____	Airport ID: <u>C65</u> City: <u>Plymouth</u> State: <u>IN</u> Country: <u>USA</u>	☒ None ☐ Company VFR ☐ Military VFR ☐ VFR ☐ VFR/IFR ☐ IFR ☐ Unknown Activated? ☐ Yes ☐ No ☐ Unknown

Type of ATC Clearance/Service <i>(Check all that apply)</i>					
☐ Certificate of Authorization	☐ Special VFR	☐ Special IFR	☐ VFR Flight Following	☐ Cruise	
☐ VFR	☐ IFR	☐ VFR On Top	☐ Traffic Advisory	☐ Unknown / NA	
☒ None					
Airspace where the accident/incident occurred <i>(Check all that apply)</i>					
☐ 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 <i>(Check all that apply)</i>			Weather Observation Facility		
☐ National Weather Service ☐ Flight Service Station ☐ TV/Radio ☒ Automated Report ☐ Electronic Flight Bag-Application:			☐ Company ☐ Military ☐ Internet ☐ None ☐ Unknown		
☐ On-Board Weather			Facility ID: C65 Observation Time: 2055Z Time Zone: _____ Distance from Accident Site: 1.00 nm Direction from Accident Site: 250.00 degrees true		
Basic Conditions		Lowest Cloud Condition	Light Condition		
☒ VMC ☐ IMC ☐ Unknown		Height CLR _____ ft. AGL	☐ Dawn ☒ Day ☐ Dusk ☐ Night ☐ Dark Night ☐ Bright Night ☐ Unknown		
Sky/Lowest Cloud Condition		Ceiling	Ceiling Height		
☒ Clear ☐ Few ☐ Partial ☐ Obscuration ☐ Scattered		☐ Thin Broken ☐ Thin Overcast ☐ Unknown	☒ None (Clear) ☐ Broken ☐ Overcast ☐ Obscured ☐ Indefinite ☐ Unknown	Temperature: 27.00 (°C) or _____ (°F) Dewpoint: 7.00 (°C) or _____ (°F)	
Altimeter Setting:	Wind Direction	Wind Speed	Wind Gusts	Visibility	
3,004 (Hg), or _____ (mb)	☐ Variable or Direction: 230.00 degrees true	☐ Calm ☐ Light and Variable or Speed: 9.0 kts	☒ Not Gusting or Speed: _____ kts	10.0 miles RVR: _____ feet RVV: _____ miles Density Altitude: _____ ft.	
Type of Precipitation <i>(Check all that apply)</i>				Restriction to Visibility <i>(Check all that apply)</i>	
☒ None ☐ Rain ☐ Snow ☐ Hail ☐ Rain Showers				☐ Drizzle ☐ Ice Pellets ☐ Snow Pellets ☐ Snow Grains ☐ Ice Crystals	
☐ Freezing Rain ☐ Snow Shower ☐ Ice Pellets Shower ☐ Freezing Drizzle				☒ None ☐ Fog ☐ Blowing Dust ☐ Ground Fog ☐ Blowing Sand ☐ Haze ☐ Blowing Snow ☐ Ice Fog ☐ Blowing Spray ☐ Smoke ☐ Dust ☐ Unknown	
Icing Forecast		Intensity of Precipitation	Icing Actual		Turbulence <i>(Check all that apply)</i>
Amount ☒ None ☐ Trace ☐ Light ☐ Moderate ☐ Severe ☐ Unknown	Type ☐ N/A ☐ Rime ☐ Clear ☐ Mixed ☐ Unknown	☐ Light ☐ Moderate ☐ Heavy ☒ N/A ☐ Unknown	Amount ☒ None ☐ Trace ☐ Light ☐ Moderate ☐ Severe ☐ Unknown	Type ☒ N/A ☐ Rime ☐ Clear ☐ Mixed ☐ Unknown	☒ None ☐ Clean 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**

- ☐ 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 ☐ Fire at Unknown Time
☐ On-Ground ☐ Unknown

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

Main rotor blades bent/broken.
 Tailboom bent
 Right landing skid bent/broken
 Windshield broken

NARRATIVE HISTORY OF FLIGHT *(Please type or print in ink.)*

Describe what occurred in chronological order, including circumstances leading to and nature of accident/incident. Describe terrain and include wreckage distribution sketch if pertinent. Attach extra sheets if needed. State departure time and location, services obtained, and intended destination. Provide as much detail as possible.

The aircraft had been in storage for several years and had recently been through a conditional inspection. The inspection was signed off the day of the accident. The flight was a local training flight in the local pattern of Plymouth Municipal airport (C65) for Crewmember #1 to gain proficiency in a new helicopter model and was planned to last three (3) hours. First departure time was approximately 1500L. The first hour was conducted at the airport and included low hover practice. Twice during this evolution the tailrotor drive belts became loose and required tightening before further flight. The crew members thought this was normal since they believed the tailrotor drive belts to be in fairly new condition even though they had been installed for several years, and would stretch during initial break in. This is normal break-in procedure for the Rotorway tailrotor belts.

In the second hour of flight, crewmember #1 performed two normal circuits in the pattern with normal approaches to runway 28. No abnormalities were encountered with the aircraft during this time. The third circuit was being set up for a practice autorotation to runway 28. On base leg, at 500' AGL, crewmember #2 says he heard a noise. Airspeed was between 40 and 50 kts. The nose started a slow uncommanded turn to the left. Crewmember #1 was at the controls. The aircraft continued to slow and the left hand rotation accelerated. At this time, crewmember #2 took the controls and attempted to stop the rotations and perform an autorotation. The aircraft rotated approximately 10-12 times before impacting the ground in a corn field on the approach end of runway 28. The aircraft impacted in a right wing down attitude and rolled onto its right side. The main rotor blades struck the ground. One blade broke and the second blade bent as it struck the ground and came to a rest. The impact bent the tailboom, but it did not strike the ground. The windshield broke as a result of the impact and subsequent torque on the cabin structure.

The engine was still running when the aircraft came to a rest. Crewmember #1 shut the engine down with the overhead switches, released his harness and egressed the aircraft through the broken windshield. Crewmember #2 then released his harness and egressed the same way. There was no post crash fire. The aircraft came to a rest pointed in a northwesterly heading.

OPERATOR/OWNER SAFETY RECOMMENDATION *(How could this accident/incident have been prevented?)*

A more thorough review of the logbooks would have revealed that not all the tailrotor drive belts had been replaced. It should not have been assumed that the belts had been replaced or were in a new condition despite the fact that other tailrotor drive components had been replaced more recently. The maintenance manual states, "Replace the tail rotor drive belts at 250 hours of operation, or at 2 years, or on condition, whichever comes first." The belts were not beyond 250 hours and appeared to be in satisfactory condition, but were beyond the recommended 2 year service life and should therefore have been changed.

MECHANICAL MALFUNCTION/FAILURE (If more space is needed, continue on a 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.)

Forward tailrotor drive belt, Rotorway part number E18-1150. Belt broke

Total Time/ Cycles On Part

232.0 Hours Cycles

Time Since This Part Inspected/Overhauled

1.5 Hours**FUEL & SERVICES INFORMATION**

Fuel on Board at Last Takeoff

(Convert from pounds, as necessary)

13.0 Gallons

Fuel Type

☒ 100 Low Lead☐ Automotive☐ Jet A☐ Jet A-1☐ Unleaded AV☐ Other, specify

Other Services, if any, prior to departure:

EVACUATION OF AIRCRAFTWas an emergency evacuation of the aircraft performed? ☒ Yes ☐ No

Method of Exit – Describe how the occupants exited and how many occupants evacuated each location:

Stepped through broken windshield,

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☐ Substantial☐ Minor☐ None

Registered Owner of Other Aircraft

Pilot of Other Aircraft

Name: Name: City: City: State: ZIP: State: ZIP: Country: Country: **ADDITIONAL INFORMATION** (Additional space for answers to any question.)

By signing this form, I am consenting to the public release of the information provided herein.

Date of this report:

mm/dd/yyyy

Name of Pilot/Operator: _____

Signature: _____

-or- ☐ Check here to electronically sign this document

If a person other than Pilot/Operator is filing this report

Name: _____

Title: _____

Signature: _____

-or- ☐ Check here to electronically sign this document

FOR NTSB USE ONLY

NTSB Accident/Incident No.	Reviewed by NTSB AS Division	Name of Investigator	Date Report Received
CEN25LA013	Central	Laura Abraham	10-17-2024