

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: Marianna State: FLZIP: 32448 Country: USALatitude: 30.50 Longitude: 85.10

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

Accident/Incident Date/TimeDate: 08/23/2024 Local Time: 11:31
mm/dd/yyyy HH:MMTime Zone: CTCollision with Other Aircraft: ☐ Midair ☐ On-ground ☒ None**AIRCRAFT INFORMATION**Registration Number: N945TCManufacturer: BELL TEXTRON CANADAModel: 505Serial Number: 65573Year of Manufacture: 24Amateur-Built: ☐ Yes ☒ No If Yes: ☐ Original Design ☐ Kit/Plans

Make: _____

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

Maximum Gross Weight: 3,680 lbs.

Weight at Time of Accident/Incident: _____ lbs.

Number of Seats: 5 Flight Crew Seats: 2Cabin Crew Seats: 0 Passenger Seats: 3Number 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 | 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 | ☐ High Skid |
| ☐ Tricycle | ☒ Skid |
| ☐ Tailwheel | ☐ Ski/Wheel |
| ☐ Emergency Float | ☐ Hull |
| ☐ Float | ☐ Ski |
| ☐ Amphibian | |
| ☐ 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	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	SAFRAN	ARRIUS 2R	54387	05/27/2024	472	149	50	0
Eng. 2								
Eng. 3								
Eng. 4								

Last Inspection Type

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

Date of Last Inspection: 07/22/2024
mm/dd/yyyyAirframe Total Time: 99.6 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: ACKModel or Part No.: E-04TSO No.: ☐ C91 (121.5 MHz) ☐ C91a (121.5 MHz)☒ C126 (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: CAE USA
 City: TAMPA State: FL
 ZIP: 33684 Country: USA

Fractional Ownership Aircraft: ☐ Yes ☐ No

Operator of Aircraft

☒ The Operator is also the Registered Owner

☐ Same address as Registered Owner

Name: CAE USA
 City: DOTHAN State: AL
 ZIP: 36360 Country: USA

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: Marianna Municipal Airport

Airport Identifier: KMAI

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

Distance From Airport Center: _____ sm.

Direction From Airport: _____ degrees true

Airport Elevation: 110.00 ft. MSL

Runway Information

Runway ID: 08/26 Length: 4,895 ft. Width: 100 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 ☐ 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 ☐ 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: Enterprise

Middle Initial: I

State: AL ZIP: 36330

Last Name: Case

Country: USA

Age at time of Accident/Incident: 37

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 ☐ Unknown
☐ Class 1 ☐ BasicMed
☒ Class 2 ☐ Driver's License (Sport Pilot only)

Medical Certificate Validity

☒ Without limitations/waivers ☐ Unknown
☐ With limitations/waivers ☐ N/A
☐ Special Issuance

Date of Last Medical

03/07/2024
 mm/dd/yyyy

Medical Certificate Limitations

Military

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:

 mm/dd/yyyy

Flight Review Aircraft

Make: Bell

Model: Jet Ranger 505X

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	1,096	31										
Pilot in Command (PIC)												
Time as Instructor	268											
This Make/Model												
Last 90 Days		13										
Last 30 Days												
Last 24 Hours												

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 <u>0</u>					
Passenger Information	Seat	Injury	Restraint Type	Inflatable Restraints	Age
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>KDHN</u> City: <u>Dothan</u> State: <u>AL</u> Country: <u>USA</u>	Time: <u>10:00</u> HH:MM Time Zone: <u>CT</u>	Flight Number: <u>N/A</u> Operating as Flight _____	Airport ID: <u>KMAI</u> City: <u>Marianna</u> State: <u>FL</u> Country: <u>USA</u>	☐ None ☐ Company VFR ☒ Military VFR ☐ VFR 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: _____ Observation Time: _____ Time Zone: _____ Distance from Accident Site: _____ nm Direction from Accident Site: _____ degrees true		
Basic Conditions		Lowest Cloud Condition	Light Condition		
☒ VMC ☐ IMC ☐ Unknown		Height SCL _____ ft. AGL	☐ Dawn ☐ Dusk ☐ Dark Night ☐ Unknown ☐ Day ☐ Night ☐ Bright Night		
Sky/Lowest Cloud Condition		Ceiling	Ceiling Height		
☒ Clear ☐ Thin Broken ☐ Few ☐ Thin Overcast ☐ Partial ☐ Unknown ☐ Obscuration ☐ Scattered		☒ None (Clear) ☐ Broken ☐ Overcast ☐ Obscured ☐ Indefinite ☐ Unknown	_____ ft. AGL	Temperature: _____ (°C) or <u>83.6</u> (°F) Dewpoint: _____ (°C) or <u>58.6</u> (°F)	
Altimeter Setting:	Wind Direction	Wind Speed	Wind Gusts	Visibility	
<u>29.79</u> (Hg), or _____ (mb)	☐ Variable or Direction: <u>70.00</u> degrees true	☐ Calm ☐ Light and Variable or Speed: <u>15.0</u> kts	☐ Not Gusting or Speed: <u>24.0</u> kts	_____ 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 ☐ Drizzle ☐ Freezing Rain ☐ Rain ☐ Ice Pellets ☐ Snow Shower ☐ Snow ☐ Snow Pellets ☐ Ice Pellets Shower ☐ Hail ☐ Snow Grains ☐ Freezing Drizzle ☐ Rain Showers ☐ Ice Crystals				☒ None ☐ Fog ☐ Blowing Dust ☐ Ground Fog ☐ Blowing Sand ☐ Haze ☐ Blowing Snow ☐ Ice Fog ☐ Blowing Spray ☐ Smoke ☐ Dust ☐ Unknown	
Icing Forecast		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 ☐ Severity ☐ Clean Air ☐ Light ☐ Terrain-Induced ☐ Moderate ☐ Convective ☐ Severe ☐ Turbulence ☐ Extreme
NOTAMS (D and FDC), AIRMETS, SIGMETs, PIREPs in effect at the time of the accident/incident:					
09/001 - OBST TOWER LGT (ASR 1039193) 304720.00N0851711.00W (6.2NM WSW MAI) 651.9FT (475.1FT AGL) U/S. 09 SEP 14:49 2024 UNTIL 08 DEC 04:00 2024. CREATED: 09 SEP 14:49 2024					
07/006 - RWY 36 PAPI U/S. 10 JUL 14:49 2024 UNTIL 10 JAN 21:11 2025 ESTIMATED. CREATED: 10 JUL 14:49 2024					
08/002 - RWY 36 RIGHT PATTERN. 05 AUG 14:06 2016 UNTIL PERM. CREATED: 05 AUG 14:06 2016					

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.)*

1. Transmission (XMSN) Restraint Bolt gouged Truss
 2. Tailboom doubler delamination/separation
 3. Tailboom attachment bolt damage
 4. Aft crosstube spread 0.5" out of tolerance
 5. Frahm Damper gouged and spring bird-caging
 6. Free Wheel unit must be over hauled.
 7. Tailboom must be replaced
 8. Mast must be replace due to it failing run out inspection
 - 9.
- No Damage to Property

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 instructor reported experiencing extreme lateral vibrations after touchdown of a practice autorotation. Out of caution, the instructor dismounted the aircraft (at idle) to inspect for visible damage to the aircraft. After discovering visible tailboom attachment bolt and tailboom doubler damage, the aircrew continued with the aircraft shutdown procedure. The aircrew immediately notified the Chain of Command to begin the recovery process.

The aircraft skid marks measured 154 feet in length, and the aircraft came to rest, facing approximately 30 degrees to the left of the runway centerline. Analysis of the runway found the runway to be course and needed resurfacing; however, the runway was otherwise serviceable and capable of sustaining practice emergency maneuvers. There was evidence of other successful autorotations or slide landings to the runway area used.

The maintenance department, coupled with the regional Bell representative, discovered additional physical airframe/component damage. The aircraft inspection found:

Prior to any mission, maintenance personnel complete a daily inspection of the airframe and prepare the respective logbooks for aircrew inspection. In the conduct and execution of the USAF SOI, Instructor Pilots and students must complete a mission risk assessment, conduct a preflight, and conduct an airframe records analysis to determine the aircraft's airworthiness and its capability to carry out the day's sortie (training). The crew found the aircraft to be serviceable and capable of conducting the day's mission. There is no indication of any mis or malfeasance on the part of any crewmember.

The Bell 505 begins collecting data at the point the battery is turned on (1Hz or one reading every second). When energizing the starter, the aircraft collects data at 5Hz (five readings every second). The 5Hz data indicated that the instructor entered the autorotation at 1,000 feet, 90 KIAS, and 104% NR. The maneuver achieved steady state (Rotor: 104%; Airspeed: 60KIAS; Trim; Termination Point: Reachable) by 600 feet MSL. The aircraft appears to have begun the deceleration at approximately 110 feet MSL. During the maneuver's decelerative phase, the data indicates the aircrew increased aircraft pitch (decelerative attitude) and experienced a minimal 108.72% NR overspeed with an audible warning (occurs at 108% NR). Approximately 3.5 seconds following the overspeed tone, the collective pitch began a sustained increase to arrest the rotor RPM. After arresting the overspeed, the aircrew continued, without interruption, to pull collective pitch progressively. As a result, the aircraft experienced a harder-than-normal touchdown and below 70% NR. This heavy touchdown induced a lateral airframe oscillation that transmitted through the airframe and dissipated by the tailboom and Frahm Damper.

Analysis: The Bell 505 incorporates the Bell 206 L4 drivetrain. In similar Bell aircraft testing (Bell 206), Engineers found similar airframe damage if the aircrew allowed the NR to decay below 70%. The excessive collective pitch control after landing may have induced higher-than-normal blade flapping that transmitted vibrations through the XMSN to the airframe.

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

Crew Mix needs to be evaluated by Program Manager and Chief Pilot. A sun-standard student should not be paired with a low-time instructor pilot for an evaluation.

The Instructor was moved to evaluate potential recruit instructor pilots rather than novice pilots.

The Instructor was given additional simulator time and a post accident evaluation by the chief pilot.

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.)

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)

50.0 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:

OTHER AIRCRAFT – COLLISION (If air or ground collision occurred, complete this section for other aircraft.)

Aircraft Registration Number

N/A

Manufacturer: _____

Model: _____

Damage to Other Aircraft:

☐ Destroyed☐ Substantial☐ Minor☐ None

Registered Owner of Other Aircraft

Name: _____

City: _____

State: _____ ZIP: _____

Country: _____

Pilot of Other Aircraft

Name: _____

City: _____

State: _____ ZIP: _____

Country: _____

ADDITIONAL INFORMATION (Additional space for answers to any question.)

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

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

Date of this report: <u>11/06/2024</u> <i>mm/dd/yyyy</i>	Name of Pilot/Operator: _____ Signature: _____ -or- ☐ Check here to electronically sign this document
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If a person other than Pilot/Operator is filing this report

Name: <u>KRISTINA IRVING</u> Signature: _____ -or- ☐ Check here to electronically sign this document	Title: <u>DIRECTOR OF SAFETY</u>
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FOR NTSB USE ONLY

NTSB Accident/Incident No. ERA24LA399	Reviewed by NTSB AS Division ERA	Name of Investigator Kurt Gibson	Date Report Received 11/06/2024
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