

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: Tampa State: FL

ZIP: 33610 Country: US

Latitude: 28 01'N Longitude: -82 21'W

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

Accident/Incident Date/Time

Date: 02/18/2020 Local Time: 1550
mm/dd/yyyy

Time Zone: Eastern

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

AIRCRAFT INFORMATION

Registration Number: N188FS

Manufacturer: Airbus Helicopters Inc

Model: AS350B2

Serial Number: 7863

Year of Manufacture: 2014

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

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

Maximum Gross Weight: 4961 lbs

Weight at Time of Accident/Incident: 3919 lbs

Number of Seats: 6 Flight Crew Seats: 1

Cabin Crew Seats: 1 Passenger Seats: 4

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. mm/dd/yyyy	Rated Power <input checked="" type="radio"/> Horsepower or <input type="radio"/> lbs of Thrust	Total Time (hours)	Time Since: Inspection (hours)	Overhaul (hours)
Eng. 1	SAFRAN/Turbomeca	Ariel 1D1	19577	07/11/2013	721.95	2118.7	93.6	1481.3
Eng. 2								
Eng. 3								
Eng. 4								

Last Inspection Type

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

Date Last Inspection: 10/09/2019
mm/dd/yyyy

Airframe Total Time: 2627.3 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: FAR Part 43

Description of Fire Extinguishing System

- ☒ None
☐ Specify:

Propeller 1

- ☐ Fixed Pitch
☐ Controllable Pitch
☐ Ground Adjustable

Manufacturer: _____

Model: _____

Propeller 2

- ☐ Fixed Pitch
☐ Controllable Pitch
☐ Ground Adjustable

Manufacturer: _____

Model: _____

ELT Installed: ☒ Yes ☐ No

If Yes:

ELT Manufacturer: ARTEX

Model or Part No.: S/N 15024

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: Hillsborough County (FL) Sheriff's DepartmentCity: TampaFractional Ownership Aircraft: ☐ Yes ☒ NoState: FL ZIP: 33610Country: US**Operator of Aircraft**☒ Same As Registered Owner☒ Same Address as Registered Owner

Name: _____

City: _____

Doing Business As: _____

State: _____ ZIP: _____

Air Carrier/Operator Designator (4 Character Code): _____

Country: _____

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: Tampa Executive Airport

Distance From Airport Center: _____ sm

Airport Identifier: KVDF

Direction From Airport: _____ degrees true

Proximity to Airport: ☐ Off Airport/Airstrip ☐ On Airport/Airstrip ☒ N/AAirport Elevation: 21 ft. msl**Runway Information**Runway ID: 18 (L/R/C) Length: 3219 ft Width: 75 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: Matthew City of Residence: Valrico
 Middle Initial: A State: FL ZIP: 33594
 Last Name: Bonin Country: US
 Age at time of Accident/Incident: 32 Date of Birth: mm/dd/yyyy
 Certificate Number:

Degree of Injury <input checked="" type="radio"/> None <input type="radio"/> Fatal <input type="radio"/> Minor <input type="radio"/> Unknown <input type="radio"/> Serious	Seat Occupied <input type="radio"/> Left <input type="radio"/> Front <input type="radio"/> Unknown <input checked="" type="radio"/> Right <input type="radio"/> Rear <input type="radio"/> Center <input type="radio"/> Single	Restraint Type <table style="width: 100%;"> <tr> <th style="text-align: left;">Available</th> <th style="text-align: left;">Used</th> </tr> <tr> <td><input type="radio"/> None</td> <td><input type="radio"/> None</td> </tr> <tr> <td><input type="radio"/> Lap only</td> <td><input type="radio"/> Lap only</td> </tr> <tr> <td><input type="radio"/> 3-point</td> <td><input type="radio"/> 3-point</td> </tr> <tr> <td><input checked="" type="radio"/> 4-point</td> <td><input checked="" type="radio"/> 4-point</td> </tr> <tr> <td><input type="radio"/> 5-point</td> <td><input type="radio"/> 5-point</td> </tr> <tr> <td><input type="radio"/> Unknown</td> <td><input type="radio"/> Unknown</td> </tr> </table>	Available	Used	<input type="radio"/> None	<input type="radio"/> None	<input type="radio"/> Lap only	<input type="radio"/> Lap only	<input type="radio"/> 3-point	<input type="radio"/> 3-point	<input checked="" type="radio"/> 4-point	<input checked="" type="radio"/> 4-point	<input type="radio"/> 5-point	<input type="radio"/> 5-point	<input type="radio"/> Unknown	<input type="radio"/> Unknown	Inflatable Restraints <input checked="" type="checkbox"/> Not Installed <input type="checkbox"/> Installed <input type="checkbox"/> Not Deployed <input type="checkbox"/> Deployed <input type="checkbox"/> Unknown
Available	Used																
<input type="radio"/> None	<input type="radio"/> None																
<input type="radio"/> Lap only	<input type="radio"/> Lap only																
<input type="radio"/> 3-point	<input type="radio"/> 3-point																
<input checked="" type="radio"/> 4-point	<input checked="" type="radio"/> 4-point																
<input type="radio"/> 5-point	<input type="radio"/> 5-point																
<input type="radio"/> Unknown	<input type="radio"/> Unknown																
Pilot Certificate(s) (Check all that apply) <input type="checkbox"/> None <input type="checkbox"/> Flight Instructor <input type="checkbox"/> Commercial <input type="checkbox"/> US Military <input checked="" type="checkbox"/> Private <input type="checkbox"/> Recreational <input type="checkbox"/> Airline Transport <input type="checkbox"/> Foreign <input type="checkbox"/> Student <input type="checkbox"/> Sport <input type="checkbox"/> Flight Engineer																	

Principal Occupation <input checked="" type="radio"/> Pilot <input type="radio"/> Other <input type="radio"/> Unknown	Medical Certificate <input type="radio"/> None <input type="radio"/> Class 3 <input type="radio"/> Class 1 <input type="radio"/> Driver's License (Sport Pilot only) <input checked="" type="radio"/> Class 2 <input type="radio"/> Unknown	Medical Certificate Validity <input type="radio"/> Without limitations/waivers <input type="radio"/> Unknown <input checked="" type="radio"/> With limitations/waivers <input type="radio"/> N/A <input type="radio"/> Special Issuance	Date of Last Medical <u>07/22/2019</u> mm/dd/yyyy
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Medical Certificate Limitations

Must Wear Corrective Lenses

Medical Certificate Special Issuance

Date of Last Flight Review or Equivalent, Including FAR 121/135 Checks: <u>09/25/2009</u> mm/dd/yyyy	Flight Review Aircraft Make: <u>Cessna</u> Model: <u>C-172</u>
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Airplane Rating(s) (Check all that apply) <input type="checkbox"/> None <input checked="" type="checkbox"/> Single-Engine Land <input type="checkbox"/> Single-Engine Sea <input type="checkbox"/> Multiengine Land <input type="checkbox"/> Multiengine Sea	Other Aircraft Rating(s) (Check all that apply) <input checked="" type="checkbox"/> None <input type="checkbox"/> Airship <input type="checkbox"/> Balloon <input type="checkbox"/> Glider <input type="checkbox"/> Gyroplane <input type="checkbox"/> Helicopter <input type="checkbox"/> Powered Lift	Instrument Rating(s) (Check all that apply) <input type="checkbox"/> None <input checked="" type="checkbox"/> Airplane <input type="checkbox"/> Helicopter <input type="checkbox"/> Powered Lift	Instructor Rating(s) (Check all that apply) <input checked="" type="checkbox"/> None <input type="checkbox"/> Airplane Single-Engine <input type="checkbox"/> Airplane Multi-Engine <input type="checkbox"/> Gyroplane <input type="checkbox"/> Powered Lift <input type="checkbox"/> Instrument Airplane <input type="checkbox"/> Instrument Helicopter <input type="checkbox"/> Helicopter <input type="checkbox"/> Glider <input type="checkbox"/> Sport
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Type Ratings	Student Endorsements (Include dates) Pre-Solo Aeronautical Knowledge test of 61.87(b) for the AS350B2 Helicopter 09/06/2019 Pre-Solo Flight training for AS350B2 Helicopter 09/08/2019
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Flight Time (Enter appropriate number of hours in each box)	All Aircraft	This Make & Model	Airplane Single Engine	Airplane Multiengine	Night	Instrument	Lighter Category	Higher Category
Total Time	225	104	106		48	52	119	
Pilot in Command (PIC)	118	51	57		40	2	60	
Time as Instructor	0	0	0		0	0	0	
This Make/Model					23	0	0	
Last 90 Days	67	52	0		11	0	5	67
Last 30 Days	23	16	0		6	0	0	23
Last 24 Hours	1	1	0		0	52	0	1

ADDITIONAL FLIGHT CREWMEMBERS (Exclusive of cabin crew, complete the following information)									
Crew Name and Address					Seat Occupied		Injury		
First Name: _____ City of Residence: _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____					<input type="radio"/> Left <input type="radio"/> Front <input type="radio"/> Center <input type="radio"/> Rear <input type="radio"/> Right <input type="radio"/> Single <input type="radio"/> Unknown		<input type="radio"/> None <input type="radio"/> Minor <input type="radio"/> Serious <input type="radio"/> Fatal <input type="radio"/> Unknown		
Pilot Certificate(s) (Check all that apply) <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> None <input type="checkbox"/> Private <input type="checkbox"/> Student </div> <div> <input type="checkbox"/> Flight Instructor <input type="checkbox"/> Recreational <input type="checkbox"/> Sport </div> <div> <input type="checkbox"/> Commercial <input type="checkbox"/> Airline Transport <input type="checkbox"/> Flight Engineer </div> <div> <input type="checkbox"/> US Military <input type="checkbox"/> Foreign </div> </div>					Restraint Type: <div style="display: flex;"> <div style="flex: 1;"> Available <input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown </div> <div style="flex: 1;"> Used <input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown </div> </div>		Inflatable Restraints <input type="checkbox"/> Not Installed <input type="checkbox"/> Installed <input type="checkbox"/> Not Deployed <input type="checkbox"/> Deployed <input type="checkbox"/> Unknown		
Type Rating/Endorsement for Accident/Incident Aircraft? <input type="checkbox"/> Yes <input type="checkbox"/> No			Total Flight Time at the Time of this Accident/Incident: _____ hrs						
Crew Name and Address					Seat Occupied		Injury		
First Name: _____ City of Residence: _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____					<input type="radio"/> Left <input type="radio"/> Front <input type="radio"/> Center <input type="radio"/> Rear <input type="radio"/> Right <input type="radio"/> Single <input type="radio"/> Unknown		<input type="radio"/> None <input type="radio"/> Minor <input type="radio"/> Serious <input type="radio"/> Fatal <input type="radio"/> Unknown		
Pilot Certificate(s) (Check all that apply) <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> None <input type="checkbox"/> Private <input type="checkbox"/> Student </div> <div> <input type="checkbox"/> Flight Instructor <input type="checkbox"/> Recreational <input type="checkbox"/> Sport </div> <div> <input type="checkbox"/> Commercial <input type="checkbox"/> Airline Transport <input type="checkbox"/> Flight Engineer </div> <div> <input type="checkbox"/> US Military <input type="checkbox"/> Foreign </div> </div>					Restraint Type: <div style="display: flex;"> <div style="flex: 1;"> Available <input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown </div> <div style="flex: 1;"> Used <input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown </div> </div>		Inflatable Restraints <input type="checkbox"/> Not Installed <input type="checkbox"/> Installed <input type="checkbox"/> Not Deployed <input type="checkbox"/> Deployed <input type="checkbox"/> Unknown		
Type Rating/Endorsement for Accident/Incident Aircraft? <input type="checkbox"/> Yes <input type="checkbox"/> 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: _____ City : _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____ <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input type="radio"/> Crew <input type="radio"/> Passenger <input type="radio"/> Other </div>			<input type="radio"/> Left <input type="radio"/> Center <input type="radio"/> Right <input type="radio"/> Unknown Row: _____	<input type="radio"/> None <input type="radio"/> Minor <input type="radio"/> Serious <input type="radio"/> Fatal <input type="radio"/> Unknown	Available <input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown Used <input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown		<input type="checkbox"/> Not Installed <input type="checkbox"/> Installed <input type="checkbox"/> Not Deployed <input type="checkbox"/> Deployed <input type="checkbox"/> Unknown	<input type="checkbox"/> Under 5 years If Under 5, <input type="radio"/> Child Restraint <input type="radio"/> Lap-Held <input type="radio"/> Unknown	
First Name: _____ City : _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____ <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input type="radio"/> Crew <input type="radio"/> Passenger <input type="radio"/> Other </div>			<input type="radio"/> Left <input type="radio"/> Center <input type="radio"/> Right <input type="radio"/> Unknown Row: _____	<input type="radio"/> None <input type="radio"/> Minor <input type="radio"/> Serious <input type="radio"/> Fatal <input type="radio"/> Unknown	Available <input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown Used <input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown		<input type="checkbox"/> Not Installed <input type="checkbox"/> Installed <input type="checkbox"/> Not Deployed <input type="checkbox"/> Deployed <input type="checkbox"/> Unknown	<input type="checkbox"/> Under 5 years If Under 5, <input type="radio"/> Child Restraint <input type="radio"/> Lap-Held <input type="radio"/> Unknown	
First Name: _____ City : _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____ <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input type="radio"/> Crew <input type="radio"/> Passenger <input type="radio"/> Other </div>			<input type="radio"/> Left <input type="radio"/> Center <input type="radio"/> Right <input type="radio"/> Unknown Row: _____	<input type="radio"/> None <input type="radio"/> Minor <input type="radio"/> Serious <input type="radio"/> Fatal <input type="radio"/> Unknown	Available <input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown Used <input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown		<input type="checkbox"/> Not Installed <input type="checkbox"/> Installed <input type="checkbox"/> Not Deployed <input type="checkbox"/> Deployed <input type="checkbox"/> Unknown	<input type="checkbox"/> Under 5 years If Under 5, <input type="radio"/> Child Restraint <input type="radio"/> Lap-Held <input type="radio"/> Unknown	
First Name: _____ City : _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____ <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input type="radio"/> Crew <input type="radio"/> Passenger <input type="radio"/> Other </div>			<input type="radio"/> Left <input type="radio"/> Center <input type="radio"/> Right <input type="radio"/> Unknown Row: _____	<input type="radio"/> None <input type="radio"/> Minor <input type="radio"/> Serious <input type="radio"/> Fatal <input type="radio"/> Unknown	Available <input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown Used <input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown		<input type="checkbox"/> Not Installed <input type="checkbox"/> Installed <input type="checkbox"/> Not Deployed <input type="checkbox"/> Deployed <input type="checkbox"/> Unknown	<input type="checkbox"/> Under 5 years If Under 5, <input type="radio"/> Child Restraint <input type="radio"/> Lap-Held <input type="radio"/> Unknown	

FLIGHT ITINERARY INFORMATION

Last Departure Point Airport ID: <u>KTPF</u> City: <u>Tampa</u> State: <u>FL</u> Country: <u>US</u>	Time of Departure Time: <u>1545</u> Time Zone: <u>Eastern</u>	Destination Airport ID: <u>KVDF</u> City: <u>Tampa</u> State: <u>FL</u> Country: <u>US</u>	Type Flight Plan Filed <input checked="" type="radio"/> None <input type="radio"/> VFR/IFR <input type="radio"/> Company VFR <input type="radio"/> IFR <input type="radio"/> Military VFR <input type="radio"/> Unknown <input type="radio"/> VFR Activated? <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown
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Type of ATC Clearance/Service (Check all that apply)

<input checked="" type="checkbox"/> None	<input type="checkbox"/> Special VFR	<input type="checkbox"/> Special IFR	<input type="checkbox"/> VFR Flight Following	<input type="checkbox"/> Cruise
<input type="checkbox"/> VFR	<input type="checkbox"/> IFR	<input type="checkbox"/> VFR On Top	<input type="checkbox"/> Traffic Advisory	<input type="checkbox"/> Unknown / NA

Airspace where the accident/incident occurred (Check all that apply)

<input type="checkbox"/> Class A <input type="checkbox"/> Class B <input type="checkbox"/> Class C <input type="checkbox"/> Class D <input type="checkbox"/> Class E	<input checked="" type="checkbox"/> Class G <input type="checkbox"/> Demo Area <input type="checkbox"/> Warning Area <input type="checkbox"/> Prohibited Area <input type="checkbox"/> Restricted Area	<input type="checkbox"/> Military Operations Area (MOA) <input type="checkbox"/> Airport Advisory Area <input type="checkbox"/> Jet Training Area <input type="checkbox"/> TRSA <input type="checkbox"/> FAR 93	<input type="checkbox"/> Special <input type="checkbox"/> Air Traffic Control Area <input type="checkbox"/> Unknown	Altitude of In-Flight Occurrence: <u>1000</u> ft msl
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WEATHER INFORMATION AT THE ACCIDENT/INCIDENT SITE

Source of Pilot Weather Information

(Check all that apply)

<input type="checkbox"/> National Weather Service <input type="checkbox"/> Flight Service Station <input type="checkbox"/> TV/Radio <input checked="" type="checkbox"/> Automated Report <input type="checkbox"/> Commercial Weather Service (DUATS) <input type="checkbox"/> On-Board Weather	<input type="checkbox"/> Company <input type="checkbox"/> Military <input type="checkbox"/> Internet <input type="checkbox"/> None <input type="checkbox"/> Unknown
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Weather Observation Facility

Facility ID: KVDF
 Observation Time: 1553
 Time Zone: Eastern
 Distance from Accident Site: 0 nm
 Direction from Accident Site: _____ 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

4900 ft agl

Ceiling

☒ None (Clear) ☐ Obscured
☐ Broken ☐ Indefinite
☐ Overcast ☐ Unknown

Ceiling Height

_____ ft agl

Temperature: 30 (C) or 86 (F)

Dew Point: 19 (C) or 66 (F)

Altimeter Setting: 3009 in. Hg
or _____ MB

Wind Direction

☐ Variable

-or-
Direction: 160 degrees true

Wind Speed

☐ Calm
☐ Light and Variable

-or-
Speed: 7 kts

Wind Gusts

☒ Not Gusting

-or-
Speed: _____ kts

Visibility 10 miles

RVR: _____ feet

RVV: _____ miles

Density Altitude: _____ ft

Intensity of Precipitation

☐ Light
☐ Moderate
☐ Heavy
☒ N/A
☐ Unknown

Type of Precipitation (Check all that apply)

<input checked="" type="checkbox"/> None	<input type="checkbox"/> Drizzle	<input type="checkbox"/> Freezing Rain
<input type="checkbox"/> Rain	<input type="checkbox"/> Ice Pellets	<input type="checkbox"/> Snow Shower
<input type="checkbox"/> Snow	<input type="checkbox"/> Snow Pellets	<input type="checkbox"/> Ice Pellets Shower
<input type="checkbox"/> Hail	<input type="checkbox"/> Snow Grains	<input type="checkbox"/> Freezing Drizzle
<input type="checkbox"/> Rain Showers	<input type="checkbox"/> Ice Crystals	

Restriction to Visibility (Check all that apply)

<input checked="" type="checkbox"/> None	<input type="checkbox"/> Fog
<input type="checkbox"/> Blowing Dust	<input type="checkbox"/> Ground Fog
<input type="checkbox"/> Blowing Sand	<input type="checkbox"/> Haze
<input type="checkbox"/> Blowing Snow	<input type="checkbox"/> Ice Fog
<input type="checkbox"/> Blowing Spray	<input type="checkbox"/> Smoke
<input type="checkbox"/> Dust	<input type="checkbox"/> Unknown

Icing Forecast

Amount	Type
<input checked="" type="radio"/> None	<input type="radio"/> N/A
<input type="radio"/> Trace	<input type="radio"/> Rime
<input type="radio"/> Light	<input type="radio"/> Clear
<input type="radio"/> Moderate	<input type="radio"/> Mixed
<input type="radio"/> Severe	<input type="radio"/> Unknown
<input type="radio"/> Unknown	

Icing Actual

Amount	Type
<input checked="" type="radio"/> None	<input type="radio"/> N/A
<input type="radio"/> Trace	<input type="radio"/> Rime
<input type="radio"/> Light	<input type="radio"/> Clear
<input type="radio"/> Moderate	<input type="radio"/> Mixed
<input type="radio"/> Severe	<input type="radio"/> Unknown
<input type="radio"/> Unknown	

Turbulence

Type (Check all that apply)	Severity
<input checked="" type="checkbox"/> None	<input type="checkbox"/> Light
<input type="checkbox"/> Clear Air	<input type="checkbox"/> Moderate
<input type="checkbox"/> Terrain-Induced	<input type="checkbox"/> Severe
<input type="checkbox"/> Convective Turbulence	<input type="checkbox"/> Extreme

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

None

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)*

Cabin Anti Vibrator that is attached to the frame under left floor board is bent.
Camera mount attached to the Anti Vibrator is bent.
Tail rotor drive shaft cover has sheet metal damage from contact with the red main rotor blade.
Red main rotor blade has paint transfer and scratch from contact with the tail rotor drive shaft cover

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.

On 02/18/2020 at approximately 1445, Rotorcraft Flight Instructor J. Gray and rotorcraft pilot trainee Deputy M. Bonin departed The Hillsborough County (FL) Sheriff's Office Aviation ramp located on the southern end of Tampa Executive Airport (KVDF), in an Airbus AS350B2 helicopter, registration #N188FS, call sign SO4. The purpose of the flight was to conduct emergency procedures training, specifically autorotations with a power recovery, in preparation of M. Bonin obtaining a commercial rotorcraft rating. Prior to departure, it was briefed between CFI Gray and pilot trainee Bonin that the conduct of the training would involve CFI Gray reducing the throttle located between the pilot and copilot seats to the idle position (when the throttle gate is engaged in the idle gate de-tent), and pilot trainee Bonin initiating the maneuver by lowering the collective and adjusting the cyclic to obtain the proper autorotation airspeed, 60 to 65 knots indicated. Completion of the maneuver would involve CFI Gray advancing the throttle to the flight position as the helicopter reached 200 AGL as indicated by the radar altimeter. Trainee Bonin would then initiate a deceleration at the appropriate altitude and terminate the maneuver at a 3 to 5 foot hover height.

With CFI J. Gray in the left seat, and pilot trainee M. Bonin in the right seat/pilot station manipulating the flight controls, helicopter SO4 proceeded to the Peter O' Knight Airport (KTPF) to conduct the autorotation training. Upon arrival at KTPF, CFI J. Gray and pilot trainee M. Bonin conducted approximately 8 to 10 practice autorotations with power recovery, both straight-in and left turn 180 degrees, without incident or concerns. Upon completing the training, SO4 left the Peter O' Knight Airport with pilot trainee M. Bonin on the flight controls, and proceeded back to Tampa Executive Airport. While en route back to Tampa Executive Airport, M. Bonin tuned in the Airport AWOS and received the weather information. He then tuned in the appropriate traffic advisory frequency for the destination airport. On the advisory frequency, we heard an aircraft announce he was several miles to the east of the airport and was planning for a left downwind entry for landing on runway 18. There was also an airplane on parallel taxiway Alpha for runway 18 that was taxiing to the hold short line for runway 18 departure. Prior to arriving at Tampa Executive Airport, CFI J. Gray advised pilot trainee M. Bonin that we would execute a right 180 degree autorotation from 1000ft MSL, with a power recovery to the departure end of runway 18. Pilot trainee Bonin made the appropriate radio call announcing our intention to enter a right downwind for runway 18, and our intention to perform a simulated engine failure to that runway. Upon arrival at the airport, M. Bonin entered a right downwind for runway 18 at an altitude of 1000ft MSL from just south of the airport over the east side of the canal, west of runway 18. At approximately 1549 hours, when the helicopter was abeam of the intended termination point, CFI J. Gray announced he was reaching for the throttle which is located on the floor between the pilot and copilot seats. CFI Gray depressed the gate release and retarded the throttle to the idle position. As pilot trainee Bonin initiated the autorotation descent and made a right turn towards the previously discussed termination point, the low rotor RPM advisory horn, which is a continuous sounding horn, activated indicating that the rotor RPM was below 360. the normal operating RPM for the rotor during an autorotation is 360-410 RPM. There was no initial concern reference the low rotor RPM horn activation, because usually the rotor RPM increases back to the normal range due to centrifugal force when performing a 180 degree autorotation, provided the collective is in the full down position. During this particular maneuver however, the low rotor RPM horn did not extinguish, and sounded throughout the entire 180 degree turn. When M. Bonin completed the turn, the helicopter was lined up over Taxiway Alpha which is the parallel taxiway for runway 18/36. The helicopter was also approaching 400ft AGL with the low rotor RPM horn still activated. At this point CFI Gray and pilot trainee Bonin determined that the maneuver should be terminated and a go around initiated. CFI Gray announced he was reaching for the throttle to restore full engine power. After grabbing the throttle, CFI Gray depressed the gate release and advanced the throttle to the full power position. Immediately after completing this task, M. Bonin announced that he had no power. Fearing that the helicopter was experiencing a condition where the engine was unable to recover the rotor RPM due to the amount of pitch/lift of the rotor blades, CFI Gray reached back to the throttle, released the gate and moved the throttle to ensure that the throttle was in the full power position. It is during this movement of the throttle, that CFI Gray believes that he inadvertently moved the throttle past the idle position, to the point that actually shut down the engine. However, CFI Gray did not initially realize that the engine was shutdown because the low rotor RPM horn was active, and he did not detect the change of the engine noise going from the idle setting to shutoff. Also CFI Gray did not look at the engine instruments located on the Vehicle and Engine management Display (VEMD) and was unable to see the digital NR/N2 gage showing the status of the engine RPM arc. As the helicopter continued the descent with the low rotor RPM horn activated, M. Bonin requested that CFI Gray "get on the controls". CFI Gray left the throttle in the full power position and took the controls to facilitate an actual autorotation landing under low rotor RPM conditions. Due to this low rotor RPM condition, CFI Gray determined that the best

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

Operator/Owner Safety Recommendation

When performing practice autorotations, choose an area, runway etc. that allows enough space and room to complete a successful autorotation if the engine actually quits or is inadvertently shut down.

When performing practice autorotations with termination at a hover in the AS350B2 series helicopter, consider not reducing the throttle to the idle position since the throttle is separate from the collective and requires the instructor or pilot to divide his attention between the flight controls and throttle manipulation. The practice autorotation would be entered by just lowering the collective and entering an autorotation descent with full engine power applied and terminating the maneuver at a hover.

Have Airbus Helicopters, or any other aviation maintenance facility or company develop an audible engine out warning system that would better alert the flight crew to an engine out situation. This would allow the flight crew to better assess that an engine outage occurred and enable them to respond to the condition more efficiently.

Remove the camera ball from the forward mount when doing emergency procedures training.

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

Was there Mechanical Malfunction/Failure? ☐ Yes ☒ No

(If yes, list the name of the part, manufacturer, part no., serial no., and describe the failure.)

**Total Time/Cycles
On Part**

_____ Hours

_____ Cycles

**Time Since This Part
Inspected/Overhauled**

_____ Hours

FUEL & SERVICES INFORMATION**Fuel on Board at Last Takeoff**

(Convert from pounds, as necessary)

80 _____ Gallons

Fuel Type

☐ 80/87

☐ 115/145

☐ Jet B

☐ Other, specify _____

☐ 100 Low Lead

☒ Jet A

☐ JP8

☐ 100/130

☐ Jet A-1

☐ Automotive

Other Services, if Any, Prior to Departure

None

EVACUATION OF AIRCRAFT

Was an emergency evacuation of the aircraft performed? ☐ Yes ☒ No

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

Pilot and Instructor released their respective 4 point harnesses, and exited out their respective cabin doors.

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

Aircraft Registration Number

Manufacturer: _____

Model: _____

Damage to Other Aircraft

☐ Destroyed

☐ Minor

☐ Substantial

☒ None

Registered Owner of Other Aircraft

Name: _____

City: _____

State: _____ ZIP: _____

Country: _____

Pilot of Other Aircraft

Name: _____

City: _____

State: _____ ZIP: _____

Country: _____

ADDITIONAL INFORMATION (Please type or print in ink)

Use this space if additional space is needed for any answers.

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

Date of this Report

mm/dd/yyyy

Name of Pilot/Operator: Jeffery J Gray

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.
ERA20CA106

Reviewed by NTSB Regional Office
ERA

Name of Investigator
Eric M. Gutierrez

Date Report Received
2/23/2020