

NATIONAL TRANSPORTATION SAFETY BOARD

NTSB Form 6120.1

PILOT/OPERATOR AIRCRAFT ACCIDENT/INCIDENT REPORT

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

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

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

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

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

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

A. APPLICABILITY

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

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

INSTRUCTIONS TO PILOTS/OPERATORS FOR COMPLETING THIS FORM

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

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

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

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

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

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

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

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

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

B. DEFINITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

NATIONAL TRANSPORTATION SAFETY BOARD PILOT/OPERATOR AIRCRAFT ACCIDENT/INCIDENT REPORT

This form to be used for reporting civil and public aircraft accidents and incidents

BASIC INFORMATION

Accident/Incident Location

Nearest City/Place: Pacific Ocean State: _____

ZIP: _____ Country: _____

Latitude: _____ Longitude: _____

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

Accident/Incident Date/Time

Date: 01/26/2018 Local Time: 11:25

mm/dd/yyyy

Time Zone: UTC +9

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

AIRCRAFT INFORMATION

Registration Number: N339EV

Manufacturer: Airbus

Model: SA330J

Serial Number: 1285

Year of Manufacture: 1975

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

☒ IFR-Equipped and Certified

☐ Commercial Space Flight

☐ Unmanned Aircraft

Maximum Gross Weight: 16300.0 lbs

Weight at Time of Accident/Incident: 10273.5 lbs

Number of Seats: 11 Flight Crew Seats: 2

Cabin Crew Seats: 0 Passenger Seats: 9

Number of Engines: 2

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

Fuel System Type (Reciprocating)

☐ Carburetor ☐ Fuel-Injected

Engine	Engine Manufacturer	Engine Model/Series	Manufacturer's Serial Number	Date of Mfg. mm/dd/yyyy	Rated Power ☒ Horsepower or ☐ lbs of Thrust	Total Time (hours)	Time Since: Inspection (hours)	Overhaul (hours)
Eng. 1	SAFRAN	TURMO IVC	770		1495	7128.0	55.4	1460.3
Eng. 2	SAFRAN	TURMO IVC	841		1495	14303.0	53.5	1645.5
Eng. 3								
Eng. 4								

Last Inspection Type

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

Date Last Inspection: 04/29/2017

mm/dd/yyyy

Airframe Total Time: 6,689.1 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: Manufacturer's system

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.: C406N-HM

TSO No.: ☐ C91 (121.5 MHz) ☐ C91a (121.5 MHz)

☒ C126 (406 MHz)

Was ELT still mounted in aircraft? ☒ Yes ☐ No

Was ELT still connected to antenna? ☒ Yes ☐ No

Did ELT Activate? ☐ Yes ☒ No

If activated:

Did ELT Aid in Locating Aircraft? ☐ Yes ☐ No

If not activated:

Indicate Reason:

- ☐ Impact Damage
- ☐ Fire Damage
- ☐ Battery Expired/Damaged
- ☐ Unknown

Additional Equipment (Check all that apply)

- ☐ ADS-B
- ☐ Airframe Parachute
- ☐ Angle of Attack Indicator
- ☒ Autopilot
- ☐ Data Recorder
- ☐ Electronic Flight Bag or Handheld Device
- ☐ Electronic Multifunction Display
- ☐ Electronic Primary Flight Display
- ☐ Handheld GPS
- ☐ Heads Up Display
- ☐ Onboard Weather
- ☐ Satellite Tracking Device
- ☐ Stall Warning System
- ☐ Video Recording Device
- ☐ Other, Specify: _____

OWNER/OPERATOR INFORMATION**Registered Aircraft Owner**Name: SQN HELO 7 LLCCity: NEW YORKFractional Ownership Aircraft: ☐ Yes ☒ NoState: NY ZIP: 10005-3743Country: USA**Operator of Aircraft**☐ Same As Registered Owner☐ Same Address as Registered OwnerName: Erickson Helicopters IncorporatedCity: Portland

Doing Business As: _____

State: Oregon ZIP: 97239Air Carrier/Operator Designator (4 Character Code): 9EKACountry: USA**Operating Certificates Held**

(Check all that apply)

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

Regulation Flight Conducted Under

- ☐ FAR 91 ☐ FAR 129 ☐ FAR 415
☐ FAR 103 ☒ FAR 133 ☐ FAR 431
☐ FAR 121 ☐ FAR 135 ☐ FAR 435
☐ FAR 125 ☐ FAR 137 ☐ FAR 437

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

- ☐ Public Aircraft (Select one)
☐ Armed Forces
☐ Federal
☐ State
☐ Local
☐ Unknown

Revenue Operation for FAR 121, 125, 129, 135

(Select one for each group)

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

- ☐ Passenger
☐ Cargo
☐ Mail Contract Only

Purpose of Flight for FAR 91, 103, 133, 137

(Select one)

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

Revenue Sightseeing Flight☐ Yes ☒ No**Air Medical Flight**☐ Yes ☒ No**AIRPORT INFORMATION (Fill in if accident/incident occurred on approach, landing, takeoff, departure, or within 3 miles of an airport)**Airport Name: Not Applicable

Distance From Airport Center: _____ sm

Airport Identifier: _____

Direction From Airport: _____ degrees true

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

Airport Elevation: _____ ft. msl

Runway Information

Runway ID: _____ (L/R/C) Length: _____ ft Width: _____ ft

Runway/Landing Surface (Check all that apply)

- ☐ Asphalt ☐ Grass/Turf ☐ Macadam ☐ Water
☐ Concrete ☐ Gravel ☐ Metal/Wood
☐ Dirt ☐ Ice ☐ Snow ☐ Unknown

Condition of Runway/Landing Surface (Check all that apply)

- ☐ Dry ☐ Snow-Compacted ☐ Water-Calm
☐ Holes ☐ Snow-Crusted ☐ Water-Choppy
☐ Ice Covered ☐ Snow-Dry ☐ Water-Glassy
☐ Rough ☐ Snow-Wet ☐ Wet
☐ Rubber Deposits ☐ Soft
☐ Slush-Covered ☐ Vegetation ☐ Unknown

Approach/Departure Segment (Select one)

- ☐ Taxi ☐ VFR Departure ☐ On Instrument Approach ☐ Downwind ☐ Low Approach
☐ Takeoff ☐ IFR Departure Procedure/Clearance ☐ Landing ☐ Base ☐ Go Around
☐ Initial Climb ☐ 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” 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: Harlan

City of Residence: Roseburg

Middle Initial: J.

State: Oregon ZIP: 97471

Last Name: Dixon

Country: USA

Age at time of Accident/Incident: 51 Date of Birth: [REDACTED]/1967 mm/dd/yyyy

Certificate Number: XXXXXXXXXX

Degree of Injury ☒ None ☐ Fatal ☐ Minor ☐ Unknown ☐ Serious	Seat Occupied ☐ Left ☐ Front ☐ Unknown ☒ Right ☐ Rear ☐ Center ☐ Single	Restraint Type Available ☐ None ☐ Lap only ☐ 3-point ☒ 4-point ☐ 5-point ☐ Unknown Used ☐ None ☐ Lap only ☐ 3-point ☒ 4-point ☐ 5-point ☐ Unknown	Inflatable Restraints ☒ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown
Pilot Certificate(s) <i>(Check all that apply)</i> ☐ None ☒ Flight Instructor ☒ Commercial ☐ US Military ☐ Private ☐ Recreational ☐ Airline Transport ☐ Foreign ☐ Student ☐ Sport ☐ Flight Engineer			

Principal Occupation	Medical Certificate	Medical Certificate Validity	Date of Last Medical
☒ Pilot ☐ Other ☐ Unknown	☐ None ☐ Class 3 ☐ Class 1 ☐ Driver's License (Sport Pilot only) ☒ Class 2 ☐ Unknown	☐ Without limitations/waivers ☐ Unknown ☐ With limitations/waivers ☐ N/A ☒ Special Issuance	<u>09/27/2017</u> <i>mm/dd/yyyy</i>

Medical Certificate Limitations

Not valid for any class after 9/30/2018

Medical Certificate Special Issuance

Diabetes . Authorization for special issuance of second-class airman medical certificate under Title 14 of the CFRs, Section 67.401. Special Issuance letter dated March 13, 2017.

Date of Last Flight Review or Equivalent, Including FAR 121/135 Checks: 09/27/2017 mm/dd/yyyy	Flight Review Aircraft Make: Airbus Model: S330J-AS332
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Airplane Rating(s) (Check all that apply)	Other Aircraft Rating(s) (Check all that apply)	Instrument Rating(s) (Check all that apply)	Instructor Rating(s) (Check all that apply)
☐ None ☒ Single-Engine Land ☐ Single-Engine Sea ☐ Multiengine Land ☐ Multiengine Sea	☐ None ☐ Airship ☐ Balloon ☐ Glider ☐ Gyroplane ☒ Helicopter ☐ Powered Lift	☐ None ☐ Airplane ☒ Helicopter ☐ Powered Lift	☐ None ☐ Airplane Single-Engine ☐ Airplane Multi-Engine ☐ Gyroplane ☐ Powered Lift ☐ Instrument Airplane ☐ Instrument Helicopter ☒ Helicopter ☐ Glider ☐ Sport

Type Ratings Rotorcraft-Helicopter; Instrument Helicopter S-330	Student Endorsements <i>(Include dates)</i>
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Flight Time <i>(Enter appropriate number of hours in each box)</i>	All Aircraft	This Make & Model	Airplane Single Engine	Airplane Multiengine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air
						Actual	Simulated			
Total Time	5,685	406						5,657		
Pilot in Command (PIC)	4,817	406						4,658		
Time as Instructor										
This Make/Model										
Last 90 Days	13	13						13		
Last 30 Days	5	5						5		
Last 24 Hours	0	0						0		

“Flight Crewmember 2” Responsibilities at the Time of Accident/Incident

“Flight Crewmember 2” was pilot flying ☒ Yes ☐ No

First Name: Nyle City of Residence: Boise
Middle Initial: L State: Idaho ZIP: 83705
Last Name: Harrison Country: USA
Age at time of Accident/Incident: 46 Date of Birth: 1971 *mm/dd/yyyy*
Certificate Number:

Degree of Injury ☒ None ☐ Fatal ☐ Minor ☐ Unknown ☐ Serious	Seat Occupied ☒ Left ☐ Front ☐ Unknown ☐ Right ☐ Rear ☐ Center ☐ Single	Restraint Type Available ☐ 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) <i>(Check all that apply)</i> ☐ None ☐ Flight Instructor ☒ Commercial ☐ US Military ☐ Private ☐ Recreational ☐ Airline Transport ☐ Foreign ☐ Student ☐ Sport ☐ Flight Engineer				

Principal Occupation	Medical Certificate	Medical Certificate Validity	Date of Last Medical
☒ Pilot ☐ Other ☐ Unknown	☐ None ☐ Class 3 ☐ Class 1 ☐ Driver's License (Sport Pilot only) ☒ Class 2 ☐ Unknown	☒ Without limitations/waivers ☐ Unknown ☐ With limitations/waivers ☐ N/A ☐ Special Issuance	<u>03/17/2017</u> <i>mm/dd/yyyy</i>

None

N/A

Date of Last Flight Review or Equivalent, Including FAR 121/135 Checks: 07/12/2017 <i>mm/dd/yyyy</i>	Flight Review Aircraft Make: Airbus Model: S330J/AS332
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Airplane Rating(s) (Check all that apply)	Other Aircraft Rating(s) (Check all that apply)	Instrument Rating(s) (Check all that apply)	Instructor Rating(s) (Check all that apply)
☐ None ☒ Single-Engine Land ☐ Single-Engine Sea ☐ Multiengine Land ☐ Multiengine Sea	☐ None ☐ Airship ☐ Balloon ☐ Glider ☐ Gyroplane ☒ Helicopter ☐ Powered Lift	☐ None ☐ Airplane ☒ Helicopter ☐ Powered Lift	☐ None ☐ Airplane Single-Engine ☐ Airplane Multi-Engine ☐ Gyroplane ☐ Powered Lift ☐ Instrument Airplane ☒ Instrument Helicopter ☐ Helicopter ☐ Glider ☐ Sport

Type Ratings Rotocraft - Helicopter; instrument helicopter S-70; S-330 S-330 SIC Privileges only	Student Endorsements <i>(Include dates)</i>
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Flight Time <i>(Enter appropriate number of hours in each box)</i>	All Aircraft	This Make & Model	Airplane Single Engine	Airplane Multiengine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air
						Actual	Simulated			
Total Time	6,382	73						5,851		
Pilot in Command (PIC)	5,239	0								
Time as Instructor										
This Make/Model										
Last 90 Days	21	21						21		
Last 30 Days	8	8						8		
Last 24 Hours	0	0						0		

ADDITIONAL FLIGHT CREWMEMBERS (Exclusive of cabin crew, complete the following information)									
Crew Name and Address					Seat Occupied		Injury		
First Name: <u>Not Applicable</u> City of Residence: _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____					☐ Left ☐ Front ☐ Center ☐ Rear ☐ Right ☐ Single ☐ Unknown ☐ Unknown		☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown		
Pilot Certificate(s) (Check all that apply) ☐ None ☐ Flight Instructor ☐ Commercial ☐ US Military ☐ Private ☐ Recreational ☐ Airline Transport ☐ Foreign ☐ Student ☐ Sport ☐ Flight Engineer					Restraint Type: Available Used ☐ None ☐ None ☐ Lap Only ☐ Lap Only ☐ 3-point ☐ 3-point ☐ 4-point ☐ 4-point ☐ 5-point ☐ 5-point ☐ Unknown ☐ Unknown		Inflatable Restraints ☐ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown		
Type Rating/Endorsement for Accident/Incident Aircraft? ☐ Yes ☐ No			Total Flight Time at the Time of this Accident/Incident: _____ hrs						
Crew Name and Address					Seat Occupied		Injury		
First Name: <u>Not Applicable</u> City of Residence: _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____					☐ Left ☐ Front ☐ Center ☐ Rear ☐ Right ☐ Single ☐ Unknown ☐ Unknown		☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown		
Pilot Certificate(s) (Check all that apply) ☐ None ☐ Flight Instructor ☐ Commercial ☐ US Military ☐ Private ☐ Recreational ☐ Airline Transport ☐ Foreign ☐ Student ☐ Sport ☐ Flight Engineer					Restraint Type: Available Used ☐ None ☐ None ☐ Lap Only ☐ Lap Only ☐ 3-point ☐ 3-point ☐ 4-point ☐ 4-point ☐ 5-point ☐ 5-point ☐ Unknown ☐ Unknown		Inflatable Restraints ☐ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown		
Type Rating/Endorsement for Accident/Incident Aircraft? ☐ Yes ☐ No			Total Flight Time at the Time of this Accident/Incident: _____ hrs						
PASSENGER(S) / OTHER PERSONNEL (Include cabin crew; continue on separate sheet if necessary)									
Name and Address			Seat	Injury	Restraint Type		Inflatable Restraints	Age	
First Name: <u>Not Applicable</u> City : _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____ ☐ Crew ☐ Passenger ☐ Other			☐ Left ☐ Center ☐ Right ☐ Unknown Row: _____	☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown	Available ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown	Used ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown	☐ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown	☐ Under 5 years If Under 5, ☐ Child Restraint ☐ Lap-Held ☐ Unknown	
First Name: <u>Not Applicable</u> City : _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____ ☐ Crew ☐ Passenger ☐ Other			☐ Left ☐ Center ☐ Right ☐ Unknown Row: _____	☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown	Available ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown	Used ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown	☐ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown	☐ Under 5 years If Under 5, ☐ Child Restraint ☐ Lap-Held ☐ Unknown	
First Name: <u>Not Applicable</u> City : _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____ ☐ Crew ☐ Passenger ☐ Other			☐ Left ☐ Center ☐ Right ☐ Unknown Row: _____	☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown	Available ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown	Used ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown	☐ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown	☐ Under 5 years If Under 5, ☐ Child Restraint ☐ Lap-Held ☐ Unknown	
First Name: <u>Not Applicable</u> City : _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____ ☐ Crew ☐ Passenger ☐ Other			☐ Left ☐ Center ☐ Right ☐ Unknown Row: _____	☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown	Available ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown	Used ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown	☐ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown	☐ Under 5 years If Under 5, ☐ Child Restraint ☐ Lap-Held ☐ Unknown	

FLIGHT ITINERARY INFORMATION

Last Departure Point Airport ID: _____ City: _____ State: _____ Country: _____	Time of Departure Time: _____ Time Zone: _____	Destination Airport ID: _____ City: _____ State: _____ Country: _____	Type Flight Plan Filed ☐ None ☐ VFR/IFR ☐ Company VFR ☐ IFR ☐ Military VFR ☐ Unknown ☐ VFR Activated? ☐ Yes ☐ No ☐ Unknown
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Type of ATC Clearance/Service (Check all that apply)

☐ None	☐ Special VFR	☐ Special IFR	☐ VFR Flight Following	☐ Cruise
☐ VFR	☐ IFR	☐ VFR On Top	☐ Traffic Advisory	☐ Unknown / NA

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

☐ Class A ☐ Class B ☐ Class C ☐ Class D ☐ Class E	☐ Class G ☐ Demo Area ☐ Warning Area ☐ Prohibited Area ☐ Restricted Area	☐ Military Operations Area (MOA) ☐ Airport Advisory Area ☐ Jet Training Area ☐ TRSA ☐ FAR 93	☐ Special ☐ Air Traffic Control Area ☐ Unknown	Altitude of In-Flight Occurrence: _____ ft msl
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WEATHER INFORMATION AT THE ACCIDENT/INCIDENT SITE

Source of Pilot Weather Information

(Check all that apply)

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

Weather Observation Facility

Facility ID: _____
 Observation Time: _____
 Time Zone: _____
 Distance from Accident Site: _____ 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

_____ ft agl

Ceiling

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

Ceiling Height

_____ ft agl

Temperature: 28 (C) or _____ (F)

Dew Point: _____ (C) or _____ (F)

Altimeter Setting: 29.89 in. Hg
or _____ MB

Wind Direction

☒ Variable

-or-
Direction: _____ degrees true

Wind Speed

☐ Calm
☒ Light and Variable

-or-
Speed: _____ kts

Wind Gusts

☒ Not Gusting

-or-
Speed: _____ kts

Visibility 25 miles

RVR: _____ feet

RVV: _____ miles

Density Altitude: _____ ft

Intensity of Precipitation

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

Type of Precipitation (Check all that apply)

☒ None	☐ Drizzle	☐ Freezing Rain
☐ Rain	☐ Ice Pellets	☐ Snow Shower
☐ Snow	☐ Snow Pellets	☐ Ice Pellets Shower
☐ Hail	☐ Snow Grains	☐ Freezing Drizzle
☐ Rain Showers	☐ Ice Crystals	

Restriction to Visibility (Check all that apply)

☒ None	☐ Fog
☐ Blowing Dust	☐ Ground Fog
☐ Blowing Sand	☐ Haze
☐ Blowing Snow	☐ Ice Fog
☐ Blowing Spray	☐ Smoke
☐ Dust	☐ Unknown

Icing Forecast

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

Icing Actual

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

Turbulence

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

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

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)*

At the time of the incident only one tail rotor drive shaft that was severed, and one tail rotor cowling that was damaged. There was also a small penetration the the top of the tail boom which is considered a secondary structure area.

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

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

N339EV had just landed on the USNS Wally Schirra T-AKE8, and had chocks and chains installed. (Red deck) The engineers came out and did a fresh water rinse on the #1 engine. The pilot checked the NG's, #1 84% and #2 which was pulled back at 62% before taking a hold of the # 2 Throttle. The PIC verified with the co-pilot that he did in fact have the #2 throttle lever Identified. The PIC told the co-pilot he was bringing the #2 throttle up. Slowly the PIC brought the #2 throttle forward, and observed a rise in T-4 and a corresponding rise in the Ng of the #2 engine. At the same time, the PIC observed the Ng of the #1 engine decrease. There was no change in the Nr at 270. Then taking the #1 throttle in hand the PIC requested verification that he had the #1 throttle, which was received from the Co-Pilot. The PIC then notified the co-pilot that the PIC was bringing back the #1 throttle to ground Idle. After verifying that the #1 engine was at ground Idle, the PIC looked at the clock. It said 1:29 (One minute 29 seconds) and gave the engineer the signal to start to give water to rinse the engine.

The PIC saw the lead engineer squeeze the trigger on the wand and then there was what the PIC thought may have been a compressor stall, (rumbling sound) followed by a rough shudder through the airframe. The PIC looked over at the lead engineer in surprise and the lead engineer had already released the trigger on the wand. The PIC looked back at the instruments in the cockpit. Everything looked normal for the condition the controls were in at the time. About that time there was another shudder through the airframe, in the PIC's peripheral vision, he saw the lead engineer was moving away from the aircraft. The PIC heard a change in the tone of the engine and gear box noise. The PIC looked back at the gauges and saw that the Nr. had started to rise and the Ng of the #2 engine had started to increase also. The PIC thought that the engine had started to runaway so he reached up and pulled the #2 engine back to flight Idle to slow it down.

At this point the pilots still did not know the cause of the malfunction. The PIC told the Co-Pilot that he was going to just shut the engines down. The PIC hesitated a half second wondering as to whether or not he should allow the engine to cool, but decided it would be best not to wait. At this point the PIC secured the Boost pumps and the engines control switches both to the off position. The PIC waited for the Nr to slow to below 120 rpm and applied the rotor brake. The rotor brake did not work and commented that to the Co-Pilot. He pointed out the rotor brake control switch was still in the flight position not in the ground position. After repositioning the switch, the rotor brake was applied to stop the rotor system. When the main rotor stopped, the PIC took off his flight helmet and asked the lead engineer what he thought had happened. The lead engineer was looking toward the tail rotor and said that the tail rotor was still spinning.

The Co-Pilot finished shutting down the rest of the switches as the PIC exited the aircraft and walked back to the tail rotor. The PIC reached up to the bottom blade and moved it and found there was no resistance. The PIC then went into the hanger to remove the rest of his flight gear while a ladder was being brought out to the back of the helicopter.

After the PIC returned to the aircraft, the engineers had part of the tail rotor drive shaft cowling's open. There was a large slash across the cowling that covers the last drive shaft that connects to the Intermediate Gear Box. Upon inspection the # 7 tail rotor drive shaft section (total of 8 drive shafts in the tail rotor system) was in two major parts and about four smaller parts. The top of the tail boom showed scrapes and gouge marks that appear to have come from the drive shaft while it was turning, along with a dime size puncture in the tail boom structure.

From the Start of the incident to the start of the inspection approximately 5 min had passed.

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

Operator/Owner Safety Recommendation

At this time the cause of the incident is undetermined. No separate action on the part of the flight crew could have changed the incident or prevented it from occurring.

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.)*

Tail rotor drive shaft. P/N 330A34-1005-08N S/N TAC-0117 manufactured by Airbus. The tail rotor drive shaft sheared in the middle with approximately 5 inches of material sheared off in the middle. The shaft is on condition last being modified 08/14/2000. The only time controlled portion for replacement is the bearing which replaced 123.9 hours ago. The shaft has an inspection every P2 inspection (400 hours / 15 months) and that was the time since last inspection annotated to the right.

Total Time/Cycles On Part2549.6 HoursN/A Cycles**Time Since This Part Inspected/Overhauled**49.8 Hours**FUEL & SERVICES INFORMATION****Fuel on Board at Last Takeoff***(Convert from pounds, as necessary)*413 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 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

Not Applicable

OTHER AIRCRAFT – COLLISION (If air or ground collision occurred, complete this section for other aircraft)**Aircraft Registration Number**Not Applicable**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

20/05/2018

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 Report

Name: Christopher J Callahan

Title: Fleet Manager / Program Manager

Signature: Christopher J Callahan

Digitally signed by Christopher J Callahan
DN: cn=Christopher J Callahan, o=NTSB
Date: 2018.02.06 10:20:55 -0800

-- or --



Check here to electronically sign this document

FOR NTSB USE ONLY

NTSB Accident/Incident No.

ANC18LA020

Reviewed by NTSB Regional Office

ALASKA

Name of Investigator

S. WILLIAMS

Date Report Received

2/7/2018