

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 cowl, 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: Los Angeles International Airport State: CA
 ZIP: _____ Country: USA
 Latitude: 33-56-32.9800N Longitude: 118-24-28.9800W
(Enter in decimal degrees or degrees:minutes:seconds)

Accident/Incident Date/Time

Date: 08/13/2018 Local Time: 04:35
mm/dd/yyyy Time Zone: Pacific

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

AIRCRAFT INFORMATION

Registration Number: N204HA

Manufacturer: Airbus

Model: A321-271N

Serial Number: 7959

Year of Manufacture: 2017

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

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

Maximum Gross Weight: 207,014 lbs

Weight at Time of Accident/Incident: 165,766 lbs

Number of Seats: 200 Flight Crew Seats: 4

Cabin Crew Seats: 7 Passenger Seats: 189

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
- ☐ Emergency Float
- ☐ Float
- ☐ Hull
- ☐ High Skid
- ☐ Skid
- ☐ Ski
- ☐ 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. <i>mm/dd/yyyy</i>	Rated Power ☐ Horsepower or ☒ lbs of Thrust	Total Time (hours)	Time Since: Inspection (hours)	Overhaul (hours)
Eng. 1	Pratt & Whitney	PW1133GA-JM	P770282	01/2017	33,000	3346	1731	3346
Eng. 2	Pratt & Whitney	PW1133GA-JM	P770302	09/2017	33,000	1878	1731	1878
Eng. 3								
Eng. 4								

Last Inspection Type

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

Date Last Inspection: 08/10/2018
mm/dd/yyyy

Airframe Total Time: 1971:07 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: Engine, APU, and Cargo Compartment Halon

Propeller 1

- ☐ Fixed Pitch
- ☐ Controllable Pitch
- ☐ Ground Adjustable

Manufacturer: N/A
 Model: _____

Propeller 2

- ☐ Fixed Pitch
- ☐ Controllable Pitch
- ☐ Ground Adjustable

Manufacturer: N/A
 Model: _____

ELT Installed: ☒ Yes ☐ No

If Yes:

ELT Manufacturer: Honeywell

Model or Part No.: RESCU 406

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: Hawaiian Airlines, Inc.City: HonoluluFractional Ownership Aircraft: ☐ Yes ☐ NoState: Hawaii ZIP: 96819Country: USA**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): HALA

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: Los Angeles International Airport

Distance From Airport Center: _____ sm

Airport Identifier: KLAX

Direction From Airport: _____ degrees true

Proximity to Airport: ☐ Off Airport/Airstrip ☒ On Airport/Airstrip ☐ N/AAirport Elevation: 127 ft. msl**Runway Information**Runway ID: 06R (L/R/C) Length: 10885 ft Width: 150 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 ☐ Final ☐ 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 ☐ Visual
☐ VOR/DME ☐ Localizer Only ☐ Contact
☐ TACAN ☐ LOC-back course ☐ Circling
☐ RNAV ☐ 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: Johnathan

City of Residence: [REDACTED]

Middle Initial: R.

State: HI ZIP: [REDACTED]

Last Name: Malloy

Country: USA

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

Certificate Number: [REDACTED]

Degree of Injury ☒ None ☐ Fatal ☐ Minor ☐ Unknown ☐ Serious	Seat Occupied ☐ Left ☐ Front ☐ Unknown ☒ Right ☐ Rear ☐ Center ☐ Single	Restraint Type Available ☐ None ☐ Lap only ☐ 3-point ☐ 4-point ☒ 5-point ☐ Unknown Used ☐ None ☐ Lap only ☐ 3-point ☐ 4-point ☒ 5-point ☐ Unknown	Inflatable Restraints ☒ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown
Pilot Certificate(s) (Check all that apply) ☐ None ☐ Flight Instructor ☐ Commercial ☐ US Military ☐ Private ☐ Recreational ☒ Airline Transport ☐ Foreign ☐ Student ☐ Sport ☐ Flight Engineer			
Principal Occupation ☒ Pilot ☐ Other ☐ Unknown	Medical Certificate ☐ None ☐ Class 3 ☒ Class 1 ☐ Driver's License (Sport Pilot only) ☐ Class 2 ☐ Unknown	Medical Certificate Validity ☒ Without limitations/waivers ☐ Unknown ☐ With limitations/waivers ☐ N/A ☐ Special Issuance	Date of Last Medical <u>08/06/2018</u> mm/dd/yyyy

Medical Certificate Limitations

NONE

Medical Certificate Special Issuance

NONE

Date of Last Flight Review
or Equivalent, Including
FAR 121/135 Checks: 01/04/2018
mm/dd/yyyy

Flight Review Aircraft

Make: Airbus

Model: A320 (SIM)

Airplane Rating(s) (Check all that apply) ☐ None ☐ Single-Engine Land ☐ Single-Engine Sea ☒ Multiengine Land ☐ Multiengine Sea	Other Aircraft Rating(s) (Check all that apply) ☒ None ☐ Airship ☐ Balloon ☐ Glider ☐ Gyroplane ☐ Helicopter ☐ Powered Lift	Instrument Rating(s) (Check all that apply) ☐ None ☒ Airplane ☐ Helicopter ☐ Powered Lift	Instructor Rating(s) (Check all that apply) ☐ None ☒ Airplane Single-Engine ☐ Airplane Multi-Engine ☐ Gyroplane ☐ Powered Lift ☒ Instrument Airplane ☐ Instrument Helicopter ☐ Helicopter ☐ Glider ☐ Sport
Type Ratings A-320; BE-1900; ERJ 170/190			Student Endorsements (Include dates)

Flight Time (Enter appropriate number of hours in each box)	All Aircraft	This Make & Model	Airplane Single Engine	Airplane Multiengine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air
						Actual	Simulated			
Total Time	3,562	169	506	3,029	568	216	46			
Pilot in Command (PIC)	1,058	0	450	600	125	75	0			
Time as Instructor	277	0	277	0	75	5	0			
This Make/Model					24	5	0			
Last 90 Days	126	126	0	126	18	1	0			
Last 30 Days	60	60	0	60	11	1	0			
Last 24 Hours	0	0	0	0	0	0	0			

"FLIGHT CREWMEMBER 2" INFORMATION

"Flight Crewmember 2" Responsibilities at the Time of Accident/Incident

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

"Flight Crewmember 2" was pilot flying ☐ Yes ☒ No

"Flight Crewmember 2" Identification

First Name: Roger

City of Residence:

Middle Initial: J

State: HI ZIP:

Last Name: Cabral

Country: USA

Age at time of Accident/Incident: 45 Date of Birth: mm/dd/yyyy

Certificate Number:

Degree of Injury ☒ None ☐ Fatal ☐ Minor ☐ Unknown ☐ Serious	Seat Occupied ☒ Left ☐ Front ☐ Unknown ☐ Right ☐ Rear ☐ Center ☐ 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>☐ None</td> <td>☐ None</td> </tr> <tr> <td>☐ Lap only</td> <td>☐ Lap only</td> </tr> <tr> <td>☐ 3-point</td> <td>☐ 3-point</td> </tr> <tr> <td>☐ 4-point</td> <td>☐ 4-point</td> </tr> <tr> <td>☒ 5-point</td> <td>☐ 5-point</td> </tr> <tr> <td>☐ Unknown</td> <td>☐ Unknown</td> </tr> </table>	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
Available	Used																
☐ None	☐ None																
☐ Lap only	☐ Lap only																
☐ 3-point	☐ 3-point																
☐ 4-point	☐ 4-point																
☒ 5-point	☐ 5-point																
☐ Unknown	☐ Unknown																
Pilot Certificate(s) (Check all that apply) ☐ None ☐ Flight Instructor ☒ Commercial ☐ US Military ☐ Private ☐ Recreational ☒ Airline Transport ☐ Foreign ☐ Student ☐ Sport ☒ Flight Engineer																	
Principal Occupation ☒ Pilot ☐ Other ☐ Unknown	Medical Certificate ☐ None ☐ Class 3 ☒ Class 1 ☐ Driver's License (Sport Pilot only) ☐ Class 2 ☐ Unknown	Medical Certificate Validity ☒ Without limitations/waivers ☐ Unknown ☐ With limitations/waivers ☐ N/A ☐ Special Issuance	Date of Last Medical <u>04/18/2018</u> mm/dd/yyyy														

Medical Certificate Limitations

NONE

Medical Certificate Special Issuance

NONE

Date of Last Flight Review or Equivalent, Including FAR 121/135 Checks:
08/17/2018
 mm/dd/yyyy

Flight Review Aircraft

Make: Airbus

Model: A321neo

Airplane Rating(s) (Check all that apply) ☐ None ☒ Single-Engine Land ☐ Single-Engine Sea ☒ Multiengine Land ☐ Multiengine Sea	Other Aircraft Rating(s) (Check all that apply) ☐ None ☐ Airship ☐ Balloon ☐ Glider ☐ Gyroplane ☐ Helicopter ☐ Powered Lift	Instrument Rating(s) (Check all that apply) ☐ None ☒ Airplane ☐ Helicopter ☐ Powered Lift	Instructor Rating(s) (Check all that apply) ☒ None ☐ Airplane Single-Engine ☐ Airplane Multi-Engine ☐ Gyroplane ☐ Powered Lift ☐ Instrument Airplane ☐ Instrument Helicopter ☐ Helicopter ☐ Glider ☐ Sport
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Type Ratings

B717, A321

Student Endorsements (Include dates)

Flight Time (Enter appropriate number of hours in each box)	All Aircraft	This Make & Model	Airplane Single Engine	Airplane Multiengine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air
						Actual	Simulated			
Total Time	12,700	200	300	12,400						
Pilot in Command (PIC)	7,700	200	200	7,500						
Time as Instructor										
This Make/Model										
Last 90 Days		160								
Last 30 Days		49								
Last 24 Hours		11								

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

Crew Name and Address		Seat Occupied	Injury
First Name: <u>N/A</u>	City of Residence: _____	☐ Left ☐ Front	☐ None
Middle Initial: _____	State: _____ ZIP: _____	☐ Center ☐ Rear	☐ Minor
Last Name: _____	Country: _____	☐ Right ☐ Single	☐ Serious
		☐ Unknown	☐ Fatal
			☐ Unknown
Pilot Certificate(s) (Check all that apply)		Restraint Type:	Inflatable Restraints
☐ None	☐ Flight Instructor	Available	Used
☐ Private	☐ Recreational	☐ None	☐ None
☐ Student	☐ Sport	☐ Lap Only	☐ Lap Only
☐ Commercial	☐ Airline Transport	☐ 3-point	☐ 3-point
☐ US Military	☐ Foreign	☐ 4-point	☐ 4-point
☐ Flight Engineer		☐ 5-point	☐ 5-point
		☐ Unknown	☐ Unknown
Type Rating/Endorsement for Accident/Incident Aircraft? ☐ Yes ☐ No		Total Flight Time at the Time of this Accident/Incident: _____ hrs	

Crew Name and Address		Seat Occupied	Injury
First Name: <u>N/A</u>	City of Residence: _____	☐ Left ☐ Front	☐ None
Middle Initial: _____	State: _____ ZIP: _____	☐ Center ☐ Rear	☐ Minor
Last Name: _____	Country: _____	☐ Right ☐ Single	☐ Serious
		☐ Unknown	☐ Fatal
			☐ Unknown
Pilot Certificate(s) (Check all that apply)		Restraint Type:	Inflatable Restraints
☐ None	☐ Flight Instructor	Available	Used
☐ Private	☐ Recreational	☐ None	☐ None
☐ Student	☐ Sport	☐ Lap Only	☐ Lap Only
☐ Commercial	☐ Airline Transport	☐ 3-point	☐ 3-point
☐ US Military	☐ Foreign	☐ 4-point	☐ 4-point
☐ Flight Engineer		☐ 5-point	☐ 5-point
		☐ Unknown	☐ 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>Lakesha</u> City: <u>██████████</u>	☐ Left ☐ Center ☐ Right ☐ Unknown	☒ 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
Middle Initial: <u>T</u> State: <u>HI</u> ZIP: <u>██████████</u>	Row: <u>FA2</u>					
Last Name: <u>Powers</u> Country: <u>USA</u>	☒ Crew ☐ Passenger ☐ Other					
First Name: <u>Kelan</u> City: <u>██████████</u>	☐ Left ☐ Center ☐ Right ☐ Unknown	☒ 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
Middle Initial: <u>R</u> State: <u>HI</u> ZIP: <u>██████████</u>	Row: <u>FA1</u>					
Last Name: <u>Peters</u> Country: <u>USA</u>	☒ Crew ☐ Passenger ☐ Other					
First Name: <u>Angelo</u> City: <u>██████████</u>	☐ Left ☐ Center ☐ Right ☐ Unknown	☒ 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
Middle Initial: <u>A</u> State: <u>HI</u> ZIP: <u>██████████</u>	Row: <u>FA5</u>					
Last Name: <u>Agtarap</u> Country: <u>USA</u>	☒ Crew ☐ Passenger ☐ Other					
First Name: <u>Brandon</u> City: <u>██████████</u>	☐ Left ☐ Center ☐ Right ☐ Unknown	☒ 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
Middle Initial: <u>K</u> State: <u>HI</u> ZIP: <u>██████████</u>	Row: <u>FA3</u>					
Last Name: <u>Pontes</u> Country: <u>USA</u>	☒ Crew ☐ Passenger ☐ Other					

FLIGHT ITINERARY INFORMATION

Last Departure Point Airport ID: <u>PHOG</u> City: <u>Kahalui, Maui</u> State: <u>Hawaii</u> Country: <u>USA</u>	Time of Departure Time: <u>20:48</u> Time Zone: <u>HST</u>	Destination Airport ID: <u>KLAX</u> City: <u>Los Angeles</u> State: <u>California</u> Country: <u>USA</u>	Type Flight Plan Filed ☐ None ☐ VFR/IFR ☐ Company VFR ☒ IFR ☐ Military VFR ☐ Unknown ☐ VFR Activated? ☒ Yes ☐ No ☐ Unknown
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Type of ATC Clearance/Service (Check all that apply) ☐ None ☐ Special VFR ☐ Special IFR ☐ VFR Flight Following ☐ Cruise ☐ VFR ☒ IFR ☐ VFR On Top ☐ Traffic Advisory ☐ Unknown / NA			
Airspace where the accident/incident occurred (Check all that apply) ☐ Class A ☐ Class 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

Source of Pilot Weather Information (Check all that apply) ☒ National Weather Service ☒ Company ☐ Flight Service Station ☐ Military ☐ TV/Radio ☐ Internet ☐ Automated Report ☐ None ☐ Commercial Weather Service (DUATS) ☐ Unknown ☐ On-Board Weather	Weather Observation Facility Facility ID: <u>KLAX</u> Observation Time: <u>131353Z</u> Time Zone: <u>Pacific</u> Distance from Accident Site: <u>0</u> nm Direction from Accident Site: <u>N/A</u> degrees true
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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 <u>1500</u> ft agl	Ceiling ☒ None (Clear) ☐ Obscured ☐ Broken ☐ Indefinite ☐ Overcast ☐ Unknown Ceiling Height _____ ft agl
Temperature: <u>21</u> (C) or <u>70</u> (F) Dew Point: <u>18</u> (C) or <u>64</u> (F) Altimeter Setting: <u>A2999</u> in. Hg or _____ MB	

Wind Direction ☐ Variable - or - Direction: <u>0</u> degrees true	Wind Speed ☒ Calm ☐ Light and Variable - or - Speed: <u>0</u> kts	Wind Gusts ☒ Not Gusting - or - Speed: _____ kts	Visibility <u>10</u> miles RVR: _____ feet RVV: _____ miles Density Altitude: <u>1061</u> ft
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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
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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
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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
☐ Minor
☒ Substantial
☐ Destroyed
☐ Unknown

Aircraft Fire

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

Aircraft Explosion

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

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

Tail strike damage. The visible skin damage is in the pressurized area. Longitudinally, the damage is between frames 62 and 68. Laterally, the damage is from stringers L42 to R42. In addition to the damaged skin sections, several stringers, tie clips, frame sections, and frame cross beams are deformed or are exhibiting deflection due to compressive loads. No aircraft systems have been affected by the impact.

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.

Captain - Pilot Monitoring/Pilot Not Flying

The flight was normal, F/O was the flying pilot. We discussed that it was his second landing, but he's flown into LAX just recently on the same approach. The descent and approach was normal.

I do not recall hearing the 2500 ft call, I think we were so busy configuring, slowing and communicating. We then got an ECAM around 2000 ft, NAV - GPWS Fault. We performed the ECAM actions, and it says to turn the GPWS off. We then continued with landing checklist, there was no landing memo blue, so I continued with the checklist per each bullet points, calling and checking if each was complete and it was. By then we were less than 1000 ft AGL, not too sure if there was a "1000" call. The ILS 6R was being flown, on LOC and on GS, no deviations, normal minor corrections to remain on profile. Call-out at "100 Above" at 416 ft; DA 316 ft.

I'm thinking okay the call-outs are there, and F/O called continue. The flight profile was normal, no major deviations, unusual attitude, or corrections. When we got near the runway, there were no call-outs to help with our depth perception, so we touched down with no flare and no retard of the throttles from the F/O. It caught both of us by surprise, but the touchdown firmness did not seem out of the ordinary. The aircraft bounced a little, and I think during the bounce he pulled back on the side stick, and I said "Pitch!! Lower your nose!" He lowered it and we continued with our normal procedures and call-outs, we transferred control and exited the runway. Once taxiing, the FCC started going crazy!!!! Master warning - Stall alerts, multiple master warning and caution alerts, landing gear, hydraulic, too much to remember!!! All the systems were up and running as normal, so therefore it was concluded that the computer systems were faulty and weird spurious signals. That was our write up and biggest concern!!! We had no idea that we hit the tail, if we had known we would have definitely written it up. We called maintenance to come and take a look at our computer issues. They were surprised too at all the issues that were going on.

First Officer - Pilot Flying

The event began around 0445 local time in Los Angeles, CA. The weather was VFR with only some scattered clouds around 1500ft AGL. It was still dark out. I was the flying pilot. While established on the ILS to 06R at LAX, we received a GPWS fail ECAM around 1500ft. We performed the ECAM actions which instructed us to turn off the GPWS. The approach continued normally and was stabilized. At the time all other systems seemed to be functioning properly (in hindsight, I do not recall hearing the 2500ft, 1000ft, or 500ft RA call-outs). The 100ft RA call-out was received and we continued. As we approached the ground (approximately 30-50ft), it became apparent that the aircraft was not giving the normal call-outs (50, 40, 30, etc.). By the time I noticed this there was minimal time to react. I did my best to adjust the attitude in order to mitigate was sure to be firm landing. We touched down firmly and I perceived the aircraft to bounce. The pitch attitude increased and I did my best to lower the nose. No "Pitch" call-outs were received from the aircraft. Although the nose was high, I assumed to be within tolerances. On the roll-out, multiple ECAMS and alerts were received. The stall warning was one alert that would continue to go off multiple times on the taxi in. ECAMS included thrust reverse fault, blue hydraulic low pressure, engine one and two fail, and many others that are difficult to recall at this time. By the time we taxied to the gate, all ECAMS had cleared themselves with the exception of a GPWS and RA ECAM. These alerts/ECAMS we perceived to be a computer issue. We called maintenance and did not hear any abnormal reports from flight attendants or passengers about the landing that would indicate a tail strike. Neither myself or the captain felt anything that would indicate a tail strike.

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

Operator/Owner Safety Recommendation

- Airbus OEB55 addresses DLRA 2100 radio altimeter (RA) issues when operating over calm water. The only active indication of thailure is a GPWS Fault ECAM message. There is a passive indication in that none of the expected aural auto-alert altitude call-outs are sounded. In addition, the Airbus flight laws don't change to "Flare LAW" if RA data is invalid. The aircraft doesn't know that it's about to land so the trim and flight control sensitivity do not change.
- Airbus should provide a method that will easily and positively identify to the pilots that RA data is not available rather than depending on them to notice the absence of altitude call-outs.
- HA will add OEB discussion as part of the approach briefing when applicable.
- HA will re-emphasize bounced landing recovery techniques and tail strike awareness.
- Addressing OEB conditions on Airbus fleets in a timely manner. OEBs stagnate instead of being properly addressed by Airbus, e.g. some on the A330 have been in place since we received the aircraft a decade ago.

Actions Taken:

- Fleet Captain memo issued immediately for crew awareness.
- Completed debrief with crew and HA management.
- In-depth discussion at all Check Airman meeting.
- Simulator remedial training for the crew: Bounced landings, landings with RA failures in direct law, OEB briefings.
- Tail strike awareness training (PF and PM training).
- Developing in-depth Safety Newsletter covering significant events.
- HA has removed all DLRA 2100s and retrofitted all A321 with old DLRA 900, thus engineering the hazard out of the operation.

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)

6,000 Gallons

Fuel Type

☐ 80/87☐ 100 Low Lead☐ 100/130☐ 115/145☐ Jet A☒ Jet A-1☐ Jet B☐ JP8☐ Automotive☐ 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

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.

Analysis:

- OGG - LAX (red eye flight following DH HNL-OGG)
- No deferred items on the aircraft
- Approaching KLAX on RWY 06R (Over calm water)
- Calm winds, unrestricted visibility, cloud layer around 1500 ft
- Crew cleared for ILS approach RWY 06R
- @2500' no visual or aural indications from RA
- @1500' ECAM NAV GPWS Fault
 - Crew complied with ECAM action (GPWS to OFF).
 - Crew first awareness of an abnormal condition
- While completing the landing checklist, crew noticed landing memo not present on E/WD.
 - Crew accomplished the expanded landing checklist with the paper checklist. (SOP)
- @1000' AGL no aural or visual indications from RA.
- @ 400' AGL the PLI was not displayed on the PFD.
- @ 416' MSL the "100 above" minimums call-out was received. (Barometric Altimeter function)
- @316' MSL the "minimums" call-out was received. (Barometric Altimeter function)
- No aural or visual indications from 50' to touchdown were received from the RA.
- @20' AGL no aural "Retard" call-out was received.
- A firm touchdown occurred with thrust still set, resulting in a bounced landing.
- A second touchdown occurred at higher pitch attitude, resulted in the tail section making contact with the runway.
- After exiting the runway, numerous ECAM warnings were displayed due to FWC stuck in approach phase:
 - ENG REV SET
 - ENG 1 REVERSE UNLOCKED
 - ENG 2 REVERSE UNLOCKED
 - NAV TCAS FAULT
 - L/G SHOCK ABSORBER FAULT
 - ANTI ICE CAPT TAT
 - ANTI ICE F/O TAT
 - ENG 1 SHUT DOWN
 - ENG ALL ENGINES FAILURE

Contributing Factors:

- Environmental conditions: Night, calm winds, calm water.
- Aircraft systems: N204HA is equipped with RA LRA2100. Flare law not active changing the pitch feel for the PF. No PLI visual or aural alert causing reduced tail strike awareness.
- Recency of landing experience. (2nd aircraft landing as PF in 6 months due to new fleet type and flying with "High Minimums" Captains)
- Crew fatigue: Long duty day with a deadhead leg from HNL to OGG, followed by a night flight.
- Crews are trained to make verbal callouts when the auto-callout system fails. Lack of ECAM warning related to the radio altimeter system and failure to recognize the OEB condition (lack of RA).
- Crews are trained for bounced landing recovery with flare law active. (Not in normal law)
- Unable to replicate similar conditions in training (simulator incapable)

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

Date of this Report

09/07/2018
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:** Jim VanDerKamp**Title:** Sr. Dir. - Operations Safety**Signature:** _____

-- or -- ☒ Check here to electronically sign this document

FOR NTSB USE ONLY**NTSB Accident/Incident No.**DCA18CA283**Reviewed by NTSB Regional Office**WASHINGTON D.C**Name of Investigator**J. Lovell**Date Report Received**9/7/2018