

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: Santa Barbara Airport (KSBA) State: CA
 ZIP: 93117 Country: United States
 Latitude: N34°25.57' Longitude: W119°50.49'
(Enter in decimal degrees or degrees minutes seconds)

Accident/Incident Date/Time

Date: 05/02/2023 Local Time: 1133 am
mm/dd/yyyy Time Zone: Pacific

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

AIRCRAFT INFORMATION

Registration Number: C-GXGS

Manufacturer: Sean Derosier

Model: G202

Serial Number: 061

Year of Manufacture: 2003

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

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

Maximum Gross Weight: 1850 lbs

Weight at Time of Accident/Incident: 1672 lbs

Number of Seats: 2 Flight Crew Seats: 1

Cabin Crew Seats: 0 Passenger Seats: 1

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. <i>mm/dd/yyyy</i>	Rated Power ☒ Horsepower or ☐ lbs of Thrust	Total Time <i>(hours)</i>	Time Since: Inspection <i>(hours)</i> Overhaul <i>(hours)</i>
Eng 1	Aerosport Power	IO-360-EXP	344	05/21/2020	200	81.3	81.3
Eng 2							
Eng 3							
Eng 4							

Last Inspection Type

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

Date Last Inspection: 05/10/2022
mm/dd/yyyy

Airframe Total Time: 1090.7 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: Handheld, interior mounted

Propeller 1

- ☐ Fixed Pitch
☒ Controllable Pitch
☐ Ground Adjustable

Manufacturer: Whirl Wind Aviation

Model: 200C

Propeller 2

- ☐ Fixed Pitch
☐ Controllable Pitch
☐ Ground Adjustable

Manufacturer: _____

Model: _____

ELT Installed: ☒ Yes ☐ No

If Yes

ELT Manufacturer: AmeriKing

Model or Part No.: AK450

TSO No.: ☐ OC91 (121.5 MHz) ☒ OC91a (121.5 MHz)
☐ OC126 (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: <u>MKT Aerobatics Ltd</u> Fractional Ownership Aircraft: ☐ Yes ☒ No		City: <u>London</u> State: <u>Ontario</u> ZIP: <u>N6G 1N6</u> Country: <u>Canada</u>	
Operator of Aircraft ☒ Same As Registered Owner Name: _____ Doing Business As: _____ Air Carrier/Operator Designator (4 Character Code): _____		☒ Same Address as Registered Owner City: _____ State: _____ ZIP: _____ Country: _____	
Operating Certificates Held <i>(Check all that apply)</i> ☐ 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 <i>(Select one)</i> ☐ Armed Forces ☐ Federal ☐ State ☐ Local ☐ Unknown	Revenue Operation for FAR 121, 125, 129, 135 <i>(Select one for each group)</i> ☐ Scheduled or Commuter ☐ Non-Scheduled or Air Taxi ☐ Passenger ☐ Cargo ☐ Mail Contract Only ☐ Domestic ☐ International Purpose of Flight for FAR 91, 103, 133, 137 <i>(Select one)</i> ☐ Aerial Application ☐ Aerial Observation ☐ Air Drop ☐ Air Race/Show ☐ Banner Tow ☐ Business ☐ Executive/Corporate ☐ External Load ☐ Ferry ☐ Firefighting ☐ Flight Test ☐ Glider Tow ☐ Instructional ☐ Other Work Use ☐ Personal ☒ Positioning ☐ Skydiving ☐ Unknown	
Revenue Sightseeing Flight ☐ Yes ☒ No	Air Medical Flight ☐ Yes ☒ No		
AIRPORT INFORMATION (Fill in if accident/incident occurred on approach, landing, takeoff, departure, or within 3 miles of an airport)			
Airport Name: <u>Santa Barbara Municipal Airport</u> Airport Identifier: <u>KSBA</u> Proximity to Airport: ☐ Off Airport/Airstrip ☒ On Airport/Airstrip ☐ N/A		Distance From Airport Center: <u><1</u> sm Direction From Airport: _____ degrees true Airport Elevation: <u>13</u> ft. msl	
Runway Information Runway ID: <u>25</u> (L/R/C) Length: <u>6052</u> ft Width: <u>150</u> ft		Condition of Runway/Landing Surface <i>(Check all that apply)</i> ☒ Dry ☐ Holes ☐ Ice Covered ☐ Rough ☐ Rubber Deposits ☐ Slush-Covered ☐ Snow-Compacted ☐ Snow-Crusted ☐ Snow-Dry ☐ Snow-Wet ☐ Soft ☐ Vegetation ☐ Water-Calm ☐ Water-Choppy ☐ Water-Glassy ☐ Wet ☐ Unknown	
Runway/Landing Surface <i>(Check all that apply)</i> ☒ Asphalt ☐ Concrete ☐ Dirt ☐ Grass/Turf ☐ Gravel ☐ Ice ☐ Macadam ☐ Metal/Wood ☐ Snow ☐ Water ☐ Unknown			
Approach/Departure Segment <i>(Select one)</i> ☐ Taxi ☐ Takeoff ☐ Initial Climb ☐ VFR Departure ☐ IFR Departure Procedure/Clearance ☐ On Instrument Approach ☒ Landing ☐ Downwind ☐ Base ☐ Final ☐ Crosswind ☐ Low Approach ☐ Go Around ☐ Aborted Landing (after touchdown) ☐ Unknown			
IFR Approach <i>(Check all that apply)</i> ☒ None ☐ ADF/NDB ☐ SDF ☐ VOR/TVOR ☐ VOR/DME ☐ TACAN ☐ PAR ☐ Sidestep ☐ ILS ☐ Localizer Only ☐ LOC-back course ☐ RNAV ☐ MLS ☐ LDA ☐ ASR ☐ Visual ☐ Contact ☐ Circling ☐ Practice ☐ GPS ☐ Unknown		VFR Approach <i>(Check all that apply)</i> ☐ None ☐ Traffic Pattern ☐ Straight-In ☐ Valley/Terrain Following ☐ Go Around ☒ Full Stop ☐ Stop and Go ☐ Touch and Go ☐ Simulated Forced Landing ☐ Forced Landing ☐ 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: <u>Michael</u> Middle Initial: <u>K</u> Last Name: <u>Tryggvason</u> City of Residence: <u>London</u> State: <u>Ontario</u> ZIP: <u>N6G 1N6</u> Country: <u>Canada</u> Age at time of Accident/Incident: [REDACTED] Date of Birth: [REDACTED] /1985 <i>mm/dd/yyyy</i> 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) <i>(Check all that apply)</i> ☐ None ☐ Flight Instructor ☐ Commercial ☐ US Military ☐ Private ☐ Recreational ☒ Airline Transport ☒ Foreign ☐ Student ☐ Sport ☐ Flight Engineer					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>11/09/2022</u> <i>mm/dd/yyyy</i>																																																																																									
Medical Certificate Limitations none																																																																																																				
Medical Certificate Special Issuance																																																																																																				
Date of Last Flight Review or Equivalent, Including FAR 121/135 Checks: <u>02/23/2023</u> <i>mm/dd/yyyy</i>			Flight Review Aircraft Make: <u>Boeing</u> Model: <u>7M8</u>																																																																																																	
Airplane Rating(s) <i>(Check all that apply)</i> ☐ None ☒ Single-Engine Land ☒ Single-Engine Sea ☒ Multiengine Land ☒ Multiengine Sea		Other Aircraft Rating(s) <i>(Check all that apply)</i> ☐ None ☐ Airship ☐ Balloon ☒ Glider ☐ Gyroplane ☐ Helicopter ☐ Powered Lift		Instrument Rating(s) <i>(Check all that apply)</i> ☐ None ☒ Airplane ☐ Helicopter ☐ Powered Lift		Instructor Rating(s) <i>(Check all that apply)</i> ☐ None ☐ Airplane Single-Engine ☐ Airplane Multi-Engine ☐ Gyroplane ☐ Powered Lift ☐ Instrument Airplane ☐ Instrument Helicopter ☐ Helicopter ☐ Glider ☐ Sport																																																																																														
Type Ratings B73C, BE02, DH8, EA32, G200						Student Endorsements <i>(Include dates)</i>																																																																																														
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"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: _____ Middle Initial: _____ Last Name: _____ City of Residence: _____ State: _____ ZIP: _____ Country: _____ Age at time of Accident/Incident: _____ 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 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				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 _____ mm/dd/yyyy																																																																																										
Medical Certificate Limitations																																																																																																			
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Date of Last Flight Review or Equivalent, Including FAR 121/135 Checks: _____ mm/dd/yyyy			Flight Review Aircraft Make: _____ Model: _____																																																																																																
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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: _____					☐ Left ☐ Front ☐ Center ☐ Rear ☐ Right ☐ Single ☐ Unknown		☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown		
Pilot Certificate(s) (Check all that apply) ☐ None ☐ Private ☐ Student ☐ Flight Instructor ☐ Recreational ☐ Sport ☐ Commercial ☐ Airline Transport ☐ Flight Engineer ☐ US Military ☐ Foreign					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		
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: _____ City of Residence: _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____					☐ Left ☐ Front ☐ Center ☐ Rear ☐ Right ☐ Single ☐ Unknown		☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown		
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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: _____ 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: _____ 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	
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FLIGHT ITINERARY INFORMATION

Last Departure Point

Airport ID: KSMX

City: Santa Maria

State: California

Country: United States

Time of Departure

Time: 1050

Time Zone: Pacific

Destination

Airport ID: KINW

City: Winslow

State: Arizona

Country: United States

Type Flight Plan Filed

☐ None ☐ VFR/IFR
☐ Company VFR ☐ IFR
☐ Military VFR ☐ Unknown
☒ VFR
 Activated? ☒ Yes ☐ No ☐ Unknown

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

WEATHER INFORMATION AT THE ACCIDENT/INCIDENT SITE

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: KSBA

Observation Time: 1753Z/ 1053L

Time Zone: Pacific (-7)

Distance from Accident Site: <1 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

1500 ft agl

Ceiling

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

Ceiling Height

5500 ft agl

Temperature: 14 (C) or _____ (F)

Dew Point: 9 (C) or _____ (F)

Altimeter Setting: 29.92 in. Hg
 or _____ MB

Wind Direction

☐ Variable

-or-
Direction: 240 degrees true

Wind Speed

☐ Calm
☐ Light and Variable

-or-
Speed: 10 kts

Wind Gusts

☐ Not Gusting

-or-
Speed: _____ kts

Visibility 10 miles

RVR: _____ feet

RVV: _____ miles

Density Altitude: 13 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:

None affecting this flight

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)*

Fire scorching/ damage to belly of aircraft aft of firewall/ cowl exhaust outlet; interior fire scorching on front seat and front control stick area from fire entering via fresh air vent on belly; heat damage to polymer components on left hand side of engine compartment; fire damage to two luggage components (tool bags) secured in front seat and exposed to flame entering via fresh air vent.

Small area (4 sq ft) of fire scorching on tarmac of Taxiway C exit area north of Runway 07/25

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.

Departed KSMX at 1050am local on a VFR flight to KINW, Winslow, AZ, a 493nm - 3hr 20min trip with a routing of direct to RZS (San Marcus), KSZP (Santa Paula Airport), PMD (Palmdale), and then Direct KINW. Weather for the route was reported clear/ VFR. A segment of the KSMX to KSZP corridor (first 75 nm) was experiencing scattered rain showers moving through the area, but VFR conditions were reported throughout. Fuel load on departure was 18 gallons per wing tank and 14 gallons in the main tank for a total of 50 gallons or 4hr 25min of normal cruise endurance onboard (cruise burn planned at 11.3 gal/hr for 155 kts true).

Departure and initial climbout were normal and I activated my flight plan with Hawthorne radio after clearing the SMX zone. A short time later, I observed a rainshower about 25 miles east-southeast from KSMX in the Santa Ynez valley on the planned route of flight. At this time, the Gaviota pass had more favorable conditions, and I decided to transition over to the shoreline/ US101 corridor for easier passage to KSZP. After transiting to the shoreline and taking a moment to ensure proper contact with Santa Barbara Approach prior to entry to their airspace, flight east along the shoreline was conducted at 2000' ASL. Around this time, I noticed my main tank fuel quantity to be 11 gallons (16 gal max. quantity), the usual level when I switch to a wing tank, and made that selection. Selection of a wing tank will feed fuel to the fuel distributor unit at constant pressure, which will manage fuel delivery to the cylinders, and then return the excess fuel to the main tank only. Takeoff and landing is normally conducted with the main tank selected. About ten minutes later while passing the Santa Barbara airport area, I observed an area of degraded visibility to be present beginning around the eastern edge of the SBA control area. With Santa Barbara Municipal being easily available and observing less than favorable conditions to come, I decided to divert to Santa Barbara Municipal to wait for conditions to improve.

I informed SBA Tower (inner CTA) that I would be inbound for landing, and was cleared to join a left base for Runway 25 and subsequently cleared to land. I joined a short left base, turned final, confirmed landing clearance with the Tower, completed a pre-landing flow and landed. At 1132am local, touchdown and initial rollout was normal, then as the tail was lowered to the three point attitude, I heard a radio call from Tower advising they see flames or smoke coming from the aircraft. At about the same time I began to smell something like plastic burning and conducted a brief source check around the rear instrument panel, initially suspecting an internal source, but had no other indications or observations of a fire. By this time I was approaching the Taxiway C area and steered right to exit on that taxiway. As I was turning to exit the runway, I began to notice that there was darker smoke beginning to fill the cabin/ canopy. Exiting the runway onto taxiway C, I opened the canopy to vent the interior smoke. At this time I noticed there was actual flame coming from the front seat area, at which point I selected the Master switch to off. The performance electronic ignition/ injection system installed utilizes a design which cuts fuel and ignition to the engine as a normal design feature when the Master is selected off, as the mixture control is computerized; and so the Master switch acts as a 'Total Master' for the aircraft. As the powered down aircraft rolled to a stop I unbuckled my seatbelt harness (7 point aerobatic harness), exited the aircraft, and disconnected the quick-disconnect plug on my headset/ helmet.

Seeing the interior flames still active, I reached into the cabin and unlatched the fire extinguisher located in the lower cabin area under where the pilot's right leg is when seated in the aircraft. Using that, I extinguished the interior fire successfully. Next I noticed that there were flames active on the tarmac around the front of the aircraft. With the fire extinguisher, I jogged around the left wing (not very far, 10' wing half span) and saw that there was fuel actively venting from the main tank external vent fitting on the lower left side of the forward fuselage, just ahead of the wing root, and that this fuel was igniting on the tarmac from the previously vented fuel being on fire. I attempted to put out the active fire with the fire extinguisher, but was out of extinguishant from the earlier effort. I then began pushing the aircraft backwards on the taxiway to create distance between the active fire and the fresh venting fuel. As I noticed that the fresh fuel was igniting quickly after contact with the tarmac, I attempted to divert the vent fuel stream with the fire extinguisher bottle (unsuccessfully), and then returned to the cabin/ open canopy to turn the fuel selector to off in an attempt to cut off fuel supply at the source. Noticing that the exterior fire was still present, I pulled the aircraft further backwards by the cabin frame. About this time, the venting fuel stream momentarily interrupted and allowed a discontinuity in the fuel spilling and the fire on the tarmac ceased to spread to newly spilled fuel. I continued to pull the aircraft about 15 feet further to ensure adequate distance from the last of the burning fuel, and then returned to the front of the aircraft to check if the fuel venting has stopped. It had not stopped completely, but had become interrupted/ more sporadic. At about this time, ARFF arrived with two trucks and positioned relative to the aircraft, but it was readily apparent that the event was no longer divergent. They completed a brief FLIR inspection of the aircraft, placed absorbent cloth mats under the fuel vent area, as fuel was still venting sporadically but at a decelerating rate. I made a radio call to SBA ground using a handheld radio at this moment to check in with the controller and receive their phone line number. ARFF then questioned me for contact details and post incident condition and finally assisted in pushing the aircraft clear of the taxiway to a parking ramp area which was only about 50 yards away.

End

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

Operator/Owner Safety Recommendation

In my experience, the cause of this incident may focus on a very rarely encountered fuel configuration coupled with the original builder's main tank fuel vent configuration and possibly landing wind conditions which aligned correctly to support a fuel cloud stagnating in the cowl/ exhaust exit area and which promoted an external combustion event.

Due to fuel feeding from a wing tank until very near landing and a total fuel load intended for a multi hour flight, the main tank had adequate time to refill completely, actually to a full quantity not achievable during ground fuelling. Usually a small air gap is naturally present in the forward section of the main fuel tank during normal refuelling and is co-located with the main tank vent line inlet - the filler cap is in the geographic center of the main tank, and in the tail down attitude the air gap and vent inlet is forward of (& above) the filler cap. In normal operations I would have been switching back to the main tank to begin burning its quantity down again, but in the scenario here, specifically with the decision to land at SBA to wait for better conditions, this selection was delayed beyond what would normally occur on a cross country flight. This configuration was the root cause behind why fuel was venting on landing, as immediately prior to touchdown the main tank was full to an extent that the quantity level was above the vent line inlet on that tank.

The main fuel tank external vent consists of an AN anchor bonded/ integrated into the forward left area of the fuselage ahead of the wing root and just aft of the firewall. A vent line from this anchor connects to a similar AN fitting/ inlet at a forward-top location of the main fuel tank. The fuselage mounted AN anchor accepts an AN822 elbow fitting which was tightened to face the open end of the elbow forward into the relative wind during flight, to create positive pressure to assist feeding from the main tank. This is the original vent configuration from initial kit construction. After the event, it was noticed that the AN elbow vent is located in an area which could conceivably encounter turbulent airflow due to its proximity to the cowl lower exit/ cooling relief area, and in a case such as this, excess main tank fuel would vent forward into the relative wind and also into the natural disturbed air burble of the lower cowl area during slow speed flight or landing (higher angles of attack), promoting rapid aerosol action. (cont'd in Adtn'l Info)

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)

50 _____ 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

Thru main exit/ canopy; 1 occupant made 1 exit

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.

This arrangement of the main tank vent system could create a concentration of aerosolized fuel in the cowl/ exhaust exit area at certain (low) airspeeds. In other flight phases, such as higher speeds, the cooling air leaves the cowl at much greater velocity and the free stream relative wind around the aircraft would continually clear any vented fuel away from the aircraft quickly. At taxi speeds or when stationary, no turbulent air would be present or circulating in that area, and the vented fuel stream would not disperse dynamically, but rather stream to the ground uninterrupted (ie hose water onto the ground). In the incident environment, the ground winds on landing included a small crosswind component from the left, which could bias this fuel rich cloud from the immediate vent area to more centralized along the fuselage, closer to the exhaust stack exit. This could make the presence of a rich fuel-air mixture circulating at the cowl exit/ exhaust exit/ forward belly area during the landing and rollout timeframe an understandable occurrence due to active venting.

(Fix Action) A component replacement to avoid this in the future will focus on reconfiguring from the AN822 fitting facing directly forwards from the fuselage surface, to a fitting such as an AN844 or an aluminum tube length extending normal from the fuselage surface. Such a tube segment is used successfully on a variety of similar aircraft and would direct the fuel stream velocity vector/ momentum directly away from the aircraft and into clean relative wind at all speeds, inhibiting aerosolized fuel from stagnating locally in the cowl/ exhaust stack exit area. Moving the fuel vent exit location incrementally rearwards would further assist in minimizing this risk.

The source of ignition is a factor that I have not come to completely pinpoint as of yet, however the sources to consider may not be excessively diverse. If it would hold reason that the above described environment for a fuel rich cloud to be present in the area of the cowl/ exhaust exit is plausible, then it may also hold that this combustible fuel air mixture could circulate occasionally into the lower regions of the engine compartment with natural localized turbulence. In this case, there may exist the potential for some fuel rich air to be pulled into the exhaust stack at the slip joint of the 4 into 1 exhaust collector (located about 10" from the exhaust stack free exterior outlet) due to the vacuum effect resulting from the greater interior exhaust pipe gas velocity relative to a stagnating engine cowl cooling flow. This 4 into 1 collector pipe accepts the four individual exhaust pipes from each cylinder and collates to a single exhaust outlet via a slip joint design. This 4 into 1 is also where smoke oil is injected during airshow performance and functions effectively in that respect (smoke oil system was empty at time of event). Historical experience has been a guide to the modern selection of only a few high flash point paraffin oils for smoke use to specifically avoid fire risk. The flash point of avgas is of course much lower than that of smoke oil, so if a combustible fuel-air mixture was to enter at the 4 into 1 joint, then ignition of an exhaust fire could be possible. Alternatively, a backfire event, which is a relatively common occurrence when an engine equipped with a lightweight composite propeller is decelerated prior to landing after carrying power on approach - as was the case here - this may also be considered as a possible ignition source. An exhaust or backfire initiated ignition could cause burning of the rich mixture cloud present in the cowl exit area, which would subsequently ignite any liquid fuel streaming rearward on the belly of the aircraft from preceding venting action, and continue burning additional venting fuel.

The fire damage present on the aircraft seems reasonable with this scenario, being comparatively minor on the fuselage area forward of the exhaust stack exit, then increasing in severity from about abeam the exhaust stack to 4 to 5 ft aft along the belly, then decreasing in severity until ending about 9 ft aft of the exhaust/ cowl exit and being localized to the underbelly. Additionally, besides a small number of melted polymer sheaths on the left hand side of the engine between the #2 and #4 cylinders, there was no evidence of sustained combustion anywhere within the engine compartment and very little heat damage to the cowl structures. The extent of cowl structural damage is a small (~2 in. dia) hotspot on the lower cowl immediately ahead of the fuselage fuel vent position. All else observed on the engine cowl was superficial exterior paint finish realted. No other interior cowl damage besides occasional soot stains was observed, and likely a result of external fuel burnoff at very low aircraft speed rising into the left side of the cowl as the combusting mixture could overpower the low velocity/ stagnating cooling flow. The possibility of an electrical short induced spark is plausible, but I did have the cowls removed the day prior to the incident for my own normal inspection of engine components prior to flight, and did not notice anything which stood out as amiss. The engine system had a total operating time of less than 90 hours SMOH at the time of incident, and as an airshow/ aerobatic pilot, a cowls off inspection occurs before & after any major flight segment. The secondary interior fire was due to combusting mixture entering the cabin thru a belly located fresh air vent adjacent to the right of the forward control stick.

In summary, the fuel venting action was a natural and proper effect of a main tank fuel level which is exceedingly seldom encountered, but was present during the flare and landing deceleration due to feeding from a wing tank to a moment much nearer to landing than usual. The fuel vent location and orientation vented this fuel into turbulent air in the cowl exit area and may have allowed aerosolized fuel stagnation in the lower cowl/ exhaust exit area. Landing winds may have further concentrated this air mixture. Unfortunately, if any one of these factors would have been absent or different, the likelihood of this event would be drastically reduced with the introduction of an ignition source.
End

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

Date of this Report <u>05/08/2023</u> <i>mm/dd/yyyy</i>	Name of Pilot/Operator: <u>Michael Tryggvason</u> Signature: _____ -- or -- ☒ Check here to electronically sign this document
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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. WPR23LA176	Reviewed by NTSB Regional Office WPR	Name of Investigator Starr Blum	Date Report Received 5/8/2023
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