

NATIONAL TRANSPORTATION SAFETY BOARD • PILOT/OPERATOR AIRCRAFT ACCIDENT/INCIDENT REPORT Use this form (Form 6120.1) to report civil and public aircraft accidents and incidents**BASIC INFORMATION****Accident/Incident Location**Nearest City/Place: O'Brien State: FLZIP: 32071 Country: USALatitude: 30.049035 Longitude: -82.903740

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

Accident/Incident Date/TimeDate: 11/09/2024 Local Time: 11:02
mm/dd/yyyy HH:MMTime Zone: ESTCollision with Other Aircraft: ☐ Midair ☐ On-ground ☒ None**AIRCRAFT INFORMATION**Registration Number: N214FLManufacturer: Finn LassenModel: RV-4Serial Number: 2495Year of Manufacture: 2,020Amateur-Built: ☒ Yes ☐ No If Yes: ☐ Original Design ☒ Kit/PlansMake: Van's Aircraft

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

Maximum Gross Weight: 1,650 lbs.Weight at Time of Accident/Incident: 1,180 lbs.Number of Seats: 2 Flight Crew Seats: 1Cabin Crew Seats: _____ Passenger Seats: 1Number of Engines: 1**Category of Aircraft**
(Select one)

- ☒
- Airplane
-
- ☐
- Balloon
-
- ☐
- Blimp/Dirigible
-
- ☐
- Glider
-
- ☐
- Gyroplane
-
- ☐
- Helicopter
-
- ☐
- Powered Lift
-
- ☐
- Rocket
-
- ☐
- Ultralight
-
- ☐
- Unknown

Type of Airworthiness Certificate
(Check all that apply)**Standard**

- ☐
- 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
- ☐
- High Skid
-
- ☐
- Tricycle
- ☐
- Skid
-
- ☒
- Tailwheel
- ☐
- Ski/Wheel
-
- ☐
- Emergency Float
- ☐
- Hull
-
- ☐
- Float
- ☐
- Ski
-
- ☐
- Amphibian
-
- ☐
- Other Launch/Recovery System
-
- ☐
- None
- ☐
- Unknown

Engine Type (Select one)

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

Fuel System Type (Reciprocating)

- ☐
- Carburetor
- ☒
- Fuel Injected

Engine	Engine Manufacturer	Engine Model/Series	Engine Serial Number	Date of Mfg. (mm/dd/yyyy)	Rated Power ☒ Horsepower or ☐ Lbs. of Thrust	Total Time (hours)	Time Since: Inspection (hours)	Overhaul (hours)
Eng. 1	<u>Mazda</u>	<u>13-B Renesis</u>	<u>429433</u>		<u>160</u>	<u>150</u>	<u>5</u>	
Eng. 2								
Eng. 3								
Eng. 4								

Last Inspection Type

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

Date of Last Inspection: 05/01/2024
mm/dd/yyyyAirframe Total Time: 125.0 hrs

Hours measured at (Select one)

- ☐
- Last Inspection
- ☒
- Time of Accident/Incident

Type of Maintenance Program (Select One)

- ☐
- Annual
-
- ☒
- Conditional (Amateur-built only)
-
- ☐
- Manufacturer's Inspection Program
-
- ☐
- Other Approved Inspection Program
-
- ☐
- (AAIP) Continuous Airworthiness
-
- ☐
- Other, specify: _____

Description of Fire Extinguishing System

- ☒
- None
-
- ☐
- Specify: _____

Additional Equipment

- ☒
- ADS-B
-
- ☐
- Airframe Parachute
-
- ☒
- Angle of Attack Indicator
-
- ☒
- Autopilot
-
- ☐
- Autopilot/FMS, Model: _____
-
- ☐
- Coupled Flight Director
-
- ☒
- Data Recorder
-
- ☐
- Device Stall Warning System
-
- ☒
- Electronic Flight Bag or Handheld Device
-
- ☒
- Electronic Multifunction Display
-
- ☒
- Electronic Primary Flight Display
-
- ☐
- Flight Management System

- ☒
- Handheld GPS
-
- ☐
- Heads Up Display
-
- ☐
- Night Vision Goggles
-
- ☐
- Onboard Weather
-
- ☒
- Primary Flight Display
-
- ☐
- SAS, Number of Axes: _____ Model: _____
-
- ☐
- Satellite Tracking Device
-
- ☒
- Stall Warning System
-
- ☐
- Video Recording Device
-
- ☐
- Wire Strike Detection
-
- ☐
- Wire Strike Protection
-
- ☐
- Other, Specify: _____

ELT Installed: ☒ Yes ☐ No If Yes:ELT Manufacturer: Ameri-KingModel or Part No.: AK-450TSO No.: ☐ C91 (121.5 MHz) ☒ C91a (121.5 MHz)
☐ C126 (406 MHz)Was ELT still mounted in aircraft? ☒ Yes ☐ NoWas ELT still connected to antenna? ☒ Yes ☐ NoDid ELT activate? ☐ Yes ☒ NoIf activated: Did ELT aid in locating aircraft? ☐ Yes ☐ NoIf not activated: Indicate Reason: ☐ Impact Damage☐ Fire Damage ☐ Battery Expired/Damaged ☒ UnknownPropeller 1 ☒ Fixed Pitch
☐ Controllable Pitch
☐ Ground AdjustableManufacturer: Performance PropellersModel: 76x88 161791TPropeller 2 ☐ Fixed Pitch
☐ Controllable Pitch
☐ Ground Adjustable

Manufacturer: _____

Model: _____

OWNER/OPERATOR INFORMATION**Registered Aircraft Owner**

Name: Finn Lassen
 City: Bell State: FL
 ZIP: 32619 Country: USA

Fractional Ownership Aircraft: ☐ Yes ☒ No

Operator of Aircraft

☒ *The Operator is also the Registered Owner*

☐ *Same address as Registered Owner*

Name: _____
 City: _____ State: _____
 ZIP: _____ Country: _____

Doing Business As: _____

Air Carrier/Operator Designator (4-character code): _____

Operating Certificates Held

(Check all that apply)

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

Regulation Flight Conducted Under

- ☒ FAR 91 ☐ FAR 129 ☐ FAR 415
☐ FAR 103 ☐ FAR 133 ☐ FAR 431
☐ FAR 121 ☐ FAR 135 ☐ FAR 435
☐ FAR 125 ☐ FAR 137 ☐ FAR 437
☐ FAR 450
☐ FAR 91 Special Flight
☐ Non-US, Commercial
☐ Non-US, Non-commercial
☐ Public Aircraft *(Select one)*
 ☐ Armed Forces
 ☐ Federal
 ☐ State
 ☐ Local
☐ Unknown

Revenue Operation for FAR 121, 125, 129, 135

(Select one for each group)

- ☐ Scheduled or Commuter ☐ Domestic
☐ Non-Scheduled or Air Taxi ☐ International
☐ Passenger
☐ Cargo
☐ Mail Contract Only

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

(Select one)

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

Revenue Sightseeing Flight

☐ Yes ☒ No

Air Medical Flight

☐ Yes ☒ No

AIRPORT INFORMATION (Fill in if accident/incident occurred on approach, landing, takeoff, departure, or within 3 miles of an airport)

Airport Name: _____

Airport Identifier: _____

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

Distance From Airport Center: _____ sm.

Direction From Airport: _____ degrees true

Airport Elevation: _____ ft. MSL

Runway Information

Runway ID: _____ Length: _____ ft. Width: _____ ft.

Runway/Landing Surface *(Check all that apply)*

- ☐ Asphalt ☒ Grass/Turf ☐ Ice ☐ Snow
☐ Concrete ☐ Gravel ☐ Macadam ☐ Water
☐ Dirt ☐ Helideck ☐ Metal/Wood ☐ Unknown
☐ Elevated Heliport ☐ Helistop ☒ Off-site landing area

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

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

Approach/Departure Segment *(Select one)*

- ☐ Taxi ☒ VFR Departure ☐ On Instrument Approach ☐ Downwind ☐ Low Approach
☐ Takeoff ☐ IFR Departure Procedure/Clearance ☐ Landing ☐ Base ☐ Go Around
☐ Initial Climb ☐ Aborted Landing (after touchdown)
☐ Crosswind ☐ Unknown

IFR Approach *(Check all that apply)*

- ☐ None
☐ ADF/NDB ☐ PAR ☐ MLS ☐ Practice
☐ SDF ☐ Sidestep ☐ LDA ☐ GPS
☐ VOR/TVOR ☐ ILS ☐ ASR ☐ Unknown
☐ VOR/DME ☐ Localizer Only ☐ Visual
☐ TACAN ☐ LOC-back course ☐ Contact
☐ RNAV ☐ Circling

VFR Approach *(Check all that apply)*

- ☐ None
☐ Traffic Pattern ☐ Stop and Go
☐ Straight-In ☐ Touch and Go
☐ Valley/Terrain Following ☐ Simulated Forced Landing
☐ Go Around ☒ Forced Landing
☐ Full Stop ☐ Precautionary Landing
☐ Unknown

"FLIGHT CREWMEMBER 1" INFORMATION**"Flight Crewmember 1" Responsibilities at the Time of Accident/Incident**

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

"Flight Crewmember 1" was pilot flying ☒ Yes ☐ No

"Flight Crewmember 1" Identification

First Name: Finn

City of Residence: Bell

Middle Initial: _____

State: FL ZIP: 32619

Last Name: Lassen

Country: USA

Age at time of Accident/Incident: 68

Date of Birth: 1956 (mm/dd/yyyy)

Certificate Number: _____

Degree of Injury

☒ None ☐ Serious
☐ Unknown ☐ Fatal
☐ Minor

Seat Occupied

☐ Left ☒ Front ☐ Unknown
☐ Right ☐ Rear
☐ Center ☐ Single

Restraint Type**Available**

☐ None
☐ Lap only
☐ 3-point
☐ 4-point
☒ 5-point
☐ Unknown

Used

☐ None
☐ Lap only
☐ 3-point
☐ 4-point
☒ 5-point
☐ Unknown

Supplemental Restraint, specify: _____

Inflatable Restraints

☒ Not Installed
☐ Installed
☐ Not Deployed
☐ Deployed
☐ Unknown

Pilot Certificate(s) (Check all that apply)

☐ None ☐ Flight Instructor ☐ Commercial
☐ US Military ☒ Private ☐ Recreational
☐ Airline Transport ☐ Foreign ☐ Sport
☐ Student ☐ Flight Engineer

Principal Occupation

☐ Pilot
☐ Other
☐ Unknown

Medical Certificate

☐ None ☐ Class 3 ☐ Unknown
☐ Class 1 ☒ BasicMed
☐ Class 2 ☐ Driver's License (Sport Pilot only)

Medical Certificate Validity

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

Date of Last Medical

12/06/2023
 mm/dd/yyyy

Medical Certificate Limitations

Must wear corrective lenses

Medical Certificate Special Limitations**Personal Flight Equipment** (Check all that apply)

☐ Fire resistant flight suit ☐ Helmet ☐ Laser protective visor/glasses ☐ Personal locator beacon(s) (PLB) ☐ Fire resistant gloves
☐ Helmet visor ☐ Night vision goggles ☐ Personal flotation ☐ Other: _____

Date of Last Flight Review or Equivalent, Including FAR 121/135 Checks:

07/19/2024
 mm/dd/yyyy

Flight Review Aircraft

Make: Cessna

Model: C150

Airplane Rating(s)
(Check all that apply)

☒ Single-Engine Land
☐ Single-Engine Sea
☐ Multiengine Land
☐ Multiengine Sea

Other Aircraft Rating(s)
(Check all that apply)

☒ None
☐ Airship
☐ Balloon
☐ Glider
☐ Gyroplane
☐ Helicopter
☐ Powered Lift

Instrument Rating(s)
(Check all that apply)

☒ None
☐ Airplane
☐ Helicopter
☐ Powered Lift

Instructor Rating(s)
(Check all that apply)

☒ None ☐ Instrument Airplane
☐ Airplane Single-Engine ☐ Instrument Helicopter
☐ Airplane Multiengine ☐ Helicopter
☐ Gyroplane ☐ Glider
☐ Powered lift ☐ Sport

Type Ratings and Applicable Logbook Endorsements

Tailwheel

Student Endorsements (Include dates)

Flight Time (Enter hours for each box)	All Aircraft	This Make & Model	Airplane Single Engine	Airplane Multiengine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air	Multi-engine Rotorcraft	Tail-wheel
						Actual	Simulated					
Total Time	1,139	96	1,139		16							958
Pilot in Command (PIC)	1,091	96	96									958
Time as Instructor												
This Make/Model					0	0	0					
Last 90 Days	9	9	9									9
Last 30 Days	5	5	5									5
Last 24 Hours	0	0	0									0

"FLIGHT CREWMEMBER 2" INFORMATION**"Flight Crewmember 2" Responsibilities at the Time of Accident/Incident**

☐ Captain ☐ First Officer ☐ Pilot ☐ Co-Pilot ☐ Student Pilot ☐ Flight Instructor ☐ Check Pilot ☐ Flight Engineer ☐ Other Flight Crew

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

"Flight Crewmember 2" Identification

First Name: _____

City of Residence: _____

Middle Initial: _____

State: _____ ZIP: _____

Last Name: _____

Country: _____

Age at time of Accident/Incident: _____

Date of Birth: _____ (mm/dd/yyyy)

Certificate Number: _____

Degree of Injury

☐ None ☐ Serious
☐ Unknown ☐ Fatal
☐ Minor

Seat Occupied

☐ Left ☐ Front ☐ Unknown
☐ Right ☐ Rear
☐ Center ☐ Single

Restraint Type**Available**

☐ None
☐ Lap only
☐ 3-point
☐ 4-point
☐ 5-point
☐ Unknown

Used

☐ None
☐ Lap only
☐ 3-point
☐ 4-point
☐ 5-point
☐ Unknown

Inflatable Restraints

☐ Not Installed
☐ Installed
☐ Not Deployed
☐ Deployed
☐ Unknown

Pilot Certificate(s) (Check all that apply)

☐ None ☐ Flight Instructor ☐ Commercial
☐ US Military ☐ Private ☐ Recreational
☐ Airline Transport ☐ Foreign ☐ Sport
☐ Student ☐ Flight Engineer

Supplemental Restraint, specify: _____

Principal Occupation

☐ Pilot
☐ Other
☐ Unknown

Medical Certificate

☐ None ☐ Class 3 ☐ Unknown
☐ Class 1 ☐ BasicMed
☐ Class 2 ☐ Driver's License (Sport Pilot Only)

Medical Certificate Validity

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

Date of Last Medical

 mm/dd/yyyy

Medical Certificate Limitations**Medical Certificate Special Limitations****Personal Flight Equipment** (Check all that apply)

☐ Fire resistant flight suit ☐ Helmet ☐ Laser protective visor/glasses ☐ Personal Locator Beacon(s) (PLB) ☐ Fire resistant gloves
☐ Helmet visor ☐ Night vision goggles ☐ Personal flotation ☐ Other: _____

Date of Last Flight Review or Equivalent, Including FAR 121/135 Checks:

 mm/dd/yyyy

Flight Review Aircraft

Make: _____

Model: _____

Airplane Rating(s)
(Check all that apply)

☐ Single-Engine Land
☐ Single-Engine Sea
☐ Multiengine Land
☐ Multiengine Sea

Other Aircraft Rating(s)
(Check all that apply)

☐ None
☐ Airship
☐ Balloon
☐ Glider
☐ Gyroplane
☐ Helicopter
☐ Powered Lift

Instrument Rating(s)
(Check all that apply)

☐ None
☐ Airplane
☐ Helicopter
☐ Powered Lift

Instructor Rating(s)
(Check all that apply)

☐ None ☐ Instrument Airplane
☐ Airplane Single-Engine ☐ Instrument Helicopter
☐ Airplane Multiengine ☐ Helicopter
☐ Gyroplane ☐ Glider
☐ Powered lift ☐ Sport

Type Ratings and Applicable Logbook Endorsements**Student Endorsements** (Include dates)

Flight Time (Enter hours for each box)	All Aircraft	This Make & Model	Airplane Single Engine	Airplane Multiengine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air	Multi-engine Rotorcraft	Tail-wheel
						Actual	Simulated					
Total Time												
Pilot in Command (PIC)												
Time as Instructor												
This Make/Model												
Last 90 Days												
Last 30 Days												
Last 24 Hours												

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

Additional Crewmember Information		Seat Occupied	Injury
First Name: _____	City of Residence: _____	☐ Left ☐ Rear ☐ Center ☐ Single ☐ Right ☐ Unknown ☐ Front	☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown
Middle Initial: _____	State: _____ Zip: _____		
Last Name: _____	Country: _____		
Personal Flight Equipment (Check all that apply) ☐ Fire resistant flight suit ☐ Helmet ☐ Laser protective visor/glasses ☐ Personal locator beacon(s) (PLB) ☐ Fire resistant gloves ☐ Helmet visor ☐ Night vision goggles ☐ Personal flotation ☐ Other: _____			
Pilot Certificate(s) (Check all that apply) ☐ None ☐ Flight Instructor ☐ Commercial ☐ US Military ☐ Private ☐ Recreational ☐ Airline Transport ☐ Foreign ☐ Student ☐ Sport ☐ Flight Engineer		Restraint Type Available ☐ 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.	Supplemental Restraint, specify: _____	

Additional Crewmember Information		Seat Occupied	Injury
First Name: _____	City of Residence: _____	☐ Left ☐ Rear ☐ Center ☐ Single ☐ Right ☐ Unknown ☐ Front	☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown
Middle Initial: _____	State: _____ Zip: _____		
Last Name: _____	Country: _____		
Personal Flight Equipment (Check all that apply) ☐ Fire resistant flight suit ☐ Helmet ☐ Laser protective visor/glasses ☐ Personal Locator Beacon(s) (PLB) ☐ Fire resistant gloves ☐ Helmet visor ☐ Night vision goggles ☐ Personal flotation ☐ Other: _____			
Pilot Certificate(s) (Check all that apply) ☐ None ☐ Flight Instructor ☐ Commercial ☐ US Military ☐ Private ☐ Recreational ☐ Airline Transport ☐ Foreign ☐ Student ☐ Sport ☐ Flight Engineer		Restraint Type Available ☐ 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.	Supplemental Restraint, specify: _____	

PASSENGER(S) / OTHER PERSONNEL (Include cabin crew; continue on separate sheet, if necessary.)

Number of Passengers _____	Seat	Injury	Restraint Type	Inflatable Restraints	Age
Passenger Information 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 Supplemental Restraint, specify: _____	☐ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown	☐ Under 5 years If under 5 years, ☐ Child Restraint ☐ Lap-Held ☐ Unknown
Personal Flight Equipment (Check all that apply) ☐ Fire resistant flight suit ☐ Helmet ☐ Laser protective visor/glasses ☐ PLB ☐ Fire resistant gloves ☐ Night vision goggles ☐ Helmet visor ☐ Personal flotation ☐ Other: _____					

First Name: _____ City: _____ Middle Initial: _____ State: _____ Zip: _____ Last name: _____ Country: _____ ☐ Crew ☐ Passenger ☐ Other Personal Flight Equipment (Check all that apply) ☐ Fire resistant flight suit ☐ Helmet ☐ Laser protective visor/glasses ☐ PLB ☐ Fire resistant gloves ☐ Night vision goggles ☐ Helmet visor ☐ Personal flotation ☐ Other: _____	☐ Left ☐ Center ☐ Right ☐ Unknown Row: _____	☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown	Available ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown Supplemental Restraint, specify: _____	Used ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown	☐ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown	☐ Under 5 years If under 5 years, ☐ Child Restraint ☐ Lap-Held ☐ Unknown
First Name: _____ City: _____ Middle Initial: _____ State: _____ Zip: _____ Last name: _____ Country: _____ ☐ Crew ☐ Passenger ☐ Other Personal Flight Equipment (Check all that apply) ☐ Fire resistant flight suit ☐ Helmet ☐ Laser protective visor/glasses ☐ PLB ☐ Fire resistant gloves ☐ Night vision goggles ☐ Helmet visor ☐ Personal flotation ☐ Other: _____	☐ Left ☐ Center ☐ Right ☐ Unknown Row: _____	☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown	Available ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown Supplemental Restraint, specify: _____	Used ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown	☐ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown	☐ Under 5 years If under 5 years, ☐ Child Restraint ☐ Lap-Held ☐ Unknown
First Name: _____ City: _____ Middle Initial: _____ State: _____ Zip: _____ Last name: _____ Country: _____ ☐ Crew ☐ Passenger ☐ Other Personal Flight Equipment (Check all that apply) ☐ Fire resistant flight suit ☐ Helmet ☐ Laser protective visor/glasses ☐ PLB ☐ Fire resistant gloves ☐ Night vision goggles ☐ Helmet visor ☐ Personal flotation ☐ Other: _____	☐ Left ☐ Center ☐ Right ☐ Unknown Row: _____	☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown	Available ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown Supplemental Restraint, specify: _____	Used ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown	☐ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown	☐ Under 5 years If under 5 years, ☐ Child Restraint ☐ Lap-Held ☐ Unknown

FLIGHT ITINERARY INFORMATION

Last Departure Point	Time of Departure	Flight Information	Destination	Type Flight Plan Filed
Airport ID: <u>9FL5</u> City: <u>Bell</u> State: <u>FL</u> Country: <u>USA</u>	Time: <u>10:52</u> HH:MM Time Zone: <u>EST</u>	Flight Number: _____ Operating as Flight _____	Airport ID: <u>FL10</u> City: <u>McAlpin</u> State: <u>FL</u> Country: <u>USA</u>	☒ None ☐ Company VFR ☐ Military VFR ☐ VFR ☐ VFR/IFR ☐ IFR ☐ Unknown Activated? ☐ Yes ☐ No ☐ Unknown

Type of ATC Clearance/Service <i>(Check all that apply)</i>					
☐ Certificate of Authorization	☐ Special VFR	☐ Special IFR	☐ VFR Flight Following	☐ Cruise	
☐ VFR	☐ IFR	☐ VFR On Top	☐ Traffic Advisory	☐ Unknown / NA	
☒ None					
Airspace where the accident/incident occurred <i>(Check all that apply)</i>					
☐ Class A	☐ Class G	☒ Military Operations Area (MOA)	☐ Special		
☐ Class B	☐ Demo Area	☐ Airport Advisory Area	☐ Air Traffic Control Area		
☐ Class C	☐ Warning Area	☐ Jet Training Area	☐ Unknown		
☐ Class D	☐ Prohibited Area	☐ TRSA			
☒ Class E	☐ Restricted Area	☐ FAR 93	Altitude of In-Flight Occurrence: <u>1775</u> ft. MSL		
WEATHER INFORMATION AT THE ACCIDENT/INCIDENT SITE					
Source of Pilot Weather Information <i>(Check all that apply)</i>			Weather Observation Facility		
☒ National Weather Service ☐ Flight Service Station ☐ TV/Radio ☒ Automated Report ☐ Electronic Flight Bag-Application:			☐ Company ☐ Military ☒ Internet ☐ None ☐ Unknown		
☐ On-Board Weather			Facility ID: _____ Observation Time: _____ Time Zone: _____ Distance from Accident Site: _____ nm Direction from Accident Site: _____ degrees true		
Basic Conditions		Lowest Cloud Condition	Light Condition		
☒ VMC ☐ IMC ☐ Unknown		Height <u>1800</u> ft. AGL	☐ Dawn ☒ Day ☐ Dusk ☐ Night ☐ Dark Night ☐ Bright Night ☐ Unknown		
Sky/Lowest Cloud Condition		Ceiling	Ceiling Height		
☐ Clear ☐ Few ☐ Partial Obscuration ☒ Scattered		☐ Thin Broken ☐ Thin Overcast ☐ Unknown ☒ None (Clear) ☐ Broken ☐ Overcast ☐ Obscured ☐ Indefinite ☐ Unknown	_____ ft. AGL	Temperature: <u>24.00</u> (°C) or _____ (°F) Dewpoint: <u>24.00</u> (°C) or _____ (°F)	
Altimeter Setting:	Wind Direction	Wind Speed	Wind Gusts	Visibility	
<u>30.10</u> (Hg), or _____ (mb)	☒ Variable or Direction: <u>90.00</u> degrees true	☐ Calm ☐ Light and Variable or Speed: <u>10.0</u> kts	☐ Not Gusting or Speed: <u>14.0</u> kts	_____ miles RVR: _____ feet RVV: _____ miles Density Altitude: <u>1,346.0</u> ft.	
Type of Precipitation <i>(Check all that apply)</i>				Restriction to Visibility <i>(Check all that apply)</i>	
☒ None ☐ Rain ☐ Snow ☐ Hail ☐ Rain Showers				☐ Drizzle ☐ Ice Pellets ☐ Snow Pellets ☐ Snow Grains ☐ Ice Crystals	
☐ Freezing Rain ☐ Snow Shower ☐ Ice Pellets Shower ☐ Freezing Drizzle				☒ None ☐ Fog ☐ Blowing Dust ☐ Ground Fog ☐ Blowing Sand ☐ Haze ☐ Blowing Snow ☐ Ice Fog ☐ Blowing Spray ☐ Smoke ☐ Dust ☐ Unknown	
Icing Forecast		Intensity of Precipitation	Icing Actual		Turbulence <i>(Check all that apply)</i>
Amount ☒ None ☐ Trace ☐ Light ☐ Moderate ☐ Severe ☐ Unknown	Type ☐ N/A ☐ Rime ☐ Clear ☐ Mixed ☐ Unknown	☐ Light ☐ Moderate ☐ Heavy ☒ N/A ☐ Unknown	Amount ☒ None ☐ Trace ☐ Light ☐ Moderate ☐ Severe ☐ Unknown	Type ☒ N/A ☐ Rime ☐ Clear ☐ Mixed ☐ Unknown	Severity ☒ None ☐ Light ☐ Moderate ☐ Severe ☐ Extreme ☐ Clean Air ☐ Terrain-Induced ☐ Convective Turbulence
NOTAMs (D and FDC), AIRMETs, SIGMETs, PIREPs in effect at the time of the accident/incident:					

DAMAGE TO AIRCRAFT AND OTHER PROPERTY**Aircraft Damage**

- ☐ None ☒ Substantial
☐ Minor ☐ Destroyed
 ☐ Unknown

Aircraft Fire

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

Aircraft Explosion

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

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

Lightly buckled outer right wing skin.

Right landing gear torn from engine mount and folded under right wing (but remained attached by lower right fuselage-engine mount bolt). Foot well in firewall creased by engine mount tube(s) still attached to right gear leg socket. Fuselage angle(s) bent near lower right engine mount attachment weldment. One missing angle/weldment rivet noticed.

Right wheel fiberglass wheel pant split.

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.

About 7 miles from destination I reduced power and rapidly descended to below cloud bases. Suddenly everything went dark (engine monitor and various indicator lights) and engine quit. Engine is dependent on electrical system (electronic ignition and fuel injection). Nexus 7 pad running Avare remained on but appeared to no longer be receiving GPS data from the Dual XGPS-170 receiver. Without GPS to guide me to nearest airport (a grass strip close to town) I picked out a suitable forced landing area: a series of four 1,300' West-East hay fields, each separated by barb wire fences. Fairly strong winds out of the East so I approached from the West. The first two fields appeared recently mowed and were free of hay bales. The third had grass from 6 to 12" or so. The fourth field had been recently mowed but was full of hay bales. With no flaps (electrically operated) I overshot the first two fields and was over the third field with the fence between the third and fourth field rapidly approaching, probably no more than 10 feet above the field. I decided to try to turn the plane away from the fence (towards South) but right wing/gear touched/dug into the ground and the plane spun around and came to rest. A gust of wind lifting the left wing may have been a factor. With no bruises from the harness nor contact with the canopy and ELT not activating, I must assume that final speed must have been relatively low. If I had continued straight ahead and run into the fence there is a good chance the plane would have tipped over, making it impossible to open canopy and evacuate airplane; in addition to risk of fire. So the decision to turn the airplane was probably good from the viewpoint of avoiding injury to pilot but not good for the airplane.

Cause of electrical power loss: Battery measured 0 volts. Then, wiggling the positive terminal measured 10V. Charging it overnight it got up to 13V but immediately dropped to 0V with even a light load. Electrical system is protected from alternator over-voltage by a relay between alternator B+ (output) and battery + terminal. The relay is energized by the main electrical buss. My current theory is that due to fairly rapid RPM reduction the alternator voltage momentarily dropped below relay holding voltage and with no voltage from battery was not able to re-energize relay to allow alternator to again supply power to engine buss and main buss. Even though the alternator currently does not show a short between B+ and ground, another possibility is that there may be an intermittent short to ground in the alternator which caused the battery to fail. However, I've now been advised of an instance where a PC680 AGM battery had similar symptoms and an autopsy revealed failed internal connection between battery cells. <http://forum.matronics.com/viewtopic.php?p=460530>

Note that the battery easily started the engine before the flight. Looking at data logs that monitored voltage, the voltage was stable at around 14.3V for the first 6 minutes or so and then became increasingly noisy (excursions to as much as 12.5V and 17V). That would be consistent with battery failure. I intend to test the alternator on a bench setup to see if voltage actually drops momentarily with RPM reductions.

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

For the airplane:

For an electrically dependent engine installation do not rely on an over-voltage protection relay to be powered by battery only, nor on only one battery.

I intend to install a backup battery on the cockpit side of the firewall. A double-pole/double-throw switch will supply the engine buss with power from either the main battery/alternator or from the backup battery. The other pole will connect a charging diode for the backup battery to main battery/alternator in normal operation. The purpose of the switch will be to isolate the engine buss from a failed main battery/alternator.

Objective is to protect against:

- 1) Overvoltage from alternator reaching battery, main and engine buss.
- 2) Alternator short to ground, shorting main battery and buss and engine buss.
- 3) Dead main battery and/or alternator not affecting back-up battery and engine buss.

For the pilot:

Practice non-flap approaches to randomly selected fields from different altitudes and airspeeds.

MECHANICAL MALFUNCTION/FAILURE (If more space is needed, continue on a separate sheet.)		
Was there Mechanical Malfunction/Failure? ☒ Yes ☐ No <i>(If yes, list the name of the part, manufacturer, part no., serial no., and describe the failure.)</i> Power Sport YTX20L-BS AGM battery.	Total Time/ Cycles On Part 45.0 _____ Hours 50.0 _____ Cycles Time Since This Part Inspected/Overhauled 21.0 _____ Hours	
FUEL & SERVICES INFORMATION		
Fuel on Board at Last Takeoff <i>(Convert from pounds, as necessary)</i> 13.0 _____ Gallons	Fuel Type ☐ 100 Low Lead ☒ Automotive ☐ Jet A ☐ Jet A-1 ☐ Unleaded AV ☐ Other, specify _____	
Other Services, if any, prior to departure: 		
EVACUATION OF 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: Normal exit by opening canopy and stepping out on left wing and down on the ground.		
OTHER AIRCRAFT – COLLISION (If air or ground collision occurred, complete this section for <i>other</i> aircraft.)		
Aircraft Registration Number _____	Manufacturer: _____ Model: _____	Damage to Other Aircraft: ☐ Destroyed ☐ Substantial ☐ Minor ☐ None
Registered Owner of Other Aircraft Name: _____ City: _____ State: _____ ZIP: _____ Country: _____		Pilot of Other Aircraft Name: _____ City: _____ State: _____ ZIP: _____ Country: _____
ADDITIONAL INFORMATION (Additional space for answers to any question.)		
Majority of tail-wheel time has been in Van's RV-3 (very similar to the RV-4 if a bit more agile). The Dynon D-100 EFIS that I reported going dark actually has a built-in backup battery. I guess I was too busy to look outside to notice the shut-down warning and didn't occur to me to press the left-hand button to turn it back on. Airplane does have analog backup altimeter and airspeed indicator but I've now gotten used to just looking at the EFIS. Temperature, dewpoint and cloud base info may be wrong. Some data was an hour or more prior to the flight and conditions were rapidly improving.		

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

I understand that the information provided may be subject to public release.

Date of this report:

11/15/2024

mm/dd/yyyy

Name of Pilot/Operator: Finn Lassen

Signature: _____

-or- ☒ Check here to electronically sign this document

If a person other than Pilot/Operator is filing this report

Name: _____

Title: _____

Signature: _____

-or- ☐ Check here to electronically sign this document

FOR NTSB USE ONLY

NTSB Accident/Incident No.	Reviewed by NTSB AS Division	Name of Investigator	Date Report Received
ERA25LA056	ERA	Ryan Enders	12/05/2024