

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: Cloverdale Airport State: CA
 ZIP: _____ Country: USA
 Latitude: N38 46.58 Longitude: W122 59.56
(Enter in decimal degrees or degrees:minutes:seconds)

Accident/Incident Date/Time

Date: 01/20/2018 Local Time: 13:00
mm/dd/yyyy Time Zone: US/Pacific

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

AIRCRAFT INFORMATION

Registration Number: N64204
 Manufacturer: Cessna
 Model: C172P
 Serial Number: 17275534
 Year of Manufacture: 1981
 Amateur-Built: ☒ Yes ☐ No If Yes: ☐ Kit/Plans ☐ Original Design Make: _____

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

Maximum Gross Weight: 2400 lbs
 Weight at Time of Accident/Incident: 1850 lbs
 Number of Seats: 4 Flight Crew Seats: _____
 Cabin Crew Seats: _____ Passenger Seats: 3
 Number of Engines: 1

Category of Aircraft ☒ Airplane ☐ Balloon ☐ Blimp/Dirigible ☐ Glider ☐ Gyroplane ☐ Helicopter ☐ Powered Lift ☐ Rocket ☐ Ultralight ☐ Unknown	Type of Airworthiness Certificate <i>(Check all that apply)</i> <table style="width: 100%;"> <tr> <th style="text-align: left;">Standard</th> <th style="text-align: left;">Special</th> </tr> <tr> <td>☒ Normal</td> <td>☐ Restricted</td> </tr> <tr> <td>☐ Aerobatic</td> <td>☐ Limited</td> </tr> <tr> <td>☐ Balloon</td> <td>☐ Provisional</td> </tr> <tr> <td>☐ Commuter</td> <td>☐ Special Flight</td> </tr> <tr> <td>☐ Transport</td> <td>☐ Experimental</td> </tr> <tr> <td>☒ Utility</td> <td>☐ Special Light-Sport</td> </tr> <tr> <td></td> <td>☐ Experimental Light-Sport</td> </tr> </table> ☐ Certificate of Authorization or Waiver (COA) ☒ None ☐ Unknown	Standard	Special	☒ Normal	☐ Restricted	☐ Aerobatic	☐ Limited	☐ Balloon	☐ Provisional	☐ Commuter	☐ Special Flight	☐ Transport	☐ Experimental	☒ Utility	☐ Special Light-Sport		☐ Experimental Light-Sport	Landing Gear <i>(Check all that apply)</i> ☐ Retractable ☒ Tricycle ☐ Tailwheel ☐ Amphibian ☐ High Skid ☐ Emergency Float ☐ Skid ☐ Float ☐ Ski ☐ Hull ☐ Ski/Wheel ☐ Other Launch/Recovery System ☐ None ☐ Unknown	Engine Type <i>(Select one)</i> ☒ Reciprocating ☐ Liquid Rocket ☐ Turbo Shaft ☐ Solid Rocket ☐ Turbo Prop ☐ Hybrid Rocket ☐ Turbo Jet ☐ None ☐ Turbo Fan ☐ Unknown ☐ Electric Fuel System Type <i>(Reciprocating)</i> ☒ Carburetor ☐ Fuel-Injected
Standard	Special																		
☒ Normal	☐ Restricted																		
☐ Aerobatic	☐ Limited																		
☐ Balloon	☐ Provisional																		
☐ Commuter	☐ Special Flight																		
☐ Transport	☐ Experimental																		
☒ Utility	☐ Special Light-Sport																		
	☐ Experimental Light-Sport																		

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>	Time Since: Overhaul <i>(hours)</i>
Eng. 1	Lycoming	O-320-D2J	RL-7703-39E		160			99.8
Eng. 2								
Eng. 3								
Eng. 4								

Last Inspection Type ☒ 100-Hour ☐ Continuous Airworthiness ☐ AAIP ☐ Conditional Inspection ☐ Annual ☐ Unknown Date Last Inspection: <u>12/28/2017</u> <i>mm/dd/yyyy</i> Airframe Total Time: <u>17517.4</u> hrs hours measured at <i>(Select one)</i> ☒ Last Inspection ☐ Time of Accident/Incident Type of Maintenance Program <i>(Select one)</i> ☐ Annual ☐ Conditional (Amateur-built only) ☐ Manufacturer's Inspection Program ☐ Other Approved Inspection Program (AAIP) ☐ Continuous Airworthiness ☒ Other, specify: <u>100hour and Annual</u> Description of Fire Extinguishing System ☒ None ☐ Specify: _____	Propeller 1 ☒ Fixed Pitch ☐ Controllable Pitch ☐ Ground Adjustable Manufacturer: <u>McCauley</u> Model: <u>1C160/DTM7557M1</u> Propeller 2 ☐ Fixed Pitch ☐ Controllable Pitch ☐ Ground Adjustable Manufacturer: _____ Model: _____	ELT Installed: ☒ Yes ☐ No If Yes: ELT Manufacturer: <u>Dourne & Margolin</u> Model or Part No.: <u>ELT6</u> 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 <i>(Check all that apply)</i> ☐ 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: _____
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OWNER/OPERATOR INFORMATION**Registered Aircraft Owner**Name: Stratus Aviation Solutions LLCCity: Santa RosaState: CA ZIP: 95403Fractional Ownership Aircraft: ☐ Yes ☒ NoCountry: US**Operator of Aircraft**☐ Same As Registered Owner☐ Same Address as Registered OwnerName: North Coast Air, IncCity: Santa Rosa

Doing Business As: _____

State: CA ZIP: 95403

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

Country: US**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
Scenic Air Tour FAR 91.147

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: Cloverdale Muni

Distance From Airport Center: _____ sm

Airport Identifier: O60

Direction From Airport: _____ degrees true

Proximity to Airport: ☐ Off Airport/Airstrip ☒ On Airport/Airstrip ☐ N/AAirport Elevation: 276 ft. msl**Runway Information**Runway ID: 32 (L/R/C) Length: 2909 ft Width: 60 ft**Condition of Runway/Landing Surface (Check all that apply)****Runway/Landing Surface (Check all that apply)**

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

- ☒ 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 ☐ Crosswind ☐ Aborted Landing (after touchdown)
☐ Unknown

IFR Approach (Check all that apply)

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

VFR Approach (Check all that apply)

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

"FLIGHT CREWMEMBER 1" INFORMATION

"Flight Crewmember 1" Responsibilities at the Time of Accident/Incident

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

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

"Flight Crewmember 1" Identification

First Name: Bradley City of Residence: Santa Rosa
 Middle Initial: R State: CA ZIP: 95405
 Last Name: Volz Country: USA
 Age at time of Accident/Incident: 43 Date of Birth: 1974 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 border="0"> <tr> <th>Available</th> <th>Used</th> </tr> <tr> <td> ☐ None ☐ Lap only ☒ 3-point ☐ 4-point ☐ 5-point ☐ Unknown </td> <td> ☐ None ☐ Lap only ☒ 3-point ☐ 4-point ☐ 5-point ☐ Unknown </td> </tr> </table>	Available	Used	☐ None ☐ Lap only ☒ 3-point ☐ 4-point ☐ 5-point ☐ Unknown	☐ None ☐ Lap only ☒ 3-point ☐ 4-point ☐ 5-point ☐ Unknown	Inflatable Restraints ☒ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown								
Available	Used														
☐ None ☐ Lap only ☒ 3-point ☐ 4-point ☐ 5-point ☐ Unknown	☐ None ☐ Lap only ☒ 3-point ☐ 4-point ☐ 5-point ☐ Unknown														
Pilot Certificate(s) (Check all that apply) <table border="0"> <tr> <td>☐ None</td> <td>☐ Flight Instructor</td> <td>☐ Commercial</td> <td>☐ US Military</td> </tr> <tr> <td>☒ Private</td> <td>☐ Recreational</td> <td>☐ Airline Transport</td> <td>☐ Foreign</td> </tr> <tr> <td>☐ Student</td> <td>☐ Sport</td> <td>☐ Flight Engineer</td> <td></td> </tr> </table>				☐ None	☐ Flight Instructor	☐ Commercial	☐ US Military	☒ Private	☐ Recreational	☐ Airline Transport	☐ Foreign	☐ Student	☐ Sport	☐ Flight Engineer	
☐ 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>09/07/2017</u> mm/dd/yyyy												

Medical Certificate Limitations

Medical Certificate Special Issuance

Date of Last Flight Review
 or Equivalent, Including
 FAR 121/135 Checks: 07/18/2017
 mm/dd/yyyy

Flight Review Aircraft

Make: Cessna
 Model: C172S

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

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	168.8	28.2	167.3	0	4	0.5	5.3	0	0	0
Pilot in Command (PIC)	72.4	11.2	73.0	0	0	0	0	0	0	0
Time as Instructor	0	0	0	0	0	0	0	0	0	0
This Make/Model					3.5	0	0.9			
Last 90 Days	5.2	0.6	5.2	0	0	0	0	0	0	0
Last 30 Days	0.6	0.6	0.6	0	0	0	0	0	0	0
Last 24 Hours	0.6	0.6	0.6	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: _____ 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 ☐ 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																
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☐ Unknown	☐ Unknown																
Pilot Certificate(s) (Check all that apply) <table style="width: 100%;"> <tr> <td>☐ None</td> <td>☐ Flight Instructor</td> <td>☐ Commercial</td> <td>☐ US Military</td> </tr> <tr> <td>☐ Private</td> <td>☐ Recreational</td> <td>☐ Airline Transport</td> <td>☐ Foreign</td> </tr> <tr> <td>☐ Student</td> <td>☐ Sport</td> <td>☐ Flight Engineer</td> <td></td> </tr> </table>		☐ None	☐ Flight Instructor	☐ Commercial	☐ US Military	☐ Private	☐ Recreational	☐ Airline Transport	☐ Foreign	☐ Student	☐ Sport	☐ Flight Engineer		Medical Certificate Validity ☐ Without limitations/waivers ☐ Unknown ☐ With limitations/waivers ☐ N/A ☐ Special Issuance			
☐ 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		Date of Last Medical _____ mm/dd/yyyy														

Medical Certificate Limitations

Medical Certificate Special Issuance

**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) ☐ 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

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										
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)							
Crew Name and Address First Name: _____ City of Residence: _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____				Seat Occupied ☐ Left ☐ Front ☐ Center ☐ Rear ☐ Right ☐ Single ☐ Unknown		Injury ☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown	
Pilot Certificate(s) (Check all that apply) ☐ None ☐ Flight Instructor ☐ Commercial ☐ US Military ☐ Private ☐ Recreational ☐ Airline Transport ☐ Foreign ☐ Student ☐ Sport ☐ Flight Engineer				Restraint Type: Available ☐ 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 First Name: _____ City of Residence: _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____				Seat Occupied ☐ Left ☐ Front ☐ Center ☐ Rear ☐ Right ☐ Single ☐ Unknown		Injury ☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown	
Pilot Certificate(s) (Check all that apply) ☐ None ☐ Flight Instructor ☐ Commercial ☐ US Military ☐ Private ☐ Recreational ☐ Airline Transport ☐ Foreign ☐ Student ☐ Sport ☐ Flight Engineer				Restraint Type: Available ☐ 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					
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 <i>If Under 5,</i> ☐ 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 <i>If Under 5,</i> ☐ 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 <i>If Under 5,</i> ☐ 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 <i>If Under 5,</i> ☐ Child Restraint ☐ Lap-Held ☐ Unknown

FLIGHT ITINERARY INFORMATION

Last Departure Point Airport ID: <u>KSTS</u> City: <u>Santa Rosa</u> State: <u>CA</u> Country: <u>USA</u>	Time of Departure Time: <u>~ 12:45</u> Time Zone: <u>US/Pacific</u>	Destination Airport ID: <u>O60</u> City: <u>Cloverdale</u> State: <u>CA</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

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: <u>KSTS</u> Observation Time: <u>ATIS Romeo</u> Time Zone: <u>US/Pacific</u> Distance from Accident Site: <u>18.1</u> nm Direction from Accident Site: <u>125</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 _____ ft agl	Ceiling ☒ None (Clear) ☐ Obscured ☐ Broken ☐ Indefinite ☐ Overcast ☐ Unknown Ceiling Height _____ ft agl
Temperature: _____ (C) or _____ (F) Dew Point: _____ (C) or _____ (F) Altimeter Setting: <u>30.17</u> in. Hg or _____ MB	

Wind Direction ☐ Variable - or - Direction: <u>300</u> degrees true	Wind Speed ☐ Calm ☐ Light and Variable - or - Speed: <u>11</u> kts	Wind Gusts ☐ Not Gusting - or - Speed: _____ kts	Visibility <u>10</u> miles RVR: _____ feet RVV: _____ miles Density Altitude: _____ 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 ☒ None ☐ Trace ☐ Light ☐ Moderate ☐ Severe ☐ Unknown Type ☒ N/A ☐ Rime ☐ Clear ☐ Mixed ☐ Unknown	Icing Actual Amount ☒ None ☐ Trace ☐ Light ☐ Moderate ☐ Severe ☐ Unknown Type ☒ N/A ☐ Rime ☐ Clear ☐ Mixed ☐ Unknown	Turbulence Type (Check all that apply) ☒ None ☐ Clear Air ☐ Terrain-Induced ☐ Convective Turbulence Severity ☐ Light ☐ Moderate ☐ Severe ☐ Extreme
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NOTAMs (D and FDC), AIRMETs, SIGMETs, PIREPs in effect at the time of the accident/incident:
Runway 32 Precision Approach Path Indicator Unusable. Runway 32 Runway End ID Light Out. Runway 14 Runway End ID Light Out.

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)*

Propoeller tip separated from the propeller and impacted a car door quite a distance away. The pavement of the taxiway was also /damaged. The aircraft's left strut bent on impact. The cowl and engine were compressed when the aircraft rotated tail over nose after /coming i n contact with the ground. Wing skins were severely wrinkled.

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.

The objective of the flight was to fly to Cloverdale (O60), perform 2 full-stop landings, and then return to Santa Rosa (KSTS). This would provide practice for making non-towered airport position reports while in the traffic pattern, and also log three additional full-stop landings during the day. No other goals were envisioned for the flight.

Preparation for the flight was as usual, to include creating my quick reference sheet for any airports that I expected to possibly use while reviewing data for those airports in Foreflight.

A fuel imbalance (5 gal left, 15 gal right) was addressed by requesting 10 gallons to be added to the left tank. No other issues were uncovered while preflighting the aircraft.

ATIS Romeo was current: Wind 350@11, Clear, A30.17 at Santa Rosa KSTS 18.1nm SE from field.

I'll divide the description of the flight itself into individual sections. I am mostly doing this so that I can put a label next to each section to reference it more easily.

- (a) KSTS departure was via runway 32, runway heading.
- (b) Climb to 3000'.
- (c) To avoid being unnecessarily close to KHES, course was altered NE through Alexander Valley, and then NW to get to O60.
- (d) 5SM SE of O60, a radio call was made announcing my position and intention to overfly the field at 2000' to observe the wind sock.
- (e) Pre-landing checklist.
- (f) Now at 2000' and Under 2SM from the field, Skydive1 departed runway 32. I maintained visual separation as Skydive1 flew a left pattern and departed the area.
- (g) Beyond the 32 departure end, I began a descent to 1300'
- (h) Turned crosswind.
- (i) Turned downwind.
- (j) Radio call with position report as being on downwind. Throttle set to engine RPM 2000, speed observed to be ~ 80kts.

continued below

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

Operator/Owner Safety Recommendation

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)

30

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 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

The Aircraft came to rest inverted. Additional parties on the field assisted the pilot in freeing himself from the seatbelt and exiting through the pilot's door.

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.

- (k) At Approximately midfield, I heard another aircraft announce that they were a few miles out.
(l) Abeam the 32 numbers, throttle reduced to 1500/1600 RPM, carburetor heat, flaps 10
(m) After a descent of 100-200', turned base, and made a position report.
(n) flaps to 20, pitch for 70-75kts
(o) Turned final. Made radio position report. flaps 30. speed 65kts.
(p) The approach was stable. Angle was good, speed was good, but it did appear short (midpoint of the displaced threshold). I added power, pitched up slightly to adjust the sight picture for the projected touchdown point to be beyond the displaced threshold.
(q) Since another aircraft was in the area and I did not previously announce my intentions to make a full-stop landing on my last position report when I turned final, I made another position report on short final including 'full stop'.

The sections that follow are where things go wrong.

(r) Somewhere around the displaced threshold, or perhaps just before it, the stability of the approach was lost. I suspect that there was some sort of swirling wind, or type of updraft that I have not previously encountered. In the past I have experienced a wing raise that needed to be corrected when on final and passing over trees to a comparatively open clearing or otherwise change in terrain ahead of the runway. This event was not like that. In addition to the wing raising more than I had previously experienced, the aircraft also yawed to the right.

(s) I immediately attempted to regain the runway centerline and level the wings, but the result was mostly to reverse the existing condition, except to the left instead of to the right.

(t) Another attempt to regain the runway centerline, and level the wings was unsuccessful. And found the aircraft now yawed slightly right of center.

(u) Since the attempted measures to correct the situation were obviously not producing the desired results, I made a radio call announcing that I was going to go around.

(v) Power, flaps 20 (My intention was 20 degrees, but aircraft came to rest with the flaps up, so I suspect that I missed the detent at 20 degrees on the flap operation switch).
Engine Notes: Engine overhauled and tested July 2017

At this point the aircraft rolled left, contacted the ground, and then rolled tail over nose and came to rest upside down west of the taxiway.

I suspect that the most critical mistake during the attempted recovery to a stable condition was not adding full power and starting the go around procedure at step (s). The idea of adding full power when the aircraft was not pointing in the desired direction with the wings at an expected angle doesn't seem particularly appealing to me (which is why my focus was on restoring a centered stable approach). But, I suspect that it would have been better than what ultimately transpired.

Since the aircraft's landing gear was not aligned with the runway, I would not have wanted to touch down. I suspect that I was subconsciously adding more back pressure on the yoke during (s, t) because of this. At that point, I would have effectively been in slow flight, but still with a power setting for landing. The combination of these conditions is not something that I would ever consciously do, as I would only expect a loss of airspeed followed by a stall to result. This is why I suspect that the better course of action at (s) would have been to immediately add full power, rather than attempting to stabilize the aircraft.

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

Date of this Report

01/28/2018
mm/dd/yyyy

Name of Pilot/Operator: Bradley Volz

Signature: _____

-- or --

☒ Check here to electronically sign this document

If a Person Other than Pilot/Operator is Filing Report

Name: _____

Title: _____

Signature: _____

-- or --

☐ Check here to electronically sign this document

FOR NTSB USE ONLY

NTSB Accident/Incident No.
WPR18CA072

Reviewed by NTSB Regional Office
WPR- Federal Way, WA

Name of Investigator
Debra J. Eckrote

Date Report Received
1/31/18