

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: <u>Hutchinson (KHCD)</u> State: <u>MN</u> ZIP: <u>55350</u> Country: <u>United States</u> Latitude: <u>44.86N</u> Longitude: <u>94.38W</u> <i>(Enter in decimal degrees or degrees:minutes:seconds)</i>	Accident/Incident Date/Time Date: <u>01/31/2022</u> Local Time: <u>12:56PM</u> <i>mm/dd/yyyy</i> Time Zone: <u>Central</u> Collision with Other Aircraft: ☐ Midair ☐ On-ground ☒ None
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AIRCRAFT INFORMATION

Registration Number: <u>N227BD</u> Manufacturer: <u>Cirrus</u> Model: <u>SR22TN</u> Serial Number: <u>3134</u> Year of Manufacture: <u>2008</u> Amateur-Built: ☐ Yes ☒ No If Yes: ☐ Kit/Plans ☐ Original Design Make: _____	☒ IFR-Equipped and Certified ☐ Commercial Space Flight ☐ Unmanned Aircraft Maximum Gross Weight: <u>3400</u> lbs Weight at Time of Accident/Incident: <u>~3216</u> lbs Number of Seats: <u>4</u> Flight Crew Seats: <u>2</u> Cabin Crew Seats: _____ Passenger Seats: <u>2</u> Number of Engines: <u>1</u>
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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 (hours)	Time Since: Inspection (hours)	Overhaul (hours)
Eng. 1	Teledyne Continental	IO-550 (Tornado Alley T ₄)			310			
Eng. 2								
Eng. 3								
Eng. 4								

Last Inspection Type ☐ 100-Hour ☐ Continuous Airworthiness ☐ AAIP ☐ Conditional Inspection ☐ Annual ☒ Unknown Date Last Inspection: _____ <i>mm/dd/yyyy</i> Airframe Total Time: _____ hrs hours measured at <i>(Select one)</i> ☐ Last Inspection ☐ Time of Accident/Incident	Propeller 1 ☐ Fixed Pitch ☒ Controllable Pitch ☐ Ground Adjustable Manufacturer: <u>Hartzell 3-Blade Constant S₊</u> Model: <u>PHC-J3YF-1N/N7605</u> ELT Installed: ☐ Yes ☐ No If Yes: ELT Manufacturer: <u>Artex ME406 MHz</u> Model or Part No.: _____ TSO No.: ☐ OC91 (121.5 MHz) ☐ OC91a (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	Propeller 2 ☐ Fixed Pitch ☐ Controllable Pitch ☐ Ground Adjustable Manufacturer: _____ Model: _____ 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: _____
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: _____	Description of Fire Extinguishing System ☐ None ☒ Specify: <u>Handheld Fire Extinguisher</u>	

OWNER/OPERATOR INFORMATION**Registered Aircraft Owner**Name: Black Dog Aviation LLCCity: AvonState: MNZIP: 56310Fractional Ownership Aircraft: ☐ Yes ☒ NoCountry: United States**Operator of Aircraft**☒ Same As Registered Owner☒ Same Address as Registered Owner

Name: _____

City: _____

Doing Business As: _____

State: _____ ZIP: _____

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

Country: _____

Operating Certificates Held

(Check all that apply)

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

Regulation Flight Conducted Under

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

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

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

☐ Unknown

Revenue Operation for FAR 121, 125, 129, 135

(Select one for each group)

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

☐ Passenger
☐ Cargo
☐ Mail Contract Only

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

(Select one)

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

Revenue Sightseeing Flight☐ Yes ☒ No**Air Medical Flight**☐ Yes ☒ No**AIRPORT INFORMATION (Fill in if accident/incident occurred on approach, landing, takeoff, departure, or within 3 miles of an airport)**Airport Name: Hutchinson Municipal/Butler FieldDistance From Airport Center: ~1-3 smAirport Identifier: KHCDDirection From Airport: Southeast degrees trueProximity to Airport: ☒ Off Airport/Airstrip ☐ On Airport/Airstrip ☐ N/AAirport Elevation: 1062 ft. msl**Runway Information**Runway ID: 15 (L/R/C) Length: 4000 ft Width: 75 ft**Runway/Landing Surface (Check all that apply)**

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

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

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

Approach/Departure Segment (Select one)

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

IFR Approach (Check all that apply)

- ☐ None

☐ ADF/NDB ☐ PAR ☐ MLS ☐ Practice
☐ SDF ☐ Sidestep ☐ LDA ☐ GPS
☐ VOR/TVOR ☐ ILS ☐ ASR
☐ VOR/DME ☐ Localizer Only ☐ Visual
☐ TACAN ☐ LOC-back course ☐ Contact
☐ RNAV ☐ Circling

☐ Unknown

VFR Approach (Check all that apply)

- ☐ None

☐ Traffic Pattern ☐ Stop and Go
☐ Straight-In ☒ Touch and Go
☐ Valley/Terrain Following ☐ Simulated Forced Landing
☒ Go Around ☐ Forced Landing
☐ Full Stop ☐ Precautionary Landing

☐ Unknown

"FLIGHT CREWMEMBER 1" 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: Richard

City of Residence: Avon

Middle Initial: _____

State: MN ZIP: 56310

Last Name: Jolkovsky

Country: United States

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

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

_____ 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

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										

"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: Kyle

City of Residence: Saint Louis Park

Middle Initial: M

State: MN ZIP: 55416

Last Name: Fiebelkorn

Country: United States

Age at time of Accident/Incident: 34 Date of Birth: mm/dd/yyyy

Certificate Number: mm/dd/yyyy

Degree of Injury

☐ None
 ☐ Fatal
☐ Minor
 ☐ Unknown
☒ Serious

Seat Occupied

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

Restraint Type

Available

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

Used

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

Inflatable Restraints

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

Pilot Certificate(s) (Check all that apply)

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

Principal Occupation

☒ Pilot
☐ Other
☐ Unknown

Medical Certificate

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

Medical Certificate Validity

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

Date of Last Medical

10/14/2020
 mm/dd/yyyy

Medical Certificate Limitations

Must wear corrective lenses.

Medical Certificate Special Issuance

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

10/02/2020
 mm/dd/yyyy

Flight Review Aircraft

Make: Cirrus

Model: SR22

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
 ☐ Instrument Airplane
☒ Airplane Single-Engine
 ☐ Instrument Helicopter
☐ Airplane Multi-Engine
 ☐ Helicopter
☐ Gyroplane
 ☐ Glider
☐ Powered Lift
 ☐ Sport

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	729.1	295.3	729.1		31.8	30.7	76.5			
Pilot in Command (PIC)	670.1									
Time as Instructor	313.6									
This Make/Model										
Last 90 Days	47.3									
Last 30 Days	10.3									
Last 24 Hours										

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 ☐ 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 ☐ 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						
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	
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	

FLIGHT ITINERARY INFORMATION

Last Departure Point

Airport ID: KFCM
 City: Eden Prairie
 State: MN
 Country: United States

Time of Departure

Time: 11:45am
 Time Zone: CST

Destination

Airport ID: KHCD
 City: Hutchinson
 State: MN
 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:

~1,500-1,600 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: AWOS- KHCD3 118.525
 Observation Time: ~10 minutes prior to arrival
 Time Zone: CST
 Distance from Accident Site: _____ nm
 Direction from Accident Site: _____ degrees true

Basic Conditions

☒ VMC
☐ IMC
☐ Unknown

Light Condition

☐ Dawn ☐ Dusk ☐ Dark Night ☐ Unknown
☒ Day ☐ Night ☐ Bright Night

Sky/Lowest Cloud Condition

☒ Clear ☐ Thin Broken
☐ Few ☐ Thin Overcast
☐ Partial Obscuration ☐ Unknown
☐ Scattered

Lowest Cloud Condition Height

_____ ft agl

Ceiling

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

Ceiling Height

_____ ft agl

Temperature: -6 (C) or _____ (F)

Dew Point: -10 (C) or _____ (F)

Altimeter Setting: 29.83 in. Hg
 or _____ MB

Wind Direction

☐ Variable

-or-
 Direction: ~160 degrees true

Wind Speed

☐ Calm
☐ Light and Variable

-or-
 Speed: ~6 kts

Wind Gusts

☒ Not Gusting

-or-
 Speed: _____ kts

Visibility 10+ miles

RVR: _____ feet

RVV: _____ miles

Density Altitude: _____ ft

Intensity of Precipitation

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

Type of Precipitation (Check all that apply)

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

Restriction to Visibility (Check all that apply)

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

Icing Forecast

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

Icing Actual

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

Turbulence

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

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

KHCD Runway 15/33 PAPI indicators out of service.

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)*

My knowledge of damage to the aircraft is based on news footage viewed online after being released from the hospital. See the web link to review the video footage I'm referencing:

<https://www.youtube.com/watch?v=vlq27zfoUSg>

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.

See attached pdf document (file name: N227BD Accident Report_Kyle Fiebelkorn) for a detailed recount of the accident.

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

Operator/Owner Safety Recommendation

Unknown.

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.)

- Flaps appeared to be unable to extend and hold the 50% setting before returning to the 0% setting during one portion of the flight

- Climb performance during the first go-around attempt was insufficient to maintain a safe airspeed or reach pattern altitude

**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)

44 _____ 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****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

Unknown.

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.

See attached pdf document (file name: N227BD Accident Report_Kyle Fiebelkorn) for a detailed recount of the accident.

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

Date of this Report

02/23/22

mm/dd/yyyy

Name of Pilot/Operator: Kyle Fiebelkorn

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.

CEN22FA111

Reviewed by NTSB Regional Office

CEN

Name of Investigator

LINK

Date Report Received

2/23/2022

Lesson Planning

Rick Jolkovsky and I were in contact several days prior to our first flight lesson on January 31st, 2022. We discussed the basics of his Cirrus Embark transition training syllabus and his personal logistics. He purchased a 2008 SR22TN Perspective G3 with tail number N227BD from a reseller in California and flew the airplane from there to KFCM in Minnesota with a Cirrus Standardized Instructor Pilot (CSIP) named Dennis Pearson. Rick arranged to keep his airplane hangared temporarily at KFCM with Elliott Aviation, a Fixed Base Operator (FBO) where my employer, Inflight Pilot Training, is also based. Rick planned to hangar his airplane at this facility for the duration of the VFR portion of his transition training so he would not have to solo the airplane back and forth from his home hangar at the KAXN airport before gaining this experience in his new make and model. The manufacturer-developed training program includes six lessons focused on VFR flying with an additional four lessons that are a part of an advanced transition for instrument rated pilots. Rick planned to complete both the SR22TN Perspective Transition (VFR) and Advanced Add-on (IFR) training programs at Inflight Pilot Training with me as his Cirrus Training Center Instructor (TCI).

Rick and I originally planned to go up for our first flight lesson on Wednesday, January 26th however we spoke about a potential problem with the flap system on his airplane prior to that date. In an email sent on January 24th Rick said "before leaving [California], the shop there was doing some maintenance work [and] noticed a problem with the flaps. Evidently they were going past 50%, then back to the selected 50%. Flaps 100[%] and zero[%] were fine. They thought that it wasn't a relay but probably the actuator. The long and short is that Inflight maintenance is going to look at it tomorrow. They will let me know whether it's ok to go, but there is a possibility it is not ready by this Wednesday."

I spoke with our maintenance coordinator at Inflight on Tuesday evening and the airplane was inspected with no faulty functionality observed. Rick had received the same feedback from the Inflight maintenance coordinator as well and we kept our plan to fly N227BN on Wednesday January 26th. When we spoke early Wednesday morning though, the weather conditions were too poor to fly. So we decided to cancel that flight lesson and plan for Monday, January 31st instead.

Preflight

On Monday, January 31st the weather looked great for VFR flight lessons, with the nearest Terminal Area Forecast (TAF) from KMSP predicting winds from 160 degrees at 11 knots, visibility 6+ statute miles, and ceilings broken at 15,000' AGL by 2pm CST. We were scheduled to meet at 9am with a plan to complete the first flight lesson from the Cirrus syllabus. The purpose of this specific flight lesson was to cover key subject areas including airplane weight and balance, airplane performance, preflight assessment, engine start, taxiing, before takeoff check, normal takeoff, en route climb, cruise, slow flight, power-off stalls, power-on stalls, steep turns, unusual flight attitudes, descents, traffic patterns, normal landings, after landing, parking and securing, plus a simulated CAPS deployment.

Rick arrived at 9am and we went out to see N227BD in the heated hangar first to check fuel and complete our preflight inspection. Our preflight inspection was thorough and followed the primary Pilot's Operating Handbook (POH) found in Rick's airplane. This was not the first preflight inspection procedure Rick had performed on N227BD, so he was already familiar with the checklist and individual airplane components. I observed his preflight inspection method alongside him while offering additional tips I have learned in my years flying Cirrus airplanes. Examples of these included advice to give passengers to prevent them from stepping on wing flaps while boarding the airplane, the location and differences between the five main fuel sumps and the TKS tank sumps, how to estimate tire pressure by using the width of four fingers beneath the wheel pants, awareness of Phillips head screws on the main wheel pants that could potentially become loose over time, safety considerations when checking oil levels (i.e. always ensure the oil cap is secure before walking away from the airplane), and the importance of checking exhaust pipe security.

This last item is crucial for SR22TN airplanes and it is only identified in the POH Supplement as an additional line item. The POH Supplement states "Grasp the end of each tailpipe where it exits the lower cowl area and confirm each is secure. If there is any indication that the tailpipe is not fully secure, repair before further flight. Do not fly the aircraft with a loose tailpipe." I also advised Rick to use a flashlight to visually inspect inside the area where the tailpipe exits the cowl while checking each pipe for security by hand. This step ensures that the exhaust pipes are secured with the turbochargers and neither component indicates any potential for exhaust gas leakage or structural failure of a turbocharger. Rick understood the purpose of this and we both performed the check on each tailpipe that morning.

As we continued the preflight checklist we found the oil quantity to be roughly a half quart below the 6-8 quart recommended level, so we added a quart using an extra oil container Rick had onboard his airplane. Next, we completed the preflight inspection and requested Elliott Aviation to fill the fuel tanks up to the tabs, which equals 60 gallons of useable fuel.

Ground Lesson

Rick and I reconvened inside the Inflight Pilot Training offices to review airplane weight and balance as well as takeoff and landing performance. We referenced the actual POH for this discussion and talked about how the 3400-pound max gross weight of his airplane could easily be exceeded if fuel tanks were completely filled and two full-grown adults were seated up front. With tanks filled to the tabs that day plus our flight bags, cargo, TKS fluid and oxygen onboard, we determined our weight and balance was within the safe envelope at takeoff, a weight of roughly 3,303.1 pounds.

Next we talked through a standard flight briefing from KFCM to KHCD viewed through the ForeFlight mobile app. KHCD was chosen by me as the airport for Rick to practice his normal takeoffs and landings. My plan was to have Rick fly there after completing the air work defined in the Cirrus syllabus because the airport is conveniently located west of the KFCM practice areas with little terrain change, few obstacles nearby and an ample runway length of 4,000 feet. Rick was familiar with flight briefings including those downloaded and viewed in ForeFlight. The briefing confirmed the weather should be great for VFR flying, and the only abnormal item affecting our flight that day was a NOTAM indicating that the PAPI lights were out for runway 33 and 15 at KHCD.

From there we went on to review conservative methods for determining takeoff and landing performance. That morning, the KFCM Automated Terminal Information Service (ATIS) Echo from 16:53 Zulu time reported winds from 160 degrees at 13 knots, visibility of 6 miles, temperature of -6 Celsius, dew point of -10 Celsius, and a local altimeter setting of 29.83. Runways in use included 18 and 10R and remarks specified there was a crane northeast of the field at 200 feet AGL. We determined that runway 18 would be best given the winds. The length of this runway is 2690 feet with the 18 direction having 0.22% of upslope. Using the conservative, rounding method outlined in the latest Cirrus Takeoffs and Landings training course, we determined our total takeoff distance to be approximately 1,652.7 feet over a 50-foot obstacle from the 3400-pound performance data table. We arrived at this number by adding in a performance penalty for the uphill slope of the runway. No headwind advantage was including nor any performance penalty for operation of the air conditioner (temperatures were far too cold to operate the air conditioner). So overall our calculations were safe and conservative.

To determine landing performance for our return back at KFCM on runway 18, we used the same conservative, rounding method from the 3,400-pound (100% flaps) performance table, omitting any distance advantages from the runway upslope and potential headwinds. The total distance required was about 2,317 feet. Again, this result was determined to be a safe and conservative calculation, with several feet of excess distance beyond a value interpolated down to the nearest foot.

We also discussed landing characteristics unique to flying Cirrus airplanes including high-speed float, low-speed drag resulting from the high propellor blade width of an SR22TN, and the importance of smoothly reducing power as the airplane transitions through the round out and final flare stage of a normal landing.

I emphasized to Rick how to methodically reduce power as his eyes transition from the aiming point to the end of the runway during the round out and flare. I also instructed him to avoid chopping the throttle abruptly and to focus on smooth control inputs by holding just enough back pressure on the side yoke to hold the nose wheel off the runway as long as possible. I also noted how the side yoke of a Cirrus favors precise inputs as control authority becomes progressively reduced due to airspeed decreasing during a normal landing. Finally, we discussed the unique sight picture of landing a Cirrus airplane as the seating position allows for more forward visibility that can be misinterpreted as a flat attitude during landing.

Departure

Next, we gathered our flight bags and walked out to the airplane where it was now parked on the Elliott ramp by the line crew. Before boarding, we visually confirmed that the fuel tanks were filled to the tabs with 100LL, removed the low-profile wheel chocks, and gave the airplane one last visual inspection. After that we boarded the airplane, buckled our seatbelts appropriately so they were snug around the waist area, closed the doors securely, turned on BAT 2, reconfirmed at least 24 Volts were present on the Primary Flight Display (PFD) and double checked that the flap position indicator light was out to ensure the electrical system isolation diodes were functioning properly. Next, we turned on BAT 1 and began double checking the weight and balance data using the digital feature on the Multi-Function Display (MFD). We then completed the Before Starting Engine checklist followed by the Starting Engine checklists on the MFD as well. Some database items for Rick's avionics required only for IFR flight were not current, but the digital checklists we used that day were updated and accurate with the POH. Both Rick and I also had current versions of the digital VFR charts for our region downloaded onto our personal Electronic Flight Bag (EFB) Apple devices via ForeFlight.

Next we wrote down the KFCM ATIS and completed both the Before Taxiing and Taxiing checklists before taxiing over to the designated run up area on the east end of the Elliott ramp. Our Before Takeoff checklist went smoothly. The engine performed within spec and the flaps extended to 50% appropriately. We noticed nothing abnormal during this run up checklist. Once complete, we called KFCM ground control to request our taxi clearance, which was to runway 18 via taxiway alpha.

We taxied up to the hold short lines of runway 18 and discussed our pre-takeoff briefing and departure plan. The former includes a review of critical moments prior to and after rotation in the event of an engine failure. With an airport elevation of 906' MSL, our briefing specified to land straight ahead following rotation if the engine fails before climbing above 1400' indicated (which is roughly 500' AGL). From 1400' to 2,900' indicated (roughly 500-2,000' AGL), we would pull the Cirrus Airframe Parachute System (CAPS) handle immediately if the engine failed per the manufacturer's guidance for all G3 era airplanes. Once this briefing and departure plan was discussed, we completed the Normal Takeoff checklist and final cockpit flow. We confirmed that the fuel pump was set to Low Boost mode and the mixture was set to Full Rich per the POH supplement procedures. We also confirmed that the flaps were set to 50%, COMM 1 was activated, A/C recirculate button was off, CAPS pin was removed, oil temperature was above 100 degrees Fahrenheit and within the green range, COMM 1 frequency was set to 119.15 for KFCM tower, ignition switch was set to the BOTH position, and trim was set for the takeoff position. Then we called KFCM tower to request our clearance. The local time was about 11:45 am CST.

Once cleared for takeoff on runway 18, we visually confirmed it was clear before taxiing onto centerline. During the initial takeoff ground roll, Rick was a little slow to bring the throttle full open. I instructed him to advance the throttle smoothly but deliberately all the way to full forward. I also pointed out areas to quickly check on the MFD to confirm the power output is at 100% (or slightly higher), the manifold pressure is near 29.6" Hg, the oil pressure is within the green range of 30-60 PSI, and the airspeed is alive and accelerating. After this brief coaching, Rick rotated his airplane right at 72 Knots Indicated Airspeed (KIAS), just within the recommended speeds of 70-73 KIAS, pitched for the takeoff command bars shown by the Primary Flight Display (PFD) at 7 degrees up, waited until the airplane accelerated to 80 KIAS, and then retracted flaps to the clean, 0% setting as defined in the Normal Takeoff checklist. Our climb out continued at the digitally bugged Vy speed of 101 KIAS until we reached 500 AGL, at which

point we both verbally announced "CAPS available" and Rick touched the red handle to confirm its position just as Cirrus recommends in its training material. Soon after, Rick began a gentle turn to the west followed by another turn to the northwest at his discretion because KFCM tower had said "right turn on course approved" during our initial clearance. After passing through the local traffic pattern altitude of 1,900', I advised Rick to lower the nose slight to improve both visibility and engine cooling, and to allow us to accelerate to the POH Supplement recommended En Route Climb speed of 120 KIAS.

As we progressed northwest bound we completed the Climb Checklist and confirmed that we were west of the 3,000' MSL altitude of the class Bravo airspace overlying the Delta airspace that surrounds KFCM. Once clear of that overlying airspace we continued climbing up to 3,500' to remain safely below the 4,000' MSL middle shelf of class Bravo airspace before leveling off and adjusting power. At this point of the flight we set power to the 55% output recommended by the Cirrus iFOM book to establish the 120 KIAS used for various flight training maneuvers.

En Route

Next, Rick and I verbally discussed the Cruise checklist displayed on the MFD, but left the mixture set to full rich with the fuel pump to Low Boost mode to ensure safe engine performance during the various power settings demanded by each flight training maneuver. We also left the landing light on for added visibility to any other aircraft that could potentially be flying nearby.

On our way to the practice area, we discussed the procedure to follow in the event of an engine failure beneath the bravo airspace at 3500' indicated, which is roughly 2500' AGL in that area. This altitude would allow little time for a pilot to establish glide speed and trouble shoot an engine failure before descending to the 2,000' AGL altitude recommended by Cirrus aircraft as the hard deck point at which CAPS should be activated unless a landing on a runway is assured or the engine is restarted. My intent following this discussion was to simulate an engine failure that leads to a CAPS deployment scenario on our return leg back toward KFCM to further illustrate this point and complete the task as outlined in the flight lesson syllabus.

Flight Maneuvers

Once arriving in the practice area we maintained an altitude of 3,500', again roughly 2,500' AGL, to allow adequate room for performing flight maneuvers well above the minimum 1,500' AGL power-off stall recovery altitude specified in the FAA Airman Certification Standards (ACS). This altitude also kept us safely below all nearby shelves of class bravo airspace and beneath VFR cruising altitudes. Before starting our practice maneuvers, we completed clearing turns, slowed the airplane down to 25% power, and reduced flaps incrementally down to the 100% setting ensuring airspeeds were below the max flap extend speed placarded for each setting (i.e. 119 KIAS for 50% flaps and 104 KIAS for 100% flaps). Next, we began practicing our first flight training maneuver of slow flight, which demanded power to be added back in to maintain speed just above that which would activate the stall horn whilst flying on the backside of the power curve.

Then, we moved on to power-off stalls, power-on stalls, steep turns, and unusual attitude recoveries. Rick performed all of these maneuvers well. One of his steep turns exhibited a little too much yoke back pressure that resulted in a subtle altitude gain that put him just outside of the ACS standards, but he noticed the error and corrected for it nicely without any input from me. The only maneuver that Rick needed a little coaching on was recovery from a nose-up unusual attitude. During his first recovery attempt, he was delayed to add full power just before lowering the nose and then leveling the wings. I reminded him to be smooth but deliberate with his power inputs and he performed his second attempt at this maneuver very well.

Once completing all of these maneuvers, we proceeded to KHCD to practice normal takeoffs and landings. I instructed Rick to use the GPS guidance set direct to KHCD along with the NAV and VNAV

modes of the autopilot. During our autopilot coupled descent, we finished our Descent Checklist before leveling off at an indicated altitude of 2500'. I instructed Rick to disconnect the autopilot, adjust the power to decelerate below the placarded airspeed of 119 KIAS, and hand fly the airplane to re-check the flap functionality. As we began the check, the flaps appeared to fail at holding a 50% setting once the control switch was set to this position. The green position indicator light turned off momentarily before re-illuminating in the 0% position, even though the control switch was clearly set to the 50% position.

After this check, we put the control switch back to the 0%, clean configuration setting. Then we discussed a plan. If the flaps did not deploy correctly in the downwind of the traffic pattern at KHCD, our plan was to abort that landing attempt, return to KFCM, and request a landing on the south parallel runway 10R to ensure ample runway distance for landing in a clean configuration. Next, we listened to the local AWOS-3 weather frequency of 118.525 and heard that the winds would be from 160 at 6 knots with the same 29.83 altimeter setting from KFCM earlier. Rick made our 10-mile and 5-mile radio calls to KHCD area traffic as we continued inbound direct to the field and completed our Before Landing checklist.

Practice Landing

We overflew the field from the east at 2,500', 500' above traffic pattern altitude of 2,000', and began a teardrop entry for runway 33 by mistake. The AWOS-3 had informed us that winds were favoring runway 15, so I instructed Rick to remain at 500' above pattern altitude and re-cross midfield again to make one more teardrop entry for runway 15. He handled radio communications well to communicate our position throughout this pattern entry and we both scanned diligently for traffic.

Once we entered the correct left downwind for runway 15 via this final teardrop pattern entry, the airplane seemed to perform normally. Once abeam the aiming point of the 1,000-foot markings, Rick smoothly reduced power to 25%, set the flaps to 50%, and targeted an airspeed of 100 KIAS. I visually confirmed that the flaps were working and told Rick we were safe to continue flying the pattern. He then turned left base, increased flaps to 100% while targeting 90 KIAS, visually checked the final approach path, and confirmed the mixture was set to rich and the Low Boost pump was on. Rick made the next radio call while turning final for runway 15.

Once we were established on final approach, Rick flew at our target airspeed of 80 KIAS and I pointed out that the wind sock was nearly right down centerline. However, I observed that our approach height was slightly too high, so I instructed Rick to perform a short forward slip to get lower. He smoothly brought the power to idle and flew the maneuver nicely to get better established on the correct flight path for a stabilized approach.

Just as we were about to cross the runway threshold though, Rick started allowing the airplane to sink slightly low and fly slow at 70KIAS. This was likely because he did not add quite enough power back in following the short forward slip maneuver. So I instructed him to add a little more power and leave it in briefly during round out to keep our airspeed closer to the 77 KIAS speed stated by the POH for a normal landing. Rick held centerline laterally well and little rudder input was needed to keep the nose pointing straight while established in a subtle side slip for landing. As we entered ground effect, he did not arrest our descent enough with a smooth round out into a momentary level attitude. Instead, he descended through ground effect until we experienced a noticeable bounce off the main wheels. Without hesitation I said to Rick "Go around. Let's try another one."

Go Around Attempt

Rick responded right away by adding full power, pitching up smoothly, and bringing the first notch of flaps up from 100% to 50%. Then he established a normal climbing attitude of roughly 7 degrees pitch up. He flew the airplane well during this portion of the go around, maintaining centerline with wings level while applying enough right rudder pressure to counteract the left turning tendencies and maintain coordination.

However, it was obvious that we weren't climbing very quickly—not nearly as quickly as N227BD had climbed during our first takeoff of the day.

I kept my scan mostly forward to evaluate pitch attitude with quick glances back to the PFD to monitor airspeed. Eventually, we did accelerate to the speed of 80 KIAS, which is when it's appropriate to retract the flaps from 50% to 0%. I called this out by saying "80 knots, flaps up." Rick retracted the flaps right on point and we kept climbing, but slowly still. Once we felt the flaps reach the fully retracted position, there was no noticeable feeling of acceleration that normally coincides with this clean configuration. My eyes were mostly focused on pitch attitude with glances at airspeed during this moment because, from prior experience, I assumed we may need to slightly increase pitch to maintain best rate of climb at the bugged Vy airspeed of 101 KIAS. As I glanced again at our airspeed though, I was alarmed to see it was only slightly higher than 85 KIAS while our rate of climb was only 300 FPM. This was far below what I normally experience with SR22 airplanes in similar weather conditions.

Right around this moment is when I first remember feeling the shudder of an irregular vibrational tick. Not a light tick, but a very noticeable clunky sound that resonated through the fuselage erratically every few seconds or so. At this point I took note of the indicated altitude at only about 1350' and looked forward again to reassess our pitch attitude. We were climbing at a more modest pitch, yet airspeed was slow. The attitude indicator and my sight picture both confirmed Rick had relaxed the pitch attitude slightly, which was likely done to help maintain airspeed. During this moment I told Rick that if we do not get to pattern altitude soon, we may have to consider CAPS.

As we reached an indicated altitude of 1,500', I said "CAPS available." Again, this was meant to call out that we were climbing through the 500' AGL height at which CAPS becomes usable. Rick and I had previously briefed the field elevation at KHCD to be roughly 1,000' MSL with the traffic pattern at 2,000'. This meant 1,500' indicated was our altitude to call out CAPS availability. At that moment Rick said to me "your controls." I responded "my controls" and placed my feet on the rudder pedals, right hand on the side yoke and left hand on the throttle, which was still firmly pressed forward in the full power position.

My first control inputs were made gently and coordinated to put us in a shallow left bank to ensure we would clearly fly to the east side of a farmhouse and road I knew were off the departure end of runway 15. My back pressure on the yoke was kept firm enough to prevent any altitude loss. As I leveled the wings in hope we could keep climbing up toward pattern altitude along the crosswind leg, I glanced at the altimeter again. It was only indicating 1,600' and not moving up or down. Then I scanned over to the airspeed and my heart sank. The digital airspeed tape was unraveling in deceleration. Upon this last glance it was quickly passing through 80 KIAS down into the 70s. I looked forward again to reconfirm my wings were level and a clear open farm field was in front of us. In that moment I knew we were going to hear the stall warning sound shortly. The POH states that "The warning sounds at approximately 5 knots above stall with full flaps and power off in wings level flight and at slightly greater margins in turning and accelerated flight." The published stall speed in the POH supplement for this SR22TN airplane was 70 KIAS with flaps retracted at max gross weight and most forward center of gravity (actual weight, load factor, power setting and center of gravity can all affect the stall speeds experienced in flight).

CAPS Deployment

With the reality sinking in that I was at full power yet trading airspeed to maintain altitude and quickly decelerating toward an impending stall, I said to Rick "pull it" referring to CAPS. The Cirrus CAPS Course instructs pilots to use two hands, a chin-up motion, and at least 45 pounds of downward force to deploy the parachute immediately. Knowing this, I asked Rick to make the pull because I was afraid of letting go of the side yoke and potentially sacrificing altitude that's vital for any CAPS Deployment. Rick followed my instruction without hesitation and pulled the CAPS handle exactly as he was supposed to.

In no time, I saw the activated handle dangling by its cable and heard the rocket shoot out the back of the fuselage as I turned my gaze back forward. At this moment, I could just start to see the two forward

harnesses attached near the sides of the firewall pull out from their discreet coverings on the outside of the fuselage. That's when I knew for certain the parachute was deploying. With my left hand still firmly on the throttle, I quickly pulled it back to the fully closed position and placed the red mixture lever to the cutoff position right after. The nose of the airplane began dropping as the parachute started its initial inflation. From there, I vaguely remember keying the microphone on my side yoke and saying "mayday, mayday, mayday" while looking forward to a frozen, empty farm field with no visible horizon in sight.

This was the last clear moment in my memory. I have no recollection of completing the remaining emergency items from the CAPS placard that instructs pilots to turn the fuel selector off, turn the master switch off, and secure the restraint system. However, I know for certain our seatbelts were firmly secured because we did this when we first boarded the airplane and checked the security once again during the Before Takeoff checklist.

I also do not have any recollection of the rear strap connected to the back wall of the baggage area extending fully from its shorter, snubbed position that CAPS keeps held in place initially until the parachute has fully inflated. This rear strap is supposed to extend further to lower the tail and help level the fuselage after full parachute inflation via a three-ring release mechanism activated by line cutters that are powered by a small pyrotechnically charged knife blade.

After becoming alert again at Hennepin County Medical Center, I was informed that there was no indication of a fire after ground impact. Nonetheless, the airplane clearly exhibited abnormally weak climb performance that gradually diminished to an inability to maintain airspeed while holding altitude at the full power setting.