

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: Nephi State: UT
 ZIP: 84648 Country: USA
 Latitude: 39.71 N Longitude: 111.84 W
(Enter in decimal degrees or degrees:minutes:seconds)

Accident/Incident Date/Time

Date: 06/25/2024 Local Time: 17:18
mm/dd/yyyy Time Zone: MDT

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

AIRCRAFT INFORMATION

Registration Number: N41RE

Manufacturer: Schempp-Hirth

Model: Discus 2b

Serial Number: 10

Year of Manufacture: 1998

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

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

Maximum Gross Weight: 1157 lbs

Weight at Time of Accident/Incident: 1090 lbs

Number of Seats: 1 Flight Crew Seats: _____

Cabin Crew Seats: _____ Passenger Seats: _____

Number of Engines: 0

Category of Aircraft

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

Type of Airworthiness Certificate

(Check all that apply)

Standard

- ☐ Normal
☐ Aerobatic
☐ Balloon
☐ Commuter
☐ Transport
☐ Utility

Special

- ☐ Restricted
☐ Limited
☐ Provisional
☐ Special Flight
☒ Experimental
☐ Special Light-Sport
☐ Experimental Light-Sport

☐ Certificate of Authorization or Waiver (COA)
☐ None ☐ Unknown

Landing Gear

(Check all that apply)

☒ Retractable

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

Engine Type *(Select one)*

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

Fuel System Type *(Reciprocating)*

☐ Carburetor ☐ Fuel-Injected

Engine	Engine Manufacturer	Engine Model/Series	Manufacturer's Serial Number	Date of Mfg. <i>mm/dd/yyyy</i>	Rated Power ☐ Horsepower or ☐ lbs of Thrust	Total Time <i>(hours)</i>	Time Since: Inspection <i>(hours)</i>	Overhaul <i>(hours)</i>
Eng. 1	<u>N/A</u>							
Eng. 2								
Eng. 3								
Eng. 4								

Last Inspection Type

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

Date Last Inspection: 06/03/2024
mm/dd/yyyy

Airframe Total Time: 1905.4 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: _____

Propeller 1

- ☐ Fixed Pitch
☐ Controllable Pitch
☐ Ground Adjustable

Manufacturer: _____

Model: _____

Propeller 2

- ☐ Fixed Pitch
☐ Controllable Pitch
☐ Ground Adjustable

Manufacturer: _____

Model: _____

ELT Installed: ☐ Yes ☒ No

If Yes:

ELT Manufacturer: _____

Model or Part No.: _____

TSO No.: ☐ C91 (121.5 MHz) ☐ C91a (121.5 MHz)
☐ C126 (406 MHz)

Was ELT still mounted in aircraft? ☐ Yes ☐ No

Was ELT still connected to antenna? ☐ Yes ☐ No

Did ELT Activate? ☐ Yes ☐ No

If activated:

Did ELT Aid in Locating Aircraft? ☐ Yes ☐ No

If not activated:

- Indicate Reason: ☐ Impact Damage
☐ Fire Damage
☐ Battery Expired/Damaged
☐ Unknown

Additional Equipment *(Check all that apply)*

- ☒ ADS-B
☐ Airframe Parachute
☐ Angle of Attack Indicator
☐ Autopilot
☒ Data Recorder
☒ Electronic Flight Bag or Handheld Device
☐ Electronic Multifunction Display
☐ Electronic Primary Flight Display
☐ Handheld GPS
☐ Heads Up Display
☐ Onboard Weather
☐ Satellite Tracking Device
☐ Stall Warning System
☐ Video Recording Device
☐ Other, Specify: _____

OWNER/OPERATOR INFORMATION**Registered Aircraft Owner**Name: Robert EckelCity: CentervilleState: UTZIP: 84014Fractional Ownership Aircraft: ☐ Yes ☒ NoCountry: USA**Operator of Aircraft**☒ Same As Registered Owner☒ Same Address as Registered Owner

Name: _____ City: _____

Doing Business As: _____ State: _____ ZIP: _____

Air Carrier/Operator Designator (4 Character Code): _____ 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: NephiDistance From Airport Center: 0.1 smAirport Identifier: U14Direction From Airport: 200 degrees trueProximity to Airport: ☐ Off Airport/Airstrip ☒ On Airport/Airstrip ☐ N/AAirport Elevation: 5022 ft. msl**Runway Information**Runway ID: 35 (L/R/C) Length: 6300 ft Width: 100 ft**Runway/Landing Surface** (Check all that apply)

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

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

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

Approach/Departure Segment (Select one)

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

IFR Approach (Check all that apply)

- ☒ None
- ☐ ADF/NDB ☐ PAR ☐ MLS ☐ Practice
☐ SDF ☐ Sidestep ☐ LDA ☐ GPS
☐ VOR/TVOR ☐ ILS ☐ ASR
☐ 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: Robert City of Residence: Centerville
 Middle Initial: W State: UT ZIP: 84014
 Last Name: Eckel Country: USA
 Age at time of Accident/Incident: 41 Date of Birth: [REDACTED] mm/dd/yyyy
 Certificate Number: [REDACTED]

Degree of Injury ☒ None ☐ Fatal ☐ Minor ☐ Unknown ☐ Serious	Seat Occupied ☐ Left ☐ Front ☐ Unknown ☐ Right ☐ Rear ☒ Center ☐ Single	Restraint Type <table style="width: 100%;"> <tr> <th style="text-align: left;">Available</th> <th style="text-align: left;">Used</th> </tr> <tr> <td>☐ None</td> <td>☐ None</td> </tr> <tr> <td>☐ Lap only</td> <td>☐ Lap only</td> </tr> <tr> <td>☐ 3-point</td> <td>☐ 3-point</td> </tr> <tr> <td>☒ 4-point</td> <td>☒ 4-point</td> </tr> <tr> <td>☐ 5-point</td> <td>☐ 5-point</td> </tr> <tr> <td>☐ Unknown</td> <td>☐ Unknown</td> </tr> </table>	Available	Used	☐ None	☐ None	☐ Lap only	☐ Lap only	☐ 3-point	☐ 3-point	☒ 4-point	☒ 4-point	☐ 5-point	☐ 5-point	☐ Unknown	☐ Unknown	Inflatable Restraints ☒ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown
Available	Used																
☐ None	☐ None																
☐ Lap only	☐ Lap only																
☐ 3-point	☐ 3-point																
☒ 4-point	☒ 4-point																
☐ 5-point	☐ 5-point																
☐ Unknown	☐ Unknown																
Pilot Certificate(s) (Check all that apply) ☐ None ☐ Flight Instructor ☐ Commercial ☐ US Military ☒ Private ☐ Recreational ☐ Airline Transport ☐ Foreign ☐ Student ☐ Sport ☐ Flight Engineer		Medical Certificate ☒ None ☐ Class 3 ☐ Class 1 ☐ Driver's License (Sport Pilot only) ☐ Class 2 ☐ Unknown															
Principal Occupation ☐ Pilot ☒ Other ☐ 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:

08/07/2022
 mm/dd/yyyy

Flight Review Aircraft

Make: Grob
 Model: 103

Airplane Rating(s) <i>(Check all that apply)</i> ☒ None ☐ Single-Engine Land ☐ Single-Engine Sea ☐ Multiengine Land ☐ Multiengine Sea	Other Aircraft Rating(s) <i>(Check all that apply)</i> ☐ None ☐ Airship ☐ Balloon ☒ Glider ☐ Gyroplane ☐ Helicopter ☐ Powered Lift	Instrument Rating(s) <i>(Check all that apply)</i> ☐ None ☐ Airplane ☐ Helicopter ☐ Powered Lift	Instructor Rating(s) <i>(Check all that apply)</i> ☒ None ☐ Instrument Airplane ☐ Airplane Single-Engine ☐ Instrument Helicopter ☐ Airplane Multi-Engine ☐ Helicopter ☐ Gyroplane ☐ Glider ☐ Powered Lift ☐ 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	362.6	269.6	50						313	
Pilot in Command (PIC)	303.6	270	0						303.6	
Time as Instructor										
This Make/Model										
Last 90 Days	10	10	0						10	
Last 30 Days	10	10	0						10	
Last 24 Hours	4.4	4.4	0						4.4	

"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																
☐ 5-point	☐ 5-point																
☐ Unknown	☐ Unknown																
Pilot Certificate(s) <i>(Check all that apply)</i> ☐ None ☐ Flight Instructor ☐ Commercial ☐ US Military ☐ Private ☐ Recreational ☐ Airline Transport ☐ Foreign ☐ Student ☐ Sport ☐ Flight Engineer		Medical Certificate Validity ☐ Without limitations/waivers ☐ Unknown ☐ With limitations/waivers ☐ N/A ☐ Special Issuance															
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) <i>(Check all that apply)</i> ☐ None ☐ Single-Engine Land ☐ Single-Engine Sea ☐ Multiengine Land ☐ Multiengine Sea	Other Aircraft Rating(s) <i>(Check all that apply)</i> ☐ None ☐ Airship ☐ Balloon ☐ Glider ☐ Gyroplane ☐ Helicopter ☐ Powered Lift	Instrument Rating(s) <i>(Check all that apply)</i> ☐ None ☐ Airplane ☐ Helicopter ☐ Powered Lift	Instructor Rating(s) <i>(Check all that apply)</i> ☐ None ☐ Instrument Airplane ☐ Airplane Single-Engine ☐ Instrument Helicopter ☐ Airplane Multi-Engine ☐ Helicopter ☐ Gyroplane ☐ Glider ☐ Powered Lift ☐ Sport
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Type Ratings

Student Endorsements *(Include dates)*

Flight Time <i>(Enter appropriate number of hours in each box)</i>	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					Seat Occupied		Injury		
First Name: _____ City of Residence: _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____					☐ Left ☐ Front ☐ Center ☐ Rear ☐ Right ☐ Single ☐ Unknown		☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown		
Pilot Certificate(s) (Check all that apply) ☐ None ☐ Flight Instructor ☐ Commercial ☐ US Military ☐ Private ☐ Recreational ☐ Airline Transport ☐ Foreign ☐ Student ☐ Sport ☐ Flight Engineer					Restraint Type: 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		
Type Rating/Endorsement for Accident/Incident Aircraft? ☐ Yes ☐ No			Total Flight Time at the Time of this Accident/Incident: _____ hrs						
Crew Name and Address					Seat Occupied		Injury		
First Name: _____ City of Residence: _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____					☐ Left ☐ Front ☐ Center ☐ Rear ☐ Right ☐ Single ☐ Unknown		☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown		
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 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		
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: <u>U14</u> City: <u>Nephi</u> State: <u>UT</u> Country: <u>USA</u>	Time of Departure Time: <u>1255</u> Time Zone: <u>MDT</u>	Destination Airport ID: <u>U14</u> City: <u>Nephi</u> State: <u>UT</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: <u>5072</u> 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>U14 ASOS</u> Observation Time: <u>1715</u> Time Zone: <u>MDT</u> Distance from Accident Site: <u>0</u> nm Direction from Accident Site: <u>0</u> 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 <u>13000</u> ft agl		Ceiling ☒ None (Clear) ☐ Obscured ☐ Broken ☐ Indefinite ☐ Overcast ☐ Unknown Ceiling Height _____ ft agl																													
Wind Direction ☐ Variable -or- Direction: <u>360</u> degrees true		Wind Speed ☐ Calm ☐ Light and Variable -or- Speed: <u>10</u> kts	Wind Gusts ☒ Not Gusting -or- Speed: _____ kts																												
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																													
Icing Forecast <table border="0"> <tr> <th>Amount</th> <th>Type</th> </tr> <tr> <td>☒ None</td> <td>☐ N/A</td> </tr> <tr> <td>☐ Trace</td> <td>☐ Rime</td> </tr> <tr> <td>☐ Light</td> <td>☐ Clear</td> </tr> <tr> <td>☐ Moderate</td> <td>☐ Mixed</td> </tr> <tr> <td>☐ Severe</td> <td>☐ Unknown</td> </tr> <tr> <td>☐ Unknown</td> <td></td> </tr> </table>		Amount	Type	☒ None	☐ N/A	☐ Trace	☐ Rime	☐ Light	☐ Clear	☐ Moderate	☐ Mixed	☐ Severe	☐ Unknown	☐ Unknown		Icing Actual <table border="0"> <tr> <th>Amount</th> <th>Type</th> </tr> <tr> <td>☒ None</td> <td>☐ N/A</td> </tr> <tr> <td>☐ Trace</td> <td>☐ Rime</td> </tr> <tr> <td>☐ Light</td> <td>☐ Clear</td> </tr> <tr> <td>☐ Moderate</td> <td>☐ Mixed</td> </tr> <tr> <td>☐ Severe</td> <td>☐ Unknown</td> </tr> <tr> <td>☐ Unknown</td> <td></td> </tr> </table>		Amount	Type	☒ None	☐ N/A	☐ Trace	☐ Rime	☐ Light	☐ Clear	☐ Moderate	☐ Mixed	☐ Severe	☐ Unknown	☐ Unknown	
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Visibility <u>10+</u> miles RVR: _____ feet RVV: _____ miles Density Altitude: _____ ft		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																													
Turbulence Type (Check all that apply) ☒ 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:

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)

Only damage to aircraft, no other property. Nose scraped, minor damage to gelcoat and first layer of composite. Internal steel tubular structure shows signs of bending due to paint around welds cracking, but no obvious bends to the naked eye. The wheel well, which is attached to both the steel tubular structure and the outer carbon composite skin of the aircraft delaminated from the outer skin and remained attached to the steel tubular structure. There is a concentric crack around the tail wheel axle, visible in the gelcoat and may have composite damage underneath. The tailwheel tire and tube popped.

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.

The flight originated at Nephi UT, U14, at approximately 1255 MDT. I was flying in part of an organized event in which many glider pilots spend the week at Nephi flying cross-country tasks, though it was not a typical contest in which everyone is assigned the same task and start times. I flew a task that started at Nephi, then to the NNE approximately 20 miles to near Brown's Peak, then south approximately 115 miles to Delano Peak, then north approximately 85 miles to near Champlin Peak, and returned to Nephi to the NE approximately 20 miles. When I started final glide, I was approximately 1500 ft over final glide, but due to strong sink to the west of Nephi, I lost nearly 1000 feet, leaving me with about 500 ft over final glide as I reached the airport area, corresponding to about 2000 ft agl, considering my built-in 1500 ft margin (500 + 1500). The area approximately 2-3 miles west of the airport did contain strong rising thermals, which I could have used to delay my landing or continue my flight after finishing the task.

Due to the mental picture I keep of where other glider pilots are at near me, I anticipated that there would be a group of other gliders coming to land within the next 5-10 minutes from when I arrived at the airport area, though when I arrived, the pattern was empty and the runway was clear. I chose to expedite my landing since I had an opening, went through my pre-landing checklist and entered the pattern. The ASOS was reporting a steady 10 kt wind from the north at 360, though it varied around by a few degrees, but was nearly directly down the 35 runway. I flew a left hand pattern to 35, and slowed to 60 kts on final approach, which is 6 knots above "yellow triangle" for the glider, which is the unballasted recommended approach speed. I always fly with extra speed for a safety factor, as it's easy to bleed off the speed during the flare using spoilers. At approximately 50 ft agl, on short final over the runway, I encountered wind shear. The sensation was as if I'd entered sinking air, which is extremely common to experience while thermal soaring at higher altitude around thermals. I closed the spoilers and pushed the stick forward to maintain speed and expedite my way through what I perceived as sinking air. However, this close to the ground, I did not have much margin or time to get through the sink, and I sunk at approximately 1000 ft/min to the ground within 3 seconds. I attempted to flare just as I would have been entering ground effect, but with the sink rate and relatively slow speed, I was not able to arrest the descent rate before impacting the runway. I impacted at a slight nose down attitude, striking the nose a few feet in front of the main gear first, then the main gear, then the tail wheel. I landed near the halfway point on the runway near the centerline, and continued rolling down the runway to the north end of 35.

Upon stopping at the end, I realized that I had made a mistake. In expediting my landing, I neglected to dump the 30 gallons of water ballast I had been carrying, meaning that my stall speed was increased from the configuration that I normally land in. I should have been flying closer to 73 kts rather than 54 kts prescribed for unballasted flight, considering the amount of water ballast I had in the wings. My stall speed in the ballasted configuration with spoilers extended would have been 49 kts, only 11 kts lower than the speed I was flying before encountering the wind shear. Reviewing the flight log, I did not stall, but my indicated speed got as low as 57 kts during the wind shear event. Because of this, I did not have the airspeed I needed to flare and arrest the descent after encountering the wind shear. Additionally, the water ballast likely contributed to the amount of damage sustained due to the higher mass.

RECOMMENDATION (How could this accident/incident have been prevented?)**Operator/Owner Safety Recommendation**

Flying with water ballast is not something I do every flight, and in fact, only approximately 10% of my flying is done using water ballast. I typically dump the ballast on final glide, a few miles from the airport. This gives time for the water to drain before I enter the pattern. To mitigate this happening in the future, I'll be adding a water ballast dump step to my pre-landing checklist, and performing the action to dump ballast even when I am not carrying ballast.

Additionally, the Soaring Safety Foundation recommends that glider pilots fly an approach speed of $V_{so} + \text{total wind speed including gusts}$. I know it is commonly taught to power pilots to add half of the gust factor, but soaring pilots have spoilers which allow them to bleed off the extra speed, and the extra speed provides a safety factor that power pilots may be able to use their engine to provide. I'll be following this more conservative recommendation from the SSF in the future.

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)

0 _____ 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

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.

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

Date of this Report07/22/2024*mm/dd/yyyy***Name of Pilot/Operator:** Robert Eckel**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.**
WPR24LA249**Reviewed by NTSB Regional Office**
WPR - Federal Way, WA**Name of Investigator**
S. Stein**Date Report Received**
July 22, 2024