

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: Yuma (KNYL) State: AZ
 ZIP: 85365 Country: USA
 Latitude: 32.6700 Longitude: -114.5933
(Enter in decimal degrees or degrees:minutes:seconds)

Accident/Incident Date/Time

Date: 08/27/2018 Local Time: 10:36 AM
mm/dd/yyyy
 Time Zone: PT

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

AIRCRAFT INFORMATION

Registration Number: N8162H
 Manufacturer: Michael Hyneman
 Model: Glasair Super 2S RG
 Serial Number: 2224
 Year of Manufacture: 1995
 Amateur-Built: ☒ Yes ☐ No If Yes: ☒ Kit/Plans ☐ Original Design Make: Glasair

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

Maximum Gross Weight: 2200 lbs

Weight at Time of Accident/Incident: 1815 lbs

Number of Seats: 2 Flight Crew Seats: 1

Cabin Crew Seats: 0 Passenger Seats: 1

Number of Engines: 1

Category of Aircraft

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

Type of Airworthiness Certificate (Check all that apply)

- | Standard | Special |
|---|---|
| ☐ Normal | ☐ Restricted |
| ☐ Aerobatic | ☐ Limited |
| ☐ Balloon | ☐ Provisional |
| ☐ Commuter | ☐ Special Flight |
| ☐ Transport | ☒ Experimental |
| ☐ Utility | ☐ 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 (hours)	Time Since: Inspection (hours)	Overhaul (hours)
Eng. 1	Superior Air Parts	XP-IO-361-J1HD2	361A180010	01/22/2018	200	91.9	66.6	91.9 SN
Eng. 2								
Eng. 3								
Eng. 4								

Last Inspection Type

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

Date Last Inspection: 06/08/2018
mm/dd/yyyy

Airframe Total Time: 2046.1 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: Halogen extinguisher in cockpit

Propeller 1

- ☐ Fixed Pitch
☒ Controllable Pitch
☐ Ground Adjustable

Manufacturer: Hartzell
 Model: HC-C2YR-1BFP/F7497

Propeller 2

- ☐ Fixed Pitch
☐ Controllable Pitch
☐ Ground Adjustable

Manufacturer: _____
 Model: _____

ELT Installed: ☒ Yes ☐ No

If Yes:

ELT Manufacturer: Artex
 Model or Part No.: ELT 345 Base Pack
 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: Rich Airplanes, LLCCity: San DiegoState: CAZIP: 92130Fractional 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: Yuma International AirportDistance From Airport Center: 0.5 smAirport Identifier: KNYLDirection From Airport: 227 degrees trueProximity to Airport: ☒ Off Airport/Airstrip ☐ On Airport/Airstrip ☐ N/AAirport Elevation: 213 ft. msl**Runway Information**Runway ID: 21L (L/R/C) Length: 9240 ft Width: 150 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 ☐ 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: Forrest City of Residence: Carefree
 Middle Initial: R State: AZ ZIP: 85377
 Last Name: Rich Country: USA
 Age at time of Accident/Incident: 63 Date of Birth: 1954 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 ☐ 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														
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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 <u>06/05/2017</u> mm/dd/yyyy												

Medical Certificate Limitations

Must wear corrective lenses for near and distant vision.

Medical Certificate Special Issuance

Date of Last Flight Review or Equivalent, Including FAR 121/135 Checks: <u>10/02/2017</u> mm/dd/yyyy	Flight Review Aircraft Make: <u>Glasair</u> Model: <u>Super 2S RG</u>		
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 PIC-Complex Airplane 04/26/2015 PIC-High Performance Airplane 08/06/2005		Student Endorsements (Include dates) Initial Solo Cross-Country Flight 05/28/2005 Solo Cross-Country Flight 06/04/2005 Solo Flight in Class B Airspace 06/04/2005 Solo Cross-Country Flight 06/05/2005	

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	1598.4	298.4	1598.4	0	46.5		9.9			
Pilot in Command (PIC)	1598.4	298.4	1598.4	0	46.5		9.9			
Time as Instructor	0									
This Make/Model										
Last 90 Days	74.4	74.4	74.4	0	1		0			
Last 30 Days	13.5	13.5	13.5	0	.3		0			
Last 24 Hours	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																
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☐ Unknown	☐ Unknown																
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☐ 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 ☐ Center ☐ Right ☐ Front ☐ Rear ☐ 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 ☐ Center ☐ Right ☐ Front ☐ Rear ☐ 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 First Name: _____ City: _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____ ☐ Crew ☐ Passenger ☐ Other		Seat ☐ Left ☐ Center ☐ Right ☐ Unknown Row: _____	Injury ☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown	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	Age ☐ 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>KMYF</u> City: <u>San Diego</u> State: <u>CA</u> Country: <u>USA</u>	Time of Departure Time: <u>9:42 AM</u> Time Zone: <u>PT</u>	Destination Airport ID: <u>KAVQ</u> City: <u>Marana</u> State: <u>AZ</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)				Altitude of In-Flight Occurrence:
☐ Class A	☐ Class G	☐ Military Operations Area (MOA)	☐ Special	<u>9500</u> ft msl
☐ 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		

WEATHER INFORMATION AT THE ACCIDENT/INCIDENT SITE

Source of Pilot Weather Information (Check all that apply)	Weather Observation Facility
☐ National Weather Service ☐ Flight Service Station ☐ TV/Radio ☐ Automated Report ☒ Commercial Weather Service (DUATS) ☒ On-Board Weather	Facility ID: _____ Observation Time: _____ Time Zone: _____ Distance from Accident Site: _____ nm Direction from Accident Site: _____ degrees true

Basic Conditions ☒ VMC ☐ IMC ☐ Unknown	Light Condition ☒ Dawn ☐ Dusk ☒ Day ☐ Night ☐ Dark Night ☐ Unknown ☐ Bright Night
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Sky/Lowest Cloud Condition ☒ Clear ☐ Thin Broken ☐ Few ☐ Thin Overcast ☐ Partial Obscuration ☐ Unknown ☐ Scattered	Ceiling ☒ None (Clear) ☐ Obscured ☐ Broken ☐ Indefinite ☐ Overcast ☐ Unknown	Temperature: ? _____ (C) or _____ (F) Dew Point: ? _____ (C) or _____ (F) Altimeter Setting: ? _____ in. Hg or _____ MB
Lowest Cloud Condition Height _____ ft agl	Ceiling Height _____ ft agl	

Wind Direction ☐ Variable -or- Direction: <u>Unknown</u> degrees true	Wind Speed ☐ Calm ☐ Light and Variable -or- Speed: <u>Unknown</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)	Restriction to Visibility (Check all that apply)
	☒ None ☐ Drizzle ☐ Freezing Rain ☐ Rain ☐ Ice Pellets ☐ Snow Shower ☐ Snow ☐ Ice Pellets Shower ☐ Snow Pellets ☐ Hail ☐ Snow Grains ☐ Freezing Drizzle ☐ Rain Showers ☐ Ice Crystals	☒ None ☐ Fog ☐ Blowing Dust ☐ Ground Fog ☐ Blowing Sand ☐ Haze ☐ Blowing Snow ☐ Ice Fog ☐ Blowing Spray ☐ Smoke ☐ Dust ☐ Unknown

Icing Forecast	Icing Actual	Turbulence																																						
<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		<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		<table border="0"> <tr> <th>Type (Check all that apply)</th> <th>Severity</th> </tr> <tr> <td>☒ None</td> <td>☐ Light</td> </tr> <tr> <td>☐ Clear Air</td> <td>☐ Moderate</td> </tr> <tr> <td>☐ Terrain-Induced</td> <td>☐ Severe</td> </tr> <tr> <td>☐ Convective Turbulence</td> <td>☐ Extreme</td> </tr> </table>	Type (Check all that apply)	Severity	☒ None	☐ Light	☐ Clear Air	☐ Moderate	☐ Terrain-Induced	☐ Severe	☐ Convective Turbulence	☐ Extreme
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NOTAMs (D and FDC), AIRMETs, SIGMETs, PIREPs in effect at the time of the accident/incident:

None.

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)

No damage to the cotton field that I skimmed the top of, before belly landing on the Yuma County Fairgrounds asphalt parking lot just north of the airport. I knocked down 2 handicapped parking signs (on flexible posts) in the mid-portion of the parking lot. There were no vehicles in the parking lot, and no other damage to property occurred.

There was substantial damage to the propeller at the time of impact because it was windmilling at the time. The fuselage and wings remained intact, although there appeared to be some damage to the leading edges of both wings, the undersurfaces of the wings, the belly of the fuselage, the lower cowlings, exhaust, and gear doors. No fuel or oil was leaking from the main wing tank, the header tank, or oil from the engine.

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.

I had an engine out, off airport, gear up landing on Monday, August 27, 2018. I have included the events of that flight as follows. The cause of the engine power loss and eventual engine failure is unknown at this time. No injuries occurred at the engine out, off airport, gear up landing. I was uninjured as the pilot of the airplane, and I was the only person in the airplane. The events of the flight were as follows:

Prior to departing KMYF in San Diego, en-route to KAVQ in Marana, AZ on the morning of August 27, 2018, I performed my routine checklist on the ground. Oil was at 6 quarts (normally run a max of 7 quarts), so I added 1 quart. This engine, after break-in, has been using approx. 1 qt. of Aeroshell 100W Plus oil every 10 hrs. (some of that is normally expelled via the oil breather tube and ends up on the belly of the airplane). No fuselage, wing, or gear abnormalities were found. No oil, fuel, or hydraulic/brake fluid leaks were found underneath the airplane. All position and landing lights were functioning normally. Pitot tube heat functional. Header tank (holds 7 gallons) was full. There was approximately 27 gals. of 100LL in the main fuel tank (holds 44 gal.) Tires were inflated properly. Alternator belt tension was normal. Engine start and taxi was normal. Take-off from KMYF on runway 25R at 0942 PT on 08/27/2018 was normal. The tower had me switch radio frequency to 124.35 SoCal Approach for flight following to KAVQ in Marana, AZ. Climb out to 9,500 feet was normal. The first approximately 35 minutes of this flight were completely normal. In-cockpit check lists were used throughout the start up, taxi, run-up, take-off, and climb to cruise.

The airplane is a Glasair Super 2S RG with wing extensions and was at approximately 385 lbs. below max weight at takeoff, with approx. 90 hrs. on a new Superior XP-IO-361 engine (200 Hp) with dual P-Mags, and a new Hartzell blended airfoil propeller. I was cruising at 9,500 ft. MSL with a manifold pressure of 21.9 inches (62% of full power), running ROP approx. 75 degrees on EGT's, when I received an "electrical problem, check voltage" annunciation from the Dynon Skyview. The alternator toggle switch had switched itself off, and the alternator breaker did not pop. I flipped the alternator toggle switch back on and the alternator began charging normally again for about 5 minutes, at which time the alternator toggle switch switched itself off again, and I received the same "electrical problem, check voltage" annunciation again from the Dynon Skyview. I then flipped the alternator toggle switch on a second time, and pulled the breaker switch for the Dynon D-10 backup AHRS unit to start reducing amperage draw, and all appeared to be good for about another 2-3 minutes.

I then noticed my air speed starting to drop, and my manifold pressure (MP) started to drop. MP quickly dropped to 30% of full power, despite full throttle, normal fuel flow, normal fuel pressure, and normal oil pressure. The CHT's and EGT's were normal. I turned on the electric backup fuel pump and switched the fuel switch to the full header tank. The MP continued to slowly decline with periodic small increases in MP. No sputtering or abnormal engine noise. Manipulating the throttle only caused me to loose MP more quickly, so I stopped. I declared an emergency with Yuma Approach about 15 miles west of KNYL (Yuma, AZ), and Approach provided the tower frequency at KNYL and told me to go to that frequency and speak with the tower. The tower at KNYL initially cleared me for an emergency landing on runway 17 and I was set up to land on 17, but was then switched to the longer runway 21L. MP fluctuated between 5-25% during the descent. Initially on approach into 21L at KNYL, I was too high, so I tried to make a 360 degree turn at the north end of runway 21L to lose altitude, but then suddenly lost all engine power when I was on the far side of the 360 degree turn from the airport.

I attempted to maintain my airspeed at 108 kts. (best engine out glide speed) and tried to glide into runway 21L, but I came up about 1/4 mile short of the airport. I focused on airspeed and altitude. I did not want to stall the airplane in an attempt to stretch the approach. I realized I wasn't going to make it to the airport. There was a very busy 4 lane highway immediately in front of me, between my airplane and the north end of the airport. There was also a large dirt berm, wide irrigation ditch, and what looked like a 12 foot perimeter fence between the busy highway immediately in front of me, and the threshold to 21L. An agricultural field with cotton plants was immediately in front of me, with a very large, empty asphalt parking lot off to the right at the west end of the cotton field. My airspeed was now down to 90 kts. and I did not have enough altitude to clear all of the obstacles in front of me. I never lowered my gear or my flaps on the approach, in an attempt to reduce drag and prepare for an off airport landing. I made an immediate 70 degree right turn at low altitude, just skimming the tops of cotton plants with my wings level again. There was a 5-6 foot tall dirt berm at the west end of the cotton field so I pulled back on the stick to try to hop over the dirt berm, a small irrigation ditch, a narrow asphalt road, and then another 3-4 dirt berm; and somehow got a small amount of lift and just missed all of those obstacles at the west end of the cotton field. I dropped the airplane onto the asphalt parking lot.

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

Operator/Owner Safety Recommendation

Identification of what caused the loss of engine power and then eventual engine failure.

If I had the same situation occur again, I would circle directly over the middle of the airport, instead of the end of the airport, in the event that partial engine power loss becomes complete engine failure, as it did in this case, when too far out to glide in safely and land at the intended runway.

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.)

I don't know what failed or malfunctioned yet, as the cause of my engine power loss followed by complete engine failure. Also don't know why my Power Plane alternator kept switching my alternator toggle switch to the off position.

**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)

34 _____ 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**

Added 1 quart Aeroshell 100W Plus oil to engine.

EVACUATION OF AIRCRAFTWas an emergency evacuation of the aircraft performed? ☐ Yes ☒ No**Method of Exit** – Describe how the occupants exited and how many occupants evacuated each location

Normal exit from aircraft.

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 Report

09/05/2018

mm/dd/yyyy

Name of Pilot/Operator: Forrest R. Rich

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.

WPR18LA250

Reviewed by NTSB Regional Office

WPR-AS

Name of Investigator

E Simpson

Date Report Received

9/6/18