

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: Manistee State: MI
 ZIP: 49660 Country: United States
 Latitude: 44-16.348333 N Longitude: 086-14.813333 W
(Enter in decimal degrees or degrees:minutes:seconds)

Accident/Incident Date/Time

Date: 08/05/2014 Local Time: 15:05
mm/dd/yyyy
 Time Zone: UTC-4

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

AIRCRAFT INFORMATION

Registration Number: N468LE

Manufacturer: Cessna

Model: C177 RG

Serial Number: 177RG0158

Year of Manufacture: 1971

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

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

Maximum Gross Weight: 2800 lbs

Weight at Time of Accident/Incident: 2752.3 lbs

Number of Seats: 4 Flight Crew Seats: 2

Cabin Crew Seats: 0 Passenger Seats: 2

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	Lycoming	IO-360-A1B6D	Not Available	N/A	200	3531	14	626
Eng. 2								
Eng. 3								
Eng. 4								

Last Inspection Type

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

Date Last Inspection: 07/24/2014
mm/dd/yyyy

Airframe Total Time: 3531 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: Hartzel

Model: N/A

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: TIS

OWNER/OPERATOR INFORMATION**Registered Aircraft Owner**Name: Jim ZookCity: MasonState: MIZIP: 48854-9549Fractional Ownership Aircraft: ☐ Yes ☒ NoCountry: United States**Operator of Aircraft**☐ Same As Registered Owner☐ Same Address as Registered OwnerName: Great Lakes Air Ventures LLCCity: KalamazooDoing Business As: Great Lakes Air Ventures LLCState: MIZIP: 49006Air Carrier/Operator Designator (4 Character Code): N/ACountry: United States**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: Manistee County-Blacker AirportDistance From Airport Center: .5 smAirport Identifier: KMBLDirection From Airport: 180 degrees trueProximity to Airport: ☒ Off Airport/Airstrip ☐ On Airport/Airstrip ☐ N/AAirport Elevation: 621.4 ft. msl**Runway Information**Runway ID: 19 (L/R/C) Length: 2721 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 ☐ Final ☐ Crosswind ☐ Aborted Landing (after touchdown)
☐ Unknown

IFR Approach (Check all that apply)

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

VFR Approach (Check all that apply)

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

"FLIGHT CREWMEMBER 1" INFORMATION

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

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

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

"Flight Crewmember 1" Identification

First Name: Scott City of Residence: [REDACTED]
 Middle Initial: C State: MI ZIP: 49008
 Last Name: Mason Country: United States
 Age at time of Accident/Incident: 25 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> <tr> <th>Available</th> <th>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																	
Principal Occupation ☒ Pilot ☐ Other ☐ Unknown	Medical Certificate ☐ None ☐ Class 3 ☒ Class 1 ☐ Driver's License (Sport Pilot only) ☐ Class 2 ☐ Unknown	Medical Certificate Validity ☒ Without limitations/waivers ☐ Unknown ☐ With limitations/waivers ☐ N/A ☐ Special Issuance	Date of Last Medical <u>01/28/2013</u> mm/dd/yyyy														

Medical Certificate Limitations

N/A

Medical Certificate Special Issuance

N/A

Date of Last Flight Review or Equivalent, Including FAR 121/135 Checks: 10/09/2013
 mm/dd/yyyy

Flight Review Aircraft

Make: Cirrus
 Model: SR-20

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

N/A

Student Endorsements (Include dates)

N/A

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	471	16	384	87	32	4	138			
Pilot in Command (PIC)	289	11	279	2	20	4				
Time as Instructor	105	12	105		2					
This Make/Model					1					
Last 90 Days	68	10	68		1					
Last 30 Days	11	3	11							
Last 24 Hours	2	2	2							

"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: <u>Chad</u> Middle Initial: <u>R</u> Last Name: <u>Paalman</u> City of Residence: <u>Dimondale</u> State: <u>MI</u> ZIP: <u>48821</u> Country: <u>United States</u> Age at time of Accident/Incident: <u>37</u> 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 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																																																																																											
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Medical Certificate Limitations Must wear corrective lenses.																																																																																																				
Medical Certificate Special Issuance N/A																																																																																																				
Date of Last Flight Review or Equivalent, Including FAR 121/135 Checks: <u>06-15-2014</u> mm/dd/yyyy				Flight Review Aircraft Make: <u>Piper Warrior</u> Model: <u>PA-28-151</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 N/A						Student Endorsements (Include dates) N/A																																																																																														
<table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2" style="text-align: left; padding: 2px;">Flight Time (Enter appropriate number of hours in each box)</th> <th rowspan="2" style="padding: 2px;">All Aircraft</th> <th rowspan="2" style="padding: 2px;">This Make & Model</th> <th rowspan="2" style="padding: 2px;">Airplane Single Engine</th> <th rowspan="2" style="padding: 2px;">Airplane Multiengine</th> <th rowspan="2" style="padding: 2px;">Night</th> <th colspan="2" style="padding: 2px;">Instrument</th> <th rowspan="2" style="padding: 2px;">Rotorcraft</th> <th rowspan="2" style="padding: 2px;">Glider</th> <th rowspan="2" style="padding: 2px;">Lighter Than Air</th> </tr> <tr> <th style="padding: 2px;">Actual</th> <th style="padding: 2px;">Simulated</th> </tr> </thead> <tbody> <tr> <td style="text-align: left; padding: 2px;">Total Time</td> <td style="padding: 2px;">131</td> <td style="padding: 2px;">3</td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> </tr> <tr> <td style="text-align: left; padding: 2px;">Pilot in Command (PIC)</td> <td style="padding: 2px;"></td> <td style="padding: 2px;">0</td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> </tr> <tr> <td style="text-align: left; padding: 2px;">Time as Instructor</td> <td style="padding: 2px;">0</td> <td style="padding: 2px;">0</td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> </tr> <tr> <td style="text-align: left; padding: 2px;">This Make/Model</td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> </tr> <tr> <td style="text-align: left; padding: 2px;">Last 90 Days</td> <td style="padding: 2px;">5</td> <td style="padding: 2px;">3</td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> </tr> <tr> <td style="text-align: left; padding: 2px;">Last 30 Days</td> <td style="padding: 2px;">3</td> <td style="padding: 2px;">3</td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> </tr> <tr> <td style="text-align: left; padding: 2px;">Last 24 Hours</td> <td style="padding: 2px;">2</td> <td style="padding: 2px;">2</td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> </tr> </tbody> </table>											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	131	3									Pilot in Command (PIC)		0									Time as Instructor	0	0									This Make/Model											Last 90 Days	5	3									Last 30 Days	3	3									Last 24 Hours	2	2								
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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 ☐ 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		☐ None ☐ Minor ☐ Serious ☐ Fatal ☐ Unknown		
Pilot Certificate(s) (Check all that apply) ☐ None ☐ Flight Instructor ☐ Commercial ☐ US Military ☐ Private ☐ Recreational ☐ Airline Transport ☐ Foreign ☐ Student ☐ Sport ☐ Flight Engineer					Restraint Type: Available ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown Used ☐ None ☐ Lap Only ☐ 3-point ☐ 4-point ☐ 5-point ☐ Unknown		Inflatable Restraints ☐ Not Installed ☐ Installed ☐ Not Deployed ☐ Deployed ☐ Unknown		
Type Rating/Endorsement for Accident/Incident Aircraft? ☐ Yes ☐ No				Total Flight Time at the Time of this Accident/Incident: _____ hrs					
PASSENGER(S) / OTHER PERSONNEL (Include cabin crew, continue on separate sheet if necessary)									
Name and Address			Seat	Injury	Restraint Type		Inflatable Restraints	Age	
First Name: <u>Mark</u> City: <u>Lansing</u> Middle Initial: <u>K</u> State: <u>MI</u> ZIP: <u>48906</u> Last Name: <u>Pardee</u> Country: <u>United States</u> ☐ 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: <u>Jonathan</u> City: <u>Westphalia</u> Middle Initial: <u>J</u> State: <u>MI</u> ZIP: <u>48894</u> Last Name: <u>Thelen</u> Country: <u>United States</u> ☐ 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>KMBL</u> City: <u>Manistee</u> State: <u>MI</u> Country: <u>United States</u>		Time of Departure Time: <u>15:00</u> Time Zone: <u>UTC-5</u>		Destination Airport ID: <u>KLDM</u> City: <u>Ludington</u> State: <u>MI</u> Country: <u>United States</u>		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: _____ 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: _____ Observation Time: <u>2:55</u> Time Zone: <u>UTC-5</u> Distance from Accident Site: <u>.5</u> nm Direction from Accident Site: <u>010</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		Ceiling ☒ None (Clear) ☐ Obscured ☐ Broken ☐ Indefinite ☐ Overcast ☐ Unknown		Temperature: _____ (C) or <u>74.8</u> (F) Dew Point: _____ (C) or <u>61.3</u> (F) Altimeter Setting: <u>30.07</u> in. Hg or _____ MB			
Lowest Cloud Condition Height <u>N/A</u> ft agl		Ceiling Height <u>N/A</u> ft agl					
Wind Direction ☒ Variable -or- Direction: <u>N/A</u> degrees true		Wind Speed ☒ Calm ☐ Light and Variable -or- Speed: <u>N/A</u> kts		Wind Gusts ☒ Not Gusting -or- Speed: <u>N/A</u> 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		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 ☒ None ☐ Trace ☐ Light ☐ Moderate ☐ Severe ☐ Unknown Type ☒ N/A ☐ Rime ☐ Clear ☐ Mixed ☐ Unknown		Icing Actual Amount ☒ None ☐ Trace ☐ Light ☐ Moderate ☐ Severe ☐ Unknown Type ☒ N/A ☐ Rime ☐ Clear ☐ Mixed ☐ Unknown		Turbulence Type (Check all that apply) ☒ None ☐ Clear Air ☐ Terrain-Induced ☐ Convective Turbulence Severity ☐ Light ☐ Moderate ☐ Severe ☐ Extreme			
NOTAMs (D and FDC), AIRMETs, SIGMETs, PIREPs in effect at the time of the accident/incident: MBL 07/001 Aerodrome 07/04/2014 1318 08/04/2014 1317EST AD EAST WIND SOCK NOT LGTD 1407041318-1408041317EST MBL 08/002 Aerodrome 08/05/2014 1725 08/12/2014 1800EST SVC AUTOMATED WEATHER BROADCAST SYSTEM OUT OF SERVICE 1408051725-1408121800EST MBL 08/003 Aerodrome 08/05/2014 1932 08/06/2014 1932EST RWY 1/19 CLSD 1408051932-1408061932EST MBL 06/008 Aerodrome 06/13/2014 1933 11/14/2014 2359 RWY 19 PAPI OUT OF SERVICE 1406131933-1411142359							

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)*

Runway 19 at KMBL lights and fence damaged. The aircraft is totaled as shown in photos.

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.

On 08/05/2014 at approximately 3:10 PM, the Cessna Cardinal RG (N468LE) that I was flight instructing in crashed during the initial climb while departing runway 19 out of KMBL.

The intended route, prior to the accident, was from KMBL direct to KLDM. About 20 minutes before our takeoff, I was obtaining weather information pertinent to our route of flight. At the time, the weather reporting station (AWOS-3) at KMBL was inoperative. The main source for obtaining wind information at the point of departure was the windsock located at the northwestern part of the airport near the FBO. Preceding our taxi from the parking ramp of the FBO to runway 19, the windsock showed that the winds were light and variable, mainly coming from the east. Due to the fact that the purpose of this flight was for training, the winds being light and variable, and our direction of flight being south, I made the decision to perform a short field takeoff from runway 19 (2721 by 75 ft.). According to the aircraft's POH, at maximum weight and with the conditions for that day, the required amount of runway needed to clear a 50ft obstacle was approximately 1850 ft. According to the weight and balance, the aircraft's C.G was centered and the aircraft was under maximum gross weight. Around 3:00 PM myself, the student, and two other passengers approached the hold short line for runway 19.

At this time, the student and I performed the before takeoff checklist using the call and response method. I called out each item on the checklist, the student performed, and I confirmed. We had originally set our flaps to 20 degrees for the short field takeoff. Once I realized my mistake, I called for the standard short field takeoff flap setting of 10 degrees. At this time the student rolled onto runway 19, using the most available runway. Once the nose wheel of the aircraft was centered, the student held the brakes and set the throttle for maximum power. We confirmed that engine temperatures and pressures were within limits and released the brakes. As the aircraft began the takeoff roll, I noticed that the flaps were still set at 20 degrees so I proceeded to change the flap setting to 10 degrees. I called out that the airspeed was alive as we continued with our takeoff roll. Approaching approximately 66 knots, the student called out rotation speed and began to pull back on the elevator, lifting off right around 70 knots. By the time the aircraft lifted off the ground we had approximately 1000 ft. of runway remaining. We continued to climb only about 5-10 ft. above the runway when all of a sudden the aircraft's airspeed dropped rapidly and began to sink back to the ground. The aircraft's wheels had touched down right before the end of the runway and continued its forward momentum down the hill and into the tree line about 350ft from the end of runway 19 where it came to a rapid halt.

The only thing that I remember feeling or seeing, when the aircraft lost airspeed about 5-10 ft. above the surface of the runway, was a downward force on the airplane as we neared the top of the tree line from the runway surface. To the best of my knowledge, the dramatic change in airspeed was not due to any maintenance issues. The aircraft's throttle setting was still set to full power during the loss of airspeed and altitude. I did not hear or see anything during the time of the accident that would lead me to believe otherwise.

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

Operator/Owner Safety Recommendation

It is my personal belief that the main cause of the accident was due to a dramatic change in both wind speed and direction. Prior to the taxi from the FBO to runway 19, the wind sock showed the winds calm and variable, mostly coming from the east. After the accident, I noticed that the winds had shifted, coming mostly from the north/northwest (tailwind on takeoff). Not only did the direction change but the wind speed was now gusting up to approximately 18-20 knots. I believe that this dramatic change in wind conditions, not only resulted in wind shear, but caused the dramatic drop in airspeed shortly after lifting off just above the tree line.

With the AWOS at KMBL being inoperative at the time of departure, our main source for the wind conditions was the windsock. Before takeoff I had looked over a few of the surrounding airports AWOS including KLDM (approximately 20 miles to the south). Conditions for the surrounding airports showed that there was a shift in wind speed and direction. With the information at hand, I determined that a short field takeoff from 19 would not be an issue but was something to be aware of for our arrival at KLDM.

Since the time of the accident, I have been reviewing weather information with a main focus on wind shear. Although wind shear can happen at moment's notice, I believe that my better understanding of its development will help make me more aware of the possibility for its time and place of developing. After this experience, I will be putting more emphasis on the dangers of wind shear and how it progresses throughout my flight/instructing career. If I have any reason to believe that the possibility for wind shear exists in the future, I will most likely delay the takeoff and or choose the longest available runway for my departure.

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)

25 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

None

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

Through the open windshield.

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

08/10/2014
mm/dd/yyyyName of Pilot/Operator: Scott Mason

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.
CEN14LA406Reviewed by NTSB Regional Office
NTSB, Central RegionName of Investigator
Andrew Todd FoxDate Report Received
14 Aug 2014