



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

# Aviation Investigation Final Report

<b>Location:</b>	Port Aransas, Texas	<b>Accident Number:</b>	CEN22LA094
<b>Date &amp; Time:</b>	January 1, 2022, 17:15 Local	<b>Registration:</b>	N8816T
<b>Aircraft:</b>	Cessna 182C	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Fuel related	<b>Injuries:</b>	1 Minor
<b>Flight Conducted Under:</b>	Part 91: General aviation - Skydiving		

## Analysis

The pilot reported that he was returning to land after dropping a load of skydivers at 10,000 ft above mean sea level, and that he did not apply carburetor heat during the descent. He reduced the throttle to idle when he entered an extended based leg of the traffic pattern. The approach path was low, so the pilot increased the throttle, but the engine did not respond. He completed steps to troubleshoot the loss of power, but he did not apply the carburetor heat. The pilot made a forced landing to a marshy area; the airplane impacted uneven terrain and sustained substantial damage to the left wing. Examination of the fuel system did not reveal any anomalies that would have precluded normal operation. The atmospheric conditions at the time of the accident were conducive to the development of serious carburetor icing at glide power. Given the evidence, it is likely that carburetor ice accumulated, which resulted in the inability to increase engine power during the final approach. According to the Federal Aviation Administration, the airplane's engine is highly susceptible to ice formation during a descent and the use of carburetor heat is recommended.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The loss of engine power due to carburetor icing and the pilot's failure to utilize carburetor heat.

## Findings

<b>Environmental issues</b>	Conducive to carburetor icing - Effect on equipment
<b>Personnel issues</b>	Decision making/judgment - Pilot

## Factual Information

### History of Flight

<b>Approach-VFR pattern final</b>	Fuel related (Defining event)
<b>Approach-VFR pattern final</b>	Off-field or emergency landing

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	21, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Lap only
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 2 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	September 30, 2021
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	March 3, 2021
<b>Flight Time:</b>	254 hours (Total, all aircraft), 17 hours (Total, this make and model), 134 hours (Pilot In Command, all aircraft), 22 hours (Last 90 days, all aircraft), 15 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Cessna	<b>Registration:</b>	N8816T
<b>Model/Series:</b>	182C	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	1960	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	52716
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	1
<b>Date/Type of Last Inspection:</b>	September 15, 2021 AAIP	<b>Certified Max Gross Wt.:</b>	2950 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	5680 Hrs at time of accident	<b>Engine Manufacturer:</b>	Continental Motors
<b>ELT:</b>	C91 installed, not activated	<b>Engine Model/Series:</b>	O-470L-50
<b>Registered Owner:</b>	SAFESIX AVIATION LLC	<b>Rated Power:</b>	270 Horsepower
<b>Operator:</b>	SAFESIX AVIATION LLC	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	KTFP, 17 ft msl	<b>Distance from Accident Site:</b>	9 Nautical Miles
<b>Observation Time:</b>	12:15 Local	<b>Direction from Accident Site:</b>	316°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	8 knots / None	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	220°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29.69 inches Hg	<b>Temperature/Dew Point:</b>	30°C / 22°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Port Aransas, TX	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Port Aransas, TX	<b>Type of Clearance:</b>	VFR
<b>Departure Time:</b>		<b>Type of Airspace:</b>	Class E; Class G

## Airport Information

<b>Airport:</b>	MUSTANG BEACH RAS	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	5 ft msl	<b>Runway Surface Condition:</b>	Vegetation
<b>Runway Used:</b>	12	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	3482 ft / 70 ft	<b>VFR Approach/Landing:</b>	Forced landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Minor	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Minor	<b>Latitude, Longitude:</b>	27.808258,-97.08233(est)

## Preventing Similar Accidents

### Preventing Carburetor Icing (SA-029)

#### The Problem

According to NTSB aircraft accident data, from 2000 to 2011, carburetor icing was a cause or factor in about 250 accidents. On average, carburetor icing causes or contributes to two fatal accidents per year. Accident evidence shows that some pilots do not recognize weather conditions favorable to carburetor icing and inaccurately believe that carburetor icing is only a cold- or wet-weather problem. Pilots may also have not used the carburetor heat according to the aircraft's approved procedures to prevent carburetor ice formation. In addition, some pilots may not recognize and promptly act upon the signs of carburetor icing.

#### What can you do?

- Check the temperature and dew point for your flight to determine whether the conditions are favorable for carburetor icing. Remember, serious carburetor icing can occur in ambient temperatures as high as 90° F or in relative humidity conditions as low as 35 percent at glide power.
- Refer to your approved aircraft flight manual or operating handbook to ensure that you are using carburetor heat according to the approved procedures and properly perform the following actions:
  - Check the functionality of the carburetor heat before your flight.
  - Use carburetor heat to prevent the formation of carburetor ice when operating in conditions and at power settings in which carburetor icing is probable. Remember, ground idling or taxiing time can allow carburetor ice to accumulate before takeoff.
  - Immediately apply carburetor heat at the first sign of carburetor icing, which typically includes a drop in rpm or manifold pressure (depending upon how your airplane is equipped). Engine roughness may follow.
- Consider installing a carburetor temperature gauge, if available.
- Remember that aircraft engines that run on automotive gas may be more susceptible to carburetor icing than engines that run on Avgas.

See <https://www.nts.gov/Advocacy/safety-alerts/Documents/SA-029.pdf> for additional resources.

The NTSB presents this information to prevent recurrence of similar accidents. Note that this should not be considered guidance from the regulator, nor does this supersede existing FAA Regulations (FARs).

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Lindberg, Joshua
<b>Additional Participating Persons:</b>	Michael Gabster; Federal Aviation Administration; San Antonio, TX
<b>Original Publish Date:</b>	June 14, 2022
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class 4</a>
<b>Note:</b>	The NTSB did not travel to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=104496">https://data.nts.gov/Docket?ProjectID=104496</a>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).