



# Aviation Investigation Final Report

---

<b>Location:</b>	Larkspur, Colorado	<b>Accident Number:</b>	CEN24LA226
<b>Date &amp; Time:</b>	June 16, 2024, 07:41 Local	<b>Registration:</b>	N968GV
<b>Aircraft:</b>	COSTRUZIONI AERONAUTICHE TECNA P2006T	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Fuel related	<b>Injuries:</b>	2 Serious
<b>Flight Conducted Under:</b>	Part 91: General aviation - Instructional		

---

## Analysis

The flight instructor and commercial pilot receiving multi-engine instruction intentionally shut down the left engine after they performed one-engine-inoperative (OEI) training. They restarted the left engine successfully on the second attempt and proceeded back to the departure airport. During the descent, the pilots noticed that the airplane required additional right rudder to maintain control and then noticed a decrease in left engine coolant temperature and rpm. Carburetor heat was not used during the flight. Due to the partial loss of engine power, they diverted to the nearest airport for a precautionary landing. During the descent for landing, they secured the left engine and feathered the propeller. They were unable attain the runway and landed on a highway; when the airplane touched down, it struck a road sign with the left wing. The flight instructor then pitched up to avoid vehicles and veered left into a marshy area next to the highway.

Postaccident examination of the airplane revealed that the carburetor heat levers remained in the OFF position. The left propeller lever was found retarded, but not in the feathered position. Examination of the airplane and functional test runs of both engines did not reveal any preimpact mechanical malfunctions or failures that would have precluded normal operation.

The airplane was operating in atmospheric conditions that were conducive to the formation of serious icing at glide power settings.

# Probable Cause and Findings

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

The flight instructor’s failure to apply carburetor heat, which resulted in a loss of left engine power due to carburetor icing.

## Findings

<b>Personnel issues</b>	Decision making/judgment - Instructor/check pilot
<b>Environmental issues</b>	Conducive to carburetor icing - Effect on equipment
<b>Personnel issues</b>	Lack of action - Instructor/check pilot

## Factual Information

### History of Flight

Maneuvering	Simulated/training event
Maneuvering	Fuel related (Defining event)

On June 16, 2024, about 0741 mountain daylight time, a Tecnam P2006T airplane, N968GV, was substantially damaged when it was involved in an accident near Larkspur, Colorado. The flight instructor and pilot receiving instruction were seriously injured. The airplane was operated as a Title 14 *Code of Federal Regulations (CFR)* Part 91 instructional flight.

The flight instructor stated that he and the commercial-rated pilot receiving instruction (pilot) were completing a multi-engine training flight, which was their first multi-engine training flight together. The flight instructor had accumulated 115 flight hours in the accident airplane make and model, all of which were completed while acting as flight instructor.

During the first portion of the flight, they completed five full-stop, taxi-back landings at Centennial Airport (APA), Englewood, Colorado. After the final landing, they proceeded to the southwest and climbed to 10,800 ft mean sea level (about 4,500 ft above ground level [agl]), where they intended to practice OEI training procedures in the North Perry practice area designated for multi-engine training. They initially completed directional control exercises and multiple simulated engine-out emergencies so the pilot receiving instruction could understand the step-by-step process. Next, they shut down the left engine by turning the left ignition switches to OFF. With the engine secured and the propeller feathered, the pilot maneuvered the airplane for “a little bit” until they attempted to restart the engine. They referenced the engine restart checklist and attempted to restart the engine but were unsuccessful. They waited about 5 seconds, then engaged the starter buttons again and the engine restarted successfully. They slowly increased the left engine throttle and completed the cruise checklist before proceeding back toward APA. While en route, the flight instructor noted that the airplane required additional right rudder to maintain control. The pilot took over the controls and confirmed that more right rudder was required. The flight instructor noted that the left engine coolant temperature and rpm had decreased so he took back the controls and proceeded to Perry Park Airport (CO93), Larkspur, Colorado, which was about 4 nm south of their location. After completing a 180° turn to south, he secured the left engine and feathered the propeller. The airplane was difficult to control and the airplane was rapidly losing altitude. When he realized that they could not reach CO93, he set up to land on Interstate 25 (I-25). Just before landing in the southbound lanes of I-25, he pitched up and banked left to avoid hitting southbound vehicles. The airplane climbed over the traffic, then impacted a marshy area to the east of I-25.

The pilot receiving instruction reported that he had previously accumulated 2 flight hours in the accident airplane make and model, which was his only multi-engine flight experience. He added that when they turned toward CO93 and secured the left engine, they were not sure if the propeller was fully feathered.

ADS-B data indicated that they departed APA about 0617 and completed five full-stop landings. At 0715, after the fifth landing, they departed to the southwest and climbed to 10,800 ft mean sea level (msl). The airplane was in the North Perry practice area for about 10 minutes between 10,200 ft msl and 10,800 ft msl, before the airplane turned north toward APA. In the next 3 minutes, the airplane descended about 2,000 ft before making a 180° turn toward CO93. After completing the turn, the airplane was about 1,600 ft agl and 4 nm from CO93. In the next 2 minutes the airplane continued south over I-25 before the forced landing. The final ADS-B point was recorded 1.1 nm from CO93 about 200 ft agl.

Witness videos of the accident flight showed that the airplane descended over I-25 with the right propeller rotating and the left propeller not rotating. The left wing struck a road sign, veered left, and climbed over the oncoming traffic. The end of the accident sequence was not captured in the video.

The airplane came to rest inverted in a swampy area 0.17 nm east of the runway at CO93 and sustained substantial damage. The fuselage came to rest inverted and folded on top of the wings. The engines remained attached to the nacelles. The right propeller blades were fractured. The left propeller blades were relatively undamaged and appeared to be feathered.

Postaccident examination of the airplane revealed that the left propeller lever was found retarded but not in the feathered position. The lever sustained damage and was bent right about 90° and the pedestal upper cover was bent to the right in the same area as the lever was bent over. The left throttle lever was found retarded about mid travel. The carburetor heat levers were positioned to OFF. The left and right engines were examined and prepared for functional test runs; both engines were run successfully at various power settings. There were no preimpact mechanical malfunctions or failures found during the examination or engine functional test runs that would have precluded normal operation.

The airplane's Garmin G1000 avionics were removed and sent to the NTSB Vehicle Recorder Laboratory for data extraction. The units did not record any engine parameter data.

A review of the Carburetor Icing Probability Chart located in the Federal Aviation Administration's Special Airworthiness Information Bulletin CE-09-35, *Carburetor Icing Prevention*, dated June 30, 2009, indicated that the atmospheric conditions in which the airplane was operating were conducive to the formation of serious icing at glide power settings.

The aircraft flight manual, Section 4 – Normal procedures (2.2 Single engine training), stated in part:

*The best practice to perform single engine training is to retard one engine to the flight parameters equivalent to a dead engine. A simulated feather condition is obtained with propeller lever full forward and throttle lever set at 13.5 in Hg MAP [manifold pressure] at 70-90 KIAS [knots indicated airspeed] and 2,000-4,000 ft (density altitude).*

*In normal operations, shutting down an engine for training shall not become a habit, in particular for safety reasons and in order to optimise training; engine shutdown to perform OEI shall be executed only when required by regulations (e.g. during flight check, skill tests or demonstration as per 14 CFR Part 61 or equivalent rule).*

*The continuous operation of engine securing for training may indeed cause long term damages to the engine itself due to the high load coming from propeller (which is in feathering angle during the engine re-starting).*

### Flight instructor Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	28, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	3-point
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	Airplane multi-engine; Airplane single-engine; Instrument airplane	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 1 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	February 2, 2022
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	February 9, 2023
<b>Flight Time:</b>	1174 hours (Total, all aircraft), 115 hours (Total, this make and model), 1036 hours (Pilot In Command, all aircraft), 188 hours (Last 90 days, all aircraft), 16 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

## Pilot Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	23, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	3-point
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	Airplane single-engine; Instrument airplane	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 1 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	November 5, 2019
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	June 26, 2023
<b>Flight Time:</b>	1084 hours (Total, all aircraft), 2 hours (Total, this make and model), 1081 hours (Pilot In Command, all aircraft), 206 hours (Last 90 days, all aircraft), 29 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	COSTRUZIONI AERONAUTICHE TECNA	<b>Registration:</b>	N968GV
<b>Model/Series:</b>	P2006T	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	2018	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	247/US
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	May 31, 2024 100 hour	<b>Certified Max Gross Wt.:</b>	2412 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	2 Reciprocating
<b>Airframe Total Time:</b>	1572.7 Hrs at time of accident	<b>Engine Manufacturer:</b>	Rotax
<b>ELT:</b>	Installed	<b>Engine Model/Series:</b>	912S3
<b>Registered Owner:</b>	MARSH EQUIPMENT LLC	<b>Rated Power:</b>	98 Horsepower
<b>Operator:</b>	On file	<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>	KAPA, 5870 ft msl	<b>Distance from Accident Site:</b>	18 Nautical Miles
<b>Observation Time:</b>	07:53 Local	<b>Direction from Accident Site:</b>	6°
<b>Lowest Cloud Condition:</b>	Few / 13000 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>		<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	5 knots / None	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	110°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29.9 inches Hg	<b>Temperature/Dew Point:</b>	24°C / 6°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Centennial, CO (KAPA)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	Centennial, CO (KAPA)	<b>Type of Clearance:</b>	VFR
<b>Departure Time:</b>	06:17 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	PERRY PARK C093	<b>Runway Surface Type:</b>	Concrete
<b>Airport Elevation:</b>	6700 ft msl	<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	16/34	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	5700 ft / 40 ft	<b>VFR Approach/Landing:</b>	Forced landing; Straight-in; Valley/terrain following

## Wreckage and Impact Information

<b>Crew Injuries:</b>	2 Serious	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	N/A	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 Serious	<b>Latitude, Longitude:</b>	39.255213,-104.88791

## 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>	Christopher Avdem; FAA; Denver, CO Jordan Paskevich; Rotech Flight Safety Giulio Rosati; ANSV
<b>Original Publish Date:</b>	October 8, 2025
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class 3</a>
<b>Note:</b>	The NTSB did not travel to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=194483">https://data.ntsb.gov/Docket?ProjectID=194483</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](#).