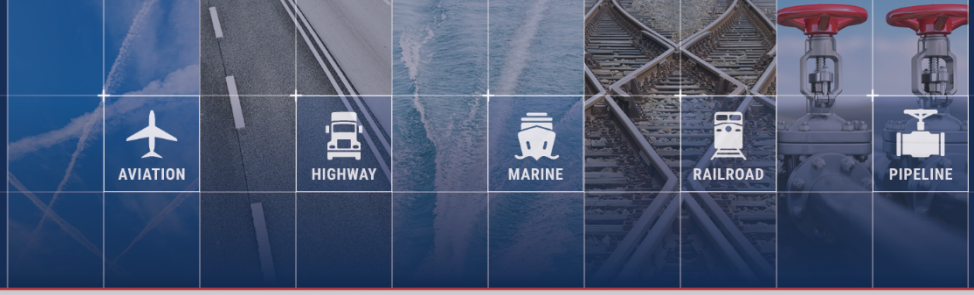

Aviation Investigation Final Report

Location:	Slocomb, Alabama	**Accident Number:**	ERA22LA389
Date & Time:	August 27, 2022, 12:37 Local	**Registration:**	N76527
Aircraft:	Cessna 140	**Aircraft Damage:**	Substantial
Defining Event:	Unknown or undetermined	**Injuries:**	1 Serious
Flight Conducted Under:	Part 91: General aviation - Flight test		

Analysis

Following an engine overhaul, the pilot conducted several test flights around the airport traffic pattern. After landing, the airplane was fueled with aviation fuel, and the pilot began another flight. During the takeoff roll, a witness observed that the airplane seemed “sluggish,” and the engine sounded “weak.” The pilot realized the engine was not producing full power but decided it was too late to abort the takeoff. As the airplane approached the top of a 70-ft-tall tree line, the pilot exceeded the critical angle of attack; the airplane entered an aerodynamic stall and descended into trees. The airplane came to rest suspended from the tree canopy, and a postcrash fire ensued. The pilot was able to egress the airplane and jump to the ground.

Postaccident examination of the engine and components, which were extensively damaged by fire, did not reveal evidence of any anomalies that would have precluded normal operation. The reason for the partial loss of engine power could not be determined based on the available evidence.

Probable Cause and Findings

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

The partial loss of engine power during takeoff for reasons that could not be determined.

Findings

Aircraft	(general) - Unknown/Not determined

Factual Information

History of Flight

Initial climb	Unknown or undetermined (Defining event)
Initial climb	Aerodynamic stall/spin

On August 27, 2022, about 1315 eastern daylight time, a Cessna 140, N76527, was substantially damaged when it was involved in an accident near Slocomb, Alabama. The commercial pilot sustained serious injuries. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

According to the pilot, after conducting his preflight and engine runup, he departed and flew near the airport for about 1 hour, landed, and checked for leaks as the engine had just been overhauled. He repeated this process “a couple more times” and then refueled the airplane with aviation fuel from several gas containers. A witness, the pilot’s son, reported that during takeoff after the refueling, the takeoff roll seemed “sluggish,” and the engine sounded “weak.” The pilot reported that the “engine wasn’t making good power” but it was too late to abort the takeoff.

The witness noted that immediately after rotation during the initial climb, the airplane seemed to be climbing slower than normal as it proceeded west towards a line of trees that were about 70 ft tall. According to the pilot, as he attempted to clear the trees, he felt the airplane stall. Shortly after the airplane reached the top of the trees, the right wing dropped, and the airplane descended into the trees and disappeared from the witness’s view. The witness drove to the tree line and found that the airplane had come to rest in the tree canopy about 30 ft above ground level and that the pilot had egressed the airplane by jumping out as the airplane was catching on fire.

According to the airport owner, who was also a mechanic with inspection authorization, he had recently overhauled the airplane’s engine and installed it on the airframe. After the installation of the engine, the mechanic test ran the engine for several hours with no anomalous behavior noted, and the pilot conducted “4 or 5 flights” around the airport with no discrepancies. The mechanic reported that the engine had operated about 5 hours since overhaul when the accident occurred.

A Federal Aviation Administration inspector examined the wreckage and reported that the airplane impacted trees and became suspended about 30 ft off the ground on a heading of about 270° magnetic and 600 ft from the end of the turf runway. The fuel tanks were breached during impact, and a post-crash fire had consumed the cockpit and fuselage while the empennage remained in the trees. The engine was exposed to fire and thermally damaged but

remained relatively free from impact damage and was subsequently examined. The carburetor heat was in the off position, and the carburetor parts and components were undamaged and clear of any water or contaminants. All spark plugs were checked and found to be in good condition. Both magnetos were damaged by postimpact fire, and the internal components were destroyed and unable to produce spark. A borescope examination was conducted on all cylinders and revealed no defects or anomalous findings.

The weather at the time of the accident was not conducive to the formation of carburetor ice.

Pilot Information

Certificate:	Commercial	**Age:**	69,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	3-point
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane single-engine	**Toxicology Performed:**	
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	June 15, 2022
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	(Estimated) 8300 hours (Total, all aircraft), 100 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N76527
Model/Series:	140	**Aircraft Category:**	Airplane
Year of Manufacture:	1946	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	10963
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	August 21, 2022 Annual	**Certified Max Gross Wt.:**	1450 lbs
Time Since Last Inspection:	5 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	6141 Hrs as of last inspection	**Engine Manufacturer:**	Continental
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	C90
Registered Owner:	MALSBERGER TIM J	**Rated Power:**	85 Horsepower
Operator:	MALSBERGER TIM J	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	DHN,321 ft msl	**Distance from Accident Site:**	13 Nautical Miles
Observation Time:	12:00 Local	**Direction from Accident Site:**	52°
Lowest Cloud Condition:	Few / 2000 ft AGL	**Visibility**	10 miles
Lowest Ceiling:		**Visibility (RVR):**	
Wind Speed/Gusts:	4 knots /	**Turbulence Type Forecast/Actual:**	None / None
Wind Direction:	140°	**Turbulence Severity Forecast/Actual:**	N/A / N/A
Altimeter Setting:	30.02 inches Hg	**Temperature/Dew Point:**	29°C / 24°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Slocomb, AL	**Type of Flight Plan Filed:**	None
Destination:	Slocomb, AL	**Type of Clearance:**	None
Departure Time:		**Type of Airspace:**	Class G

Airport Information

Airport:	PVT PVT	**Runway Surface Type:**	Grass/turf
Airport Elevation:	285 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	10	**IFR Approach:**	None
Runway Length/Width:	3300 ft / 90 ft	**VFR Approach/Landing:**	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 Serious	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Serious	**Latitude, Longitude:**	31.10381,-85.628997

Administrative Information

Investigator In Charge (IIC):	Mccarter, Lawrence
Additional Participating Persons:	Kevin L. Alewine; FAA/FSDO; Birmingham, AL
Original Publish Date:	January 30, 2024
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=105810