Aviation Investigation Final Report

Location:	HAMMOND, Louisiana	**Accident Number:**	FTW00LA271
Date & Time:	September 30, 2000, 16:30 Local	**Registration:**	N1689B
Aircraft:	Temco Luscombe 11A	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot topped off the airplane's fuel tanks (total capacity of 40.0 gallons) and departed on a cross-country flight. The first leg of the flight was 1 hour 34 minutes in duration, and upon arrival at the refueling airport, he added 33.3 gallons of fuel to top off the fuel tanks. While on the ground, he miscalculated the actual fuel consumption rate for the flight and did not know that the fuel consumption rate had been excessive. The pilot then departed for the destination airport. He was on final approach and executed a go-around when a landing airplane failed to clear the runway with enough time for him to make a safe landing. The airplane was climbing through 300 feet agl when the engine lost total power. Subsequently, a forced landing was executed, during which the airplane impacted trees and terrain. Examination of the airplane revealed that the right wing fuel tank's filler cap was in good condition and there were no stains around the fuel cap. A fuel stain was observed around the left wing fuel tank's filler cap that was 12 inches long and fanned out from the width of the cap to 8 inches wide. The cap was removed by a mechanic and when the cap was replaced the mechanic noted that 'it didn't fit very tight as it should.' A fuel stain was observed on the left side of the vertical fin approximately 2 inches wide and 14 inches high. Additionally, 8 ounces of fuel was drained from the fuel system.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's improper fuel consumption calculations, which resulted in fuel exhaustion. A contributory factor was the fuel cap leak, due to a worn seal.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL
Phase of Operation: GO-AROUND (VFR)

Findings
1. (C) FUEL CONSUMPTION CALCULATIONS - IMPROPER - PILOT IN COMMAND
2. (C) FLUID,FUEL - EXHAUSTION
3. (F) FUEL SYSTEM,CAP - LEAK
4. (F) MISCELLANEOUS,SEAL/BOOT/GASKET - WORN

Occurrence #2: FORCED LANDING
Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: EMERGENCY DESCENT/LANDING

Findings
5. OBJECT - TREE(S)

Factual Information

On September 30, 2000, at 1630 central daylight time, a Temco Luscombe 11A airplane, N1689B, was substantially damaged when it impacted trees and terrain during a forced landing following a loss of engine power near Hammond, Louisiana. The private pilot, who was the registered owner and sole occupant of the airplane, was not injured. Visual meteorological conditions prevailed and a flight plan was not filed for the for the 14 Code of Federal Regulations Part 91 personal flight. The cross-country flight originated from the Grayson County Airport, Sherman, Texas, at 1415, and was destined for the Hammond Municipal Airport, Hammond, Louisiana, after an intermediate fuel stop at the Panola County-Sharpe Field, near Carthage, Texas.

According to the pilot, he topped off both wing fuel tanks (total fuel capacity of 40.0 gallons) and departed from Sherman. He flew 1 hour 34 minutes and landed at Carthage to refuel. He added 33.3 gallons of fuel to top off the fuel tanks and calculated his actual fuel consumption rate to be 15 gallons per hour; however, he had mistakenly used 23.0 gallons as the total fuel consumed instead of 33.3 gallons. He stated that although the "normal" fuel consumption rate is 10 gallons per hour he was not concerned "based on his climb profile and low [cruise] altitude."

The flight departed Carthage and based on the pilot's preflight fuel calculations, he expected a fuel consumption rate of 10 gallons per hour. He reported that while on final approach to runway 31 at Hammond he was following a Cessna 152. The Cessna 152 did not clear the runway with enough time left to execute a safe landing and, therefore, the pilot initiated a go-around. While climbing through 300 feet agl, "the engine stopped producing power." During the ensuing forced landing, the airplane contacted trees and the ground coming to rest upright. The pilot stated that, at the time the engine lost power, his GPS indicated that 2 hours and 7 minutes had elapsed since he had departed from Carthage.

According to the FAA inspector, who examined the airplane at the accident site, the engine firewall was displaced and both wing spars were structurally damaged. A review of the airplane's airframe and powerplant maintenance logbooks did not reveal any entries referencing the fuel system.

An FAA certified airframe and powerplant mechanic examined the airplane. He reported that he drained a total of 8 ounces of fuel from the fuel system. The right wing fuel tank's filler cap was in "good" condition and there were no stains around the fuel cap. The left wing fuel tank's filler cap was examined. There was a "fuel stain around the fuel cap about 12 inches long that fanned out from the width of the cap to 8 inches wide." The cap was removed and replaced by the mechanic. When the cap was replaced, the mechanic noted that "it didn't fit very tight as it should." He also observed a "fuel stain on the left side of the vertical fin approximately 2

inches wide and 14 inches high."

In the Pilot/Operator Aircraft Accident Report (NTSB Form 6120.1/2), in the section titled "Recommendation (How Could This Accident Have Been Prevented)," the pilot reported: "Properly ascertaining fuel consumed during the Sherman (F39) to Carthage (4F2) would have prevented me from flying onto Hammond (KHMU) until the source of the excessive fuel consumption was identified and corrected."

Pilot Information

Certificate:	Private	**Age:**	31,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	September 19, 1997
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	341 hours (Total, all aircraft), 152 hours (Total, this make and model), 273 hours (Pilot In Command, all aircraft), 13 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Temco Luscombe	**Registration:**	N1689B
Model/Series:	11A 11A	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	11-195
Landing Gear Type:	Tailwheel	**Seats:**	4
Date/Type of Last Inspection:	March 9, 2000 Annual	**Certified Max Gross Wt.:**	1260 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	Continental
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	E-185
Registered Owner:	TYLER S. GUIDICE	**Rated Power:**	185 Horsepower
Operator:		**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	MSY ,17 ft msl	**Distance from Accident Site:**	31 Nautical Miles
Observation Time:	16:53 Local	**Direction from Accident Site:**	180°
Lowest Cloud Condition:	Scattered / 5500 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	9 knots / None	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	70°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	25°C / 18°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	CARTHAGE (4F2)	**Type of Flight Plan Filed:**	None
Destination:	HAMMOND (HMU)	**Type of Clearance:**	VFR
Departure Time:	14:15 Local	**Type of Airspace:**	Class E

Airport Information

Airport:	HAMMOND MUNICIPAL HMU	**Runway Surface Type:**	Asphalt
Airport Elevation:	44 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	31	**IFR Approach:**	None
Runway Length/Width:	5001 ft / 100 ft	**VFR Approach/Landing:**	Forced landing;Valley/terrain following

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 None	**Latitude, Longitude:**	30.530765,-90.460952(est)

Administrative Information

Investigator In Charge (IIC):	Ragogna, Jason
Additional Participating Persons:	PAUL A KEESLER; BATON ROUGE , LA
Original Publish Date:	July 10, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=51144