Aviation Investigation Final Report

Location:	KAUFMAN, Texas	**Accident Number:**	FTW00LA160
Date & Time:	May 28, 2000, 09:30 Local	**Registration:**	N9876A
Aircraft:	Cessna 195	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

According to the pilot, 20 minutes after departure, while in cruise flight, the airplane's engine began to 'run rough' and vibrate. He reduced power in attempts to dampen the vibration and initiated a precautionary landing to a nearby airport. As the airplane touched down the pilot noticed a dirt embankment, which was approximately 2 feet high, running along the runway centerline. Subsequently, the airplane contacted the embankment, exited the runway surface, struck a fence and trees, and came to a stop upright. A test run of the engine revealed that the engine would not run with the ignition switch in the LEFT position, and would run rough in the BOTH position. Examination of the left magneto revealed that the resistance was less than 16,000 ohms, failing to meet the manufacturer's specifications. Additionally, the number 3, 4, and 5 rear spark plugs exhibited oil and lead deposits.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The failure of the left magneto, which resulted in a partial loss of engine power. Factors were the fouled number 3, 4, and 5 rear spark plugs and the lack of suitable terrain for the precautionary landing.

Findings

Occurrence #1: LOSS OF ENGINE POWER(PARTIAL) - MECH FAILURE/MALF
Phase of Operation: CRUISE

Findings
1. (C) IGNITION SYSTEM,MAGNETO - FAILURE
2. (F) IGNITION SYSTEM,SPARK PLUG - FOULED
3. PRECAUTIONARY LANDING - INITIATED - PILOT IN COMMAND

Occurrence #2: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
Phase of Operation: LANDING

Findings
4. (F) TERRAIN CONDITION - NONE SUITABLE

Factual Information

On May 28, 2000, at 0930 central daylight time, a Cessna 195 tailwheel equipped airplane, N9876A, was substantially damaged during a precautionary landing following a partial loss of engine power near Kaufman, Texas. The airline transport rated pilot, who was the registered owner and sole occupant of the airplane, sustained minor injuries. Visual meteorological conditions prevailed for the 14 Code of Federal Regulations Part 91 personal flight and no flight plan was filed. The cross-country flight originated from the Aero Country Airport, McKinney, Texas, at 0900 and was destined for Galveston, Texas.

The pilot reported that 20 minutes after departure, while in cruise flight, the engine began to "run rough" and vibrate. He reduced power in attempts to dampen the vibration. He initiated a precautionary landing to the Hall Airport, Kaufman, Texas. The pilot stated that as he landed on runway 17 he noticed a dirt embankment that was approximately 2 feet high running along the runway centerline. Subsequently, the airplane contacted the embankment and departed the left side of the runway. The airplane impacted trees and a fence, and came to a stop upright. The pilot stated that there was an "X" made out of PVC pipe at the end of the runway; however, he did not see the "X" prior to landing as it was obscured by tall grass.

An FAA inspector, who examined the airplane, stated that the main landing gear were collapsed, and the fuselage sustained structural damage.

The 300-horsepower Jacobs radial engine was test run in the presence of an FAA inspector. It took three attempts to start the engine. The engine ran rough with the ignition switch in the BOTH position, and when the ignition was switched to the LEFT position, the engine began to lose power. The ignition was switched back to BOTH, and the engine continued to run rough. The ignition switch was switched a second time to the LEFT position, and the engine started to lose power again. A continuity check was performed on the left magneto and it did not meet the manufacturer's specifications (resistance was less than the required 16,000 ohms). Additionally, the number 3, 4, and 5 rear spark plugs exhibited oil and lead deposits.

Pilot Information

Certificate:	Airline transport; Flight instructor	**Age:**	62,Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land; Multi-engine sea	**Seat Occupied:**	Left
Other Aircraft Rating(s):	Glider; Helicopter	**Restraint Used:**	
Instrument Rating(s):	Airplane; Helicopter	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Helicopter; Instrument airplane	**Toxicology Performed:**	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	October 12, 1999
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	34000 hours (Total, all aircraft), 340 hours (Total, this make and model), 34000 hours (Pilot In Command, all aircraft), 60 hours (Last 90 days, all aircraft), 35 hours (Last 30 days, all aircraft), 25 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N9876A
Model/Series:	195 195	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	7578
Landing Gear Type:	Tailwheel	**Seats:**	6
Date/Type of Last Inspection:	May 26, 2000 Annual	**Certified Max Gross Wt.:**	3000 lbs
Time Since Last Inspection:	1 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	4000 Hrs	**Engine Manufacturer:**	Jacobs
ELT:	Installed, not activated	**Engine Model/Series:**	R-755
Registered Owner:	JOHN G. JACKSON	**Rated Power:**	300 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:	RBD ,660 ft msl	**Distance from Accident Site:**	30 Nautical Miles
Observation Time:	09:47 Local	**Direction from Accident Site:**	315°
Lowest Cloud Condition:	Scattered / 2400 ft AGL	**Visibility**	5 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	10 knots / 17 knots	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	190°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	26°C / 23°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	MCKINNEY , TX (TX05)	**Type of Flight Plan Filed:**	None
Destination:	(GLS)	**Type of Clearance:**	
Departure Time:	09:00 Local	**Type of Airspace:**	Class E

Airport Information

Airport:	HALL AIRPORT K00	**Runway Surface Type:**	Grass/turf
Airport Elevation:	440 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	17	**IFR Approach:**	
Runway Length/Width:	2585 ft / 40 ft	**VFR Approach/Landing:**	Precautionary landing

Wreckage and Impact Information

Crew Injuries:	1 Minor	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Minor	**Latitude, Longitude:**	32.579269,-96.300064(est)

Administrative Information

Investigator In Charge (IIC):	Ragogna, Jason
Additional Participating Persons:	EARL A BAUMGARD; DALLAS , TX
Original Publish Date:	March 2, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=51135