Aviation Investigation Final Report

Location:	Hollywood, Alabama	**Accident Number:**	ERA17LA006
Date & Time:	October 6, 2016, 10:15 Local	**Registration:**	N8560P
Aircraft:	Piper PA24	**Aircraft Damage:**	Substantial
Defining Event:	Loss of engine power (total)	**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The commercial pilot was accomplishing a flight review with his flight instructor seated in the right cockpit seat. Ground operations and the engine run-up were normal. After climbing to 3,000 ft mean sea level, the pilot retarded the throttle and the engine lost total power, with no pressure observed on the fuel pressure gauge. The flight instructor assumed the controls, established best glide speed, and performed a forced landing in a field. After touchdown, the airplane struck an embankment before coming to rest on a dirt road. Examination of the wreckage did not reveal any evidence of a preimpact mechanical malfunction or failure of the engine that would have precluded normal operation. All fuel tanks contained an adequate supply of fuel. However, examination of the fuel tank selector valve revealed that the valve was stuck in the partially closed position, which would have restricted fuel flow to the engine. Moving the tank selector handle did not open the valve.

Probable Cause and Findings

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

A failure of the fuel tank selector valve in a partially closed position, which resulted in fuel starvation to the engine and a total loss of engine power.

Findings

Aircraft	Fuel selector/shutoff valve - Malfunction
Environmental issues	(general) - Contributed to outcome

Factual Information

History of Flight

Enroute-cruise	Loss of engine power (total) (Defining event)
Emergency descent	Off-field or emergency landing
Landing-landing roll	Collision with terr/obj (non-CFIT)

On October 6, 2016, about 1015 central daylight time, a Piper PA-24-260, N8560P, was substantially damaged following a total loss of engine power and forced landing near Hollywood, Alabama. The commercial pilot and a flight instructor were not injured. The airplane was operated by the pilot under the provisions of 14 *Code of Federal Regulations* Part 91 as an instructional flight. Day, visual meteorological conditions prevailed at the time, and no flight plan was filed. The local flight originated from Scottsboro Municipal Airport (4A6), Scottsboro, Alabama, about 1000.

The pilot reported that he was accomplishing a flight review and his flight instructor was in the right cockpit seat. Ground operations and the engine run-up were normal. The pilot performed the takeoff and continued on runway heading to 3,000 ft mean sea level. Once level at 3,000 feet, the pilot retarded the throttle to 22-23 inches of manifold pressure. Immediately after retarding the throttle, the engine lost all power. The electric boost pump was turned on; however, the engine did not recover. There was no pressure observed on the fuel pressure gauge. The flight instructor assumed the controls and established best glide speed. A field was chosen for a forced landing and the flight instructor landed the airplane. After touchdown, the airplane struck an embankment before coming to a stop on a dirt road. The pilot and flight instructor exited the airplane and were met by first responders.

An inspector with the Federal Aviation Administration responded to the accident site and examined the wreckage. There was structural damage to the wings and the engine firewall. One propeller blade was straight and the other was bent aft.

The inspector examined the engine and found no evidence of a mechanical failure or anomaly. Internal engine continuity was confirmed. Compression and suction were observed on all cylinders and valve action was correct. There was an adequate supply of oil in the engine case.

All fuel tanks contained an adequate supply of fuel. Examination of the fuel selector valve revealed that the valve was stuck in the partially closed position, restricting fuel flow to the engine. Moving the tank selector handle did not open the valve.

Pilot Information

Certificate:	Commercial	**Age:**	47,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:**	Yes
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 With waivers/limitations	**Last FAA Medical Exam:**	October 5, 2016
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	946 hours (Total, all aircraft), 638 hours (Total, this make and model)		

Flight instructor Information

Certificate:	Airline transport; Flight instructor	**Age:**	73,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Right
Other Aircraft Rating(s):		**Restraint Used:**	3-point
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine	**Toxicology Performed:**	No
Medical Certification:	Class 2 Without waivers/limitations	**Last FAA Medical Exam:**	January 6, 2016
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	December 13, 2015
Flight Time:	23000 hours (Total, all aircraft), 100 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N8560P
Model/Series:	PA24 260	**Aircraft Category:**	Airplane
Year of Manufacture:	1964	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	24-4017
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:		**Certified Max Gross Wt.:**	3201 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	4076 Hrs at time of accident	**Engine Manufacturer:**	LYCOMING
ELT:	Installed	**Engine Model/Series:**	IO-540-D4A5
Registered Owner:	On file	**Rated Power:**	260 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	4A6,650 ft msl	**Distance from Accident Site:**	4 Nautical Miles
Observation Time:	10:35 Local	**Direction from Accident Site:**	30°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	4 knots /	**Turbulence Type Forecast/Actual:**	/ None
Wind Direction:	80°	**Turbulence Severity Forecast/Actual:**	/ N/A
Altimeter Setting:	30.17 inches Hg	**Temperature/Dew Point:**	23°C / 14°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Scottsboro, AL (4A6)	**Type of Flight Plan Filed:**	None
Destination:	Scottsboro, AL (4A6)	**Type of Clearance:**	None
Departure Time:	10:00 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	Scottsboro Municipal 4A6	**Runway Surface Type:**	
Airport Elevation:	650 ft msl	**Runway Surface Condition:**	Dry
Runway Used:		**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Forced landing

Wreckage and Impact Information

Crew Injuries:	2 None	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 None	**Latitude, Longitude:**	34.692222,-86.010002(est)

Administrative Information

Investigator In Charge (IIC):	Hicks, Ralph
Additional Participating Persons:	Joel Clark; FAA/FSDO; Birmingham, AL
Original Publish Date:	March 18, 2019
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=94169