National Transportation Safety Board
Aviation Accident Data Summary

Location:	Phoenix, AZ	**Accident Number:**	WPR14FA111
Date & Time:	02/04/2014, 1150 MST	**Registration:**	N312PA
Aircraft:	PIPER PA 28-181	**Injuries:**	2 Serious, 1 Minor
Flight Conducted Under:	Part 91: General Aviation - Instructional		

Analysis

The student and flight instructor were conducting touch-and-go landings. The student flew an approach that required slipping the airplane and maintaining a low engine power setting. During the climb after the touch-and-go landing, the airplane's engine lost power about 200 ft above ground level. The flight instructor stated that the engine's rpm was decreasing and he decided to turn toward the airport area. Subsequently, the flight instructor initiated a forced landing to a field near the airport. During the landing sequence, the airplane struck and breached the airport's perimeter fence and then nosed over; a postaccident fire ensued. The postaccident examination of the airframe and engine revealed no evidence of mechanical malfunctions or failures that would have precluded normal operation.

During the examination of the airplane wreckage, the fuel selector was found in an intermediate position. Ground testing of a similar model airplane revealed that the engine could run several minutes with the fuel selector positioned in this intermediate position. The student and the instructor stated that the student switched the fuel selector about 9 miles from the airport per operator requirements to switch fuel tanks every 30 minutes. Because of the location of the fuel selector, the flight instructor could not visually confirm its position. It is likely that the student inadvertently positioned the airplane's fuel selector in an intermediate setting, which restricted the engine's fuel supply. Further, the engine's low power setting during the approach allowed the engine to run for several minutes on the fuel remaining in the return line and operate until shortly after the completion of the touch-and-go landing. Subsequently, during the climb, when the engine power was advanced, it is likely that the remaining fuel in the return line was exhausted and led to the engine power loss.

Flight Events

Initial climb - Loss of engine power (total)
Landing-landing roll - Collision with terr/obj (non-CFIT)

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be:
The student pilot's inadvertent positioning of the fuel selector in an intermediate position, which resulted in a loss of engine power due to fuel starvation.

Findings

Aircraft-Fluids/misc hardware-Fluids-Fuel-Fluid management - C
Personnel issues-Task performance-Use of equip/info-Use of equip/system-Student/instructed pilot - C

Flight Instructor Information

Certificate:	Flight Instructor; Commercial; Private	**Age:**	27
Airplane Rating(s):	Multi-engine Land; Single-engine Land	**Instrument Rating(s):**	Airplane
Other Aircraft Rating(s):	None	**Instructor Rating(s):**	Airplane Multi-engine; Airplane Single-engine; Instrument Airplane
Flight Time:	(Estimated) 3019 hours (Total, all aircraft), 2418 hours (Total, this make and model), 2921 hours (Pilot In Command, all aircraft), 68 hours (Last 90 days, all aircraft), 28 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Student Pilot Information

Certificate:	Student	**Age:**	21
Airplane Rating(s):	None	**Instrument Rating(s):**	None
Other Aircraft Rating(s):	None	**Instructor Rating(s):**	None
Flight Time:	(Estimated) 61 hours (Total, all aircraft), 61 hours (Total, this make and model), 10 hours (Pilot In Command, all aircraft), 50 hours (Last 90 days, all aircraft), 30 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	PIPER	**Registration:**	N312PA
Model/Series:	PA 28-181 181	**Engines:**	1 Reciprocating
Operator:	TransPac Aviation Academy	**Engine Manufacturer:**	LYCOMING
Air Carrier Operating Certificate:	Pilot School (141)	**Engine Model/Series:**	O-360 SERIES
Flight Conducted Under:	Part 91: General Aviation - Instructional		

Meteorological Information and Flight Plan

Observation Facility, Elevation:	DVT, 1478 ft msl	**Weather Information Source:**	Weather Observation Facility
Conditions at Accident Site:	Visual Conditions	**Lowest Ceiling:**	None
Condition of Light:	Day	**Wind Speed/Gusts, Direction:**	8 knots, 200°
Temperature:	12°C / -1°C	**Visibility**	10 Miles
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Phoenix, AZ (DVT)	**Destination:**	Phoenix, AZ (DVT)

Airport Information

Airport:	PHOENIX DEER VALLEY (DVT)	**Runway Surface Type:**	Asphalt
Runway Used:	07L	**Runway Surface Condition:**	Dry; Rough
Runway Length/Width:	4499 ft / 75 ft		

Wreckage and Impact Information

Crew Injuries:	2 Serious	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 Minor	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None

Administrative Information

Investigator In Charge (IIC):	Albert P Nixon	**Adopted Date:**	02/29/2016
Note:	The NTSB traveled to the scene of this accident.		
Investigation Docket:	http://dms.ntsb.gov/pubdms/search/dockList.cfm?mKey=88768		