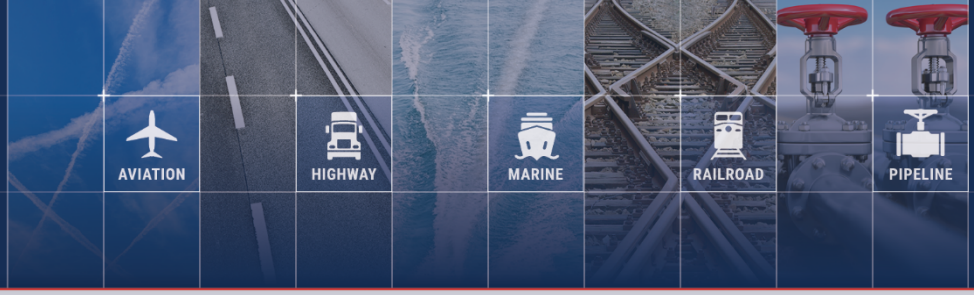

Aviation Investigation Factual Report

Location:	Kapolei, Hawaii	**Accident Number:**	WPR18LA280
Date & Time:	September 20, 2018, 16:30 Local	**Registration:**	N66201
Aircraft:	Mooney M20J	**Aircraft Damage:**	Substantial
Defining Event:	Fuel contamination	**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Factual Information

On September 20, 2018, about 1630 Hawaii standard time, a Mooney M20J airplane, N66201, was substantially damaged during a forced landing at Kalaeloa Airport/John Rodgers Field (PHJR) Kapolei, Hawaii. The certified flight instructor (CFI) and the private pilot receiving instruction were not injured. The airplane was registered to Perly Aviation Inc. and operated by Aviation Academy Hawaii under the provisions of Title 14 *Code of Federal Regulations* Part 91. Visual meteorological conditions prevailed, and a visual flight rules flight plan was filed for the local flight. The flight originated from Daniel K. Inouye International Airport (PHNL), Honolulu, Hawaii, about 1430, with an intended destination of PHJR.

The CFI reported that, prior to preflight, the airplane's battery was replaced due to an insufficient charge as the engine would not start. At the same time, fuel was added to both tanks to their respective tabs. With the new battery installed, the private pilot attempted to start the engine a few times, but she was unsuccessful. Following a few attempts on his own, the CFI was able to start the engine and did not observe anything abnormal. The engine was run for 4 minutes, with the fuel tank switched after one minute. When the ammeter stabilized, the engine was shut down. Following the engine run, a small amount of water was drained from the left-wing fuel sump. The private pilot continued to sump the fuel from the left tank until water was not visible. The right fuel tank was then sumped once, with no water visible in the sample. During taxiing, the engine did not run rough, and the engine gauges indicated normal operating limits.

After takeoff from PHNL, the CFI and pilot receiving instruction conducted several maneuvers before practicing touch-and-go landings at PHJR. Fuel tanks were regularly switched throughout the flight. During the sixth takeoff at about 300 ft above ground level, and after the landing gear and flaps were retracted, the airplane stopped climbing; the engine produced a sound as it was in idle and did not respond to throttle movements. At this time, the CFI took control of the airplane and attempted to troubleshoot the engine by manipulating the throttle and switching the fuel tanks; however, he was unsuccessful. The CFI was uncertain about the type of terrain beyond the runway concrete, so he initiated a forced landing with the landing gear in the UP position to prevent the airplane rolling into unknown terrain, and the airplane crashed on the runway.

On October 1, 2018, the postaccident examination of the airplane was conducted by a mechanic under the supervision of a Federal Aviation Administration (FAA) inspector. When fuel was drained from the left tank some water was observed. When fuel was drained from the right tank, no water was detected. The fuel collected from the fuel line going into the fuel injectors also contained some water.

Lower spark plugs were removed, When the propeller was manually rotation, compression on all cylinders was confirm. Additionally, engine continuity was established the valve train to the accessory section of the engine. The examination revealed no mechanical issues with the engine that would have precluded normal operation.

Due to the damaged propeller and logistical concerns, an engine run was not performed.

Flight instructor Information

Certificate:	Airline transport; Commercial; Flight instructor	**Age:**	38,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Right
Other Aircraft Rating(s):	None	**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 1 Without waivers/limitations	**Last FAA Medical Exam:**	March 5, 2018
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	October 5, 2017
Flight Time:	(Estimated) 2954 hours (Total, all aircraft), 157 hours (Total, this make and model), 2071 hours (Pilot In Command, all aircraft), 63 hours (Last 90 days, all aircraft), 26 hours (Last 30 days, all aircraft)		

Pilot Information

Certificate:	Private	**Age:**	31,Female
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 1 Without waivers/limitations	**Last FAA Medical Exam:**	April 11, 2018
Occupational Pilot:		**Last Flight Review or Equivalent:**	September 8, 2017
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Mooney	**Registration:**	N66201
Model/Series:	M20J No Series	**Aircraft Category:**	Airplane
Year of Manufacture:	1977	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	24-0386
Landing Gear Type:	Retractable - Tricycle	**Seats:**	
Date/Type of Last Inspection:	May 19, 2018 Annual	**Certified Max Gross Wt.:**	2740 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	6441 Hrs	**Engine Manufacturer:**	Lycoming
ELT:	Installed, not activated	**Engine Model/Series:**	IO360-A3B6DFF
Registered Owner:	Perly Aviation Inc	**Rated Power:**	200 Horsepower
Operator:	Aviation Academy Hawaii	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	PHNA,50 ft msl	**Distance from Accident Site:**	1 Nautical Miles
Observation Time:	02:53 Local	**Direction from Accident Site:**	17°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	9 knots / None	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	260°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.87 inches Hg	**Temperature/Dew Point:**	29°C / 23°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Honolulu, HI (HNL)	**Type of Flight Plan Filed:**	VFR
Destination:	Kapolei, HI (JRF)	**Type of Clearance:**	VFR
Departure Time:	14:30 Local	**Type of Airspace:**	Class D

Airport Information

Airport:	KALAELOA (JOHN RODGERS FIELD) JRF	**Runway Surface Type:**	Asphalt
Airport Elevation:	30 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	22L	**IFR Approach:**	None
Runway Length/Width:	8000 ft / 200 ft	**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:**	21.307222,-158.070281(est)

Administrative Information

Investigator In Charge (IIC):	Smith, Maja
Additional Participating Persons:	Edwin T Lee; FSDO; Honolulu, HI
Report Date:	
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=98394