Aviation Investigation Final Report

Location:	OREGON CITY, Oregon	**Accident Number:**	SEA00LA150
Date & Time:	August 1, 2000, 18:30 Local	**Registration:**	N1927Y
Aircraft:	Mooney M20E	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

While descending through 2,000 feet, the Mooney M20E's Lycoming IO-360-A1A engine stopped operating. The pilot switched fuel tanks and activated the fuel boost pump without success, and then executed a forced landing to rough/uneven terrain in an agricultural field. On site examination revealed fuel in both fuel tanks. The FAA inspector assigned to the accident reported that in a post-crash examination and test run of the engine the 'fuel control servo appeared to be blocked for unknown reason' and that 'fuel pressure going in the fuel servo was considerably/extremely low at [the] outlet and would not sustain engine operation.' The fuel servo was removed and flow checked with no discrepancies noted. The servo was then re-installed in the aircraft and the FAA inspector observed a second test run during which the engine successfully operated with no discrepancies noted.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A loss of engine power for undetermined reason(s). A factor was the rough/uneven terrain.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: DESCENT

Findings
1. (C) REASON FOR OCCURRENCE UNDETERMINED

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

Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
Phase of Operation: LANDING - ROLL

Findings
2. (F) TERRAIN CONDITION - ROUGH/UNEVEN

Factual Information

On August 1, 2000, approximately 1830 Pacific daylight time, a Mooney M20E, N1927Y, registered to Wrightco Motorcycle Accessories, Inc., and being flown by a private pilot, was substantially damaged during a forced landing six nautical miles southeast of Oregon City, Oregon. The pilot sustained minor injuries. Visual meteorological conditions existed and no flight plan had been filed. The flight, which was personal, was operated under 14CFR91, and originated from Estacada, Oregon, and was en route to Mulino, Oregon.

The pilot reported in a telephonic interview that he had initiated a descent from 2,000 feet above sea level to his destination when the engine abruptly stopped operating. He then attempted to trouble shoot the power loss by selecting alternate fuel tanks, and then boost pump operation, without success. He then executed a forced landing to an agricultural field encountering rough terrain during the landing rollout.

Post-crash examination and test run of the engine by the Federal Aviation Administration's (FAA) Hillsboro, Oregon, Flight Standards District Office inspector assigned to the accident was conducted shortly after the accident. The aircraft was leveled at the site and both left and right fuel tanks were observed to be approximately half full. The inspector reported that during the test run, the "fuel control servo appeared to be blocked for unknown reason" and that "fuel pressure going in the fuel servo was considerably/extremely low at [the] outlet and would not sustain engine operation."

The fuel servo unit was removed from the aircraft's Lycoming IO-360-A1A engine and shipped to the Safety Board's Northwest Regional Office. It was subsequently flow checked at the facilities of Precision Airmotive on October 20, 2000. No discrepancies were noted during the flow check (refer to attached report).

The fuel servo was returned to the maintenance facility that had removed it with instructions to re-install it in the aircraft. The FAA's Hillsboro Flight Standards District Office inspector assigned to the investigation returned to the maintenance facility and observed a second test run of the engine. He reported that the engine successfully operated with no discrepancies noted.

Pilot Information

Certificate:	Private	**Age:**	72,Male
Airplane Rating(s):	Single-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--w/ waivers/lim	**Last FAA Medical Exam:**	April 6, 2000
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	2200 hours (Total, all aircraft), 1900 hours (Total, this make and model), 15 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Mooney	**Registration:**	N1927Y
Model/Series:	M20E M20E	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	234
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	May 27, 1999 Annual	**Certified Max Gross Wt.:**	2550 lbs
Time Since Last Inspection:	40 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	4425 Hrs	**Engine Manufacturer:**	Lycoming
ELT:	Installed, not activated	**Engine Model/Series:**	IO-360-A1A
Registered Owner:	WRIGHTCO MOTORCYCLE ACC.'S INC	**Rated Power:**	200 Horsepower
Operator:	WRIGHT, ELDEN D.	**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:	UAO ,196 ft msl	**Distance from Accident Site:**	10 Nautical Miles
Observation Time:	18:53 Local	**Direction from Accident Site:**	242°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	Unknown	**Visibility (RVR):**	
Wind Speed/Gusts:	9 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	30°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	26°C / 16°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	ESTACADA , OR (5S9)	**Type of Flight Plan Filed:**	None
Destination:	MULINO , OR	**Type of Clearance:**	None
Departure Time:	18:15 Local	**Type of Airspace:**	Class G

Airport Information

Airport:		**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	
Runway Used:	0	**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Forced 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:**	45.319442,-122.520271(est)

Administrative Information

Investigator In Charge (IIC):	Mccreary, Steven
Additional Participating Persons:	TIM MOON; HILLSBORO , OR
Original Publish Date:	May 18, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=49882