



# Aviation Investigation Final Report

<b>Location:</b>	OREGON CITY, Oregon	<b>Accident Number:</b>	SEA00LA150
<b>Date &amp; Time:</b>	August 1, 2000, 18:30 Local	<b>Registration:</b>	N1927Y
<b>Aircraft:</b>	Mooney M20E	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 Minor
<b>Flight Conducted Under:</b>	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

<b>Certificate:</b>	Private	<b>Age:</b>	72, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	April 6, 2000
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	2200 hours (Total, all aircraft), 1900 hours (Total, this make and model), 15 hours (Last 90 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Mooney	<b>Registration:</b>	N1927Y
<b>Model/Series:</b>	M20E M20E	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	234
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	May 27, 1999 Annual	<b>Certified Max Gross Wt.:</b>	2550 lbs
<b>Time Since Last Inspection:</b>	40 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	4425 Hrs	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	IO-360-A1A
<b>Registered Owner:</b>	WRIGHTCO MOTORCYCLE ACC.'S INC	<b>Rated Power:</b>	200 Horsepower
<b>Operator:</b>	WRIGHT, ELDEN D.	<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	UAO ,196 ft msl	<b>Distance from Accident Site:</b>	10 Nautical Miles
<b>Observation Time:</b>	18:53 Local	<b>Direction from Accident Site:</b>	242°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	Unknown	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	9 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	30°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	26°C / 16°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	ESTACADA , OR (5S9 )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	MULINO , OR	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	18:15 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>		<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>		<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	Forced landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Minor	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Minor	<b>Latitude, Longitude:</b>	45.319442,-122.520271(est)

## Administrative Information

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

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).