Aviation Investigation Final Report

Location:	ST. PETERSBURG, Florida	**Accident Number:**	MIA95LA056
Date & Time:	January 8, 1995, 16:53 Local	**Registration:**	N205MD
Aircraft:	MOONEY 20J	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	3 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot stated he took off over the bay, climbed to 1,000 feet msl and leveled off. The engine was running rough and the oil pressure was decreasing. He notified the control tower he was returning to the airport. When he decreased power, the engine started to shake violently. A forced landing was made into a bay. The airplane was recovered and the engine was examined by the manufacturer in the presence of the FAA. Disassembly of the engine revealed a separation of the No. 3 connecting rod cap and bolts. Further examination of the components by the NTSB laboratory revealed a failure of the No. 3 connecting rod bolt due to oil starvation for undetermined reasons.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The failure of the No. 3 connecting rod bolt due to oil starvation for undetermined reasons. This resulted in a total loss of engine power, forced landing, and subsequent ditching.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF
Phase of Operation: CRUISE

Findings
1. ENGINE ASSEMBLY,CONNECTING ROD BOLT - FAILURE,TOTAL
2. FLUID,OIL - STARVATION

3. (C) FLUID,OIL - UNDETERMINED

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

Occurrence #3: DITCHING
Phase of Operation: EMERGENCY DESCENT/LANDING

Factual Information

On January 8, 1995, about 1653 eastern standard time, a Mooney 20J, N205MD, registered to Steven Miller, operating as a 14 CFR Part 91 personal flight, experienced a loss of oil pressure in cruise flight, and made a forced landing into Tampa Bay. Visual meteorological conditions prevailed and no flight plan was filed for the local flight. The airplane sustained substantial damage and the private pilot and two passengers reported minor injuries. The flight originated from St. Petersburg, Florida, about 4 minutes before the accident.

The pilot stated he taxied the airplane to a fixed-base operator for fuel, and completed a preflight inspection of the airplane. When checking the oil, he noticed the oil cap was crossthreaded. The dip stick indicated close to 8 quarts of oil. He taxied to runway 35 and was cleared for takeoff. On climb out the control tower informed him that the airplane was trailing smoke. He informed the tower that the airplane had just had an oil change, and that it should burn off. When he leveled the airplane at 1,000 feet msl, the engine was running rough, and the oil pressure was decreasing. He informed St. Petersburg tower of the situation and informed them that he was returning to the airport. The tower asked if he required any assistance, and cleared him to land. When he reduced power, the engine began to shake violently, and a forced landing was made into Tampa Bay.

Examination of the engine assembly and accessories was conducted by personnel from Textron Lycoming in the presence of the FAA. Disassembly of the engine revealed a separation of the No. 3 rod cap and rod bolts. The crankshaft rod bearing journal exhibited black discoloration and the rod bearings were extruded. The components were forwarded to the NTSB Materials Laboratory for analysis. (For additional information see, Textron Lycoming Accident Investigation Report).

Examination of the No. 3 connecting rod bolts revealed they had separated in two pieces. The pieces contained bending and necking down deformation and a rough fracture surface, typical of an overstress bending separation. The crankshaft ends of the connecting rods, the connecting rod journals, and the nearby portions of the crankcheeks were darkly discolored as if severely overheated. (For additional information see, NTSB Metallurgist's Factual Report No. 95-100).

The components were released to Mr. Les Waters, on May 22, 1995.

Pilot Information

Certificate:	Private	**Age:**	33,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:**	February 19, 1993
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	669 hours (Total, all aircraft), 574 hours (Total, this make and model), 603 hours (Pilot In Command, all aircraft), 35 hours (Last 90 days, all aircraft), 16 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	MOONEY	**Registration:**	N205MD
Model/Series:	20J 20J	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	24-3013
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	October 2, 1994 Annual	**Certified Max Gross Wt.:**	2700 lbs
Time Since Last Inspection:	36 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	1420 Hrs	**Engine Manufacturer:**	LYCOMING
ELT:	Installed, not activated	**Engine Model/Series:**	IO-360-A3B6D
Registered Owner:	MILLER, STEVEN	**Rated Power:**	200 Horsepower
Operator:		**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:	PIE ,11 ft msl	**Distance from Accident Site:**	4 Nautical Miles
Observation Time:	16:50 Local	**Direction from Accident Site:**	180°
Lowest Cloud Condition:	Unknown	**Visibility**	10 miles
Lowest Ceiling:	Broken / 25000 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	9 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	330°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	13°C / 7°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(PIE)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:	16:49 Local	**Type of Airspace:**	Class E

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:	2 Minor	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	3 Minor	**Latitude, Longitude:**	

Administrative Information

Investigator In Charge (IIC):	Smith, Carrol
Additional Participating Persons:	MARTIN P POLOMSKI; ORLANDO , FL EDWARD G ROGALSKI; WILLIAMSPORT , PA JAMES F BROWN; WILLIAMSPORT , PA
Original Publish Date:	August 23, 1995
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=37721