



Aviation Investigation Final Report

Location:	MANCHESTER, New Hampshire	Accident Number:	NYC88LA117
Date & Time:	March 27, 1988, 17:15 Local	Registration:	N2746W
Aircraft:	MOONEY M20	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

SHORTLY AFTER TAKEOFF FROM MANCHESTER, NEW HAMPSHIRE AND AFTER REACHING AN ALTITUDE OF ABOUT 2,000 FEET, THE AIRCRAFT EXPERIENCED AN ENGINE FAILURE AND AT THE SAME TIME OIL SPLATTERED ON THE WINDSHIELD. THE PILOT MADE AN EMERGENCY WHEELS UP LANDING ON A BRIDGE ON ROUTE 93 IN HOOKSETT, NEW HAMPSHIRE. A POST ACCIDENT INSPECTION OF THE AIRPLANE REVEALED A HOLE IN THE ENGINE UPPER CASE AT THE NO. 2 CYLINDER AND A FRACTURED AND DEFORMED NO. 2 CONNECTING ROD. METALLURGICAL EXAM INDICATED THAT THE CONNECTING ROD BOLT NUT ON THE NO.2 CYLINDER BACKED COMPLETELY OFF THE BOLT.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: MAINTENANCE PERSONNEL IMPROPERLY INSTALLED THE NUMBER TWO CONNECTING ROD (P/N L-10646) CAUSING IT TO SEPARATE, CREATE A HOLE IN THE ENGINE CASE, LOSS OF ENGINE OIL AND ENGINE POWER. DUE TO THE PILOT'S IMPROPER INFLIGHT DECISION, HE PERFORMED A WHEELS UP LANDING ON A HIGHWAY BRIDGE CAUSING SUBSTANTIAL DAMAGE.

Findings

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

Findings

1. (F) ENGINE ASSEMBLY,CONNECTING ROD - SEPARATION
2. (F) ENGINE ASSEMBLY,CONNECTING ROD BOLT - SEPARATION
3. (F) ENGINE ASSEMBLY,CONNECTING ROD CAP - SEPARATION
4. (C) MAINTENANCE,INSTALLATION - IMPROPER - OTHER MAINTENANCE PERSONNEL

Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: GEAR NOT EXTENDED

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

5. WHEELS UP LANDING - PERFORMED - PILOT IN COMMAND

Factual Information

Pilot Information

Certificate:	Commercial	Age:	30, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Front
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 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	March 27, 1987
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	1870 hours (Total, all aircraft), 370 hours (Total, this make and model), 400 hours (Pilot In Command, all aircraft), 75 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	MOONEY	Registration:	N2746W
Model/Series:	M20 M20	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	1042
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	May 31, 1987 Annual	Certified Max Gross Wt.:	2575 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	2870 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Installed	Engine Model/Series:	IO-360-A1A
Registered Owner:	FATIOS GRANNOPOULAS	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:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Unknown	Visibility	40 miles
Lowest Ceiling:	Unknown	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	MANCHESTER , NH (MHT)	Type of Flight Plan Filed:	None
Destination:	CONCORD , NH	Type of Clearance:	None
Departure Time:	00:00 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:	0 ft msl	Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	In-flight
Total Injuries:	2 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC): Twine jr., Chauncey

Additional Participating Persons:

Original Publish Date: June 11, 1990

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=36126>

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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](#).