



Aviation Investigation Final Report

Location:	KERRVILLE, Texas	Accident Number:	FTW88LA002
Date & Time:	October 8, 1987, 19:25 Local	Registration:	N57257
Aircraft:	MOONEY M-20-J	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

ACFT WAS SUBSTANTIALLY DAMAGED WHEN IT COLLIDED WITH A ROAD SIGN AND THE GRND DURING AN OFF ARPT EMERGENCY LNDG FOLLOWING A COMPLETE ENG FAILURE DURING DESCENT. PLT STATED THAT ABOUT 20 MINS OUT FROM HIS DEST, THE OIL PRESS DECREASED INTO THE YELLOW ARC, BUT OIL TEMP AND CYL HEAD TEMP REMAINED NORMAL. DURING THE DESCENT, OIL PRESS DECREASED INTO THE RED AND THE ENG STARTED VIBRATING. SHORTLY THEREAFTER THE ENG SEIZED. INVESTIGATION REVEALED THAT THE #4 PISTON CONNECTING ROD HAD SEPARATED DUE TO OIL STARVATION, RESULTING IN SEVERE INTERNAL DAMAGE TO THE ENG. TWO QTS OF HEAVY, BLACK OIL WERE DRAINED FRM THE ENG. THE CAUSE OF THE OIL STARVATION WAS NOT DETERMINED DURING THE INVESTIGATION. THE PLTS STATED THAT THEY HAD DEPARTED 4.5 HRS PRIOR TO THE ACDT WITH SLIGHTLY OVER 5 QTS OF OIL IN THE ENG. ENG HAD BEEN OPERATED A TOTAL OF 320 HRS.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

Findings

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

Findings

1. (C) ENGINE ASSEMBLY,CONNECTING ROD - FAILURE,TOTAL
2. (C) ENGINE ASSEMBLY,CONNECTING ROD - OVERTEMPERATURE
3. (C) FLUID,OIL - STARVATION

Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

4. (F) OBJECT - SIGN
5. (F) TERRAIN CONDITION - NONE SUITABLE

Occurrence #4: HARD LANDING

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Factual Information

Pilot Information

Certificate:	Private	Age:	36, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	October 15, 1985
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	234 hours (Total, all aircraft), 56 hours (Total, this make and model), 123 hours (Pilot In Command, all aircraft), 34 hours (Last 90 days, all aircraft), 7 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	MOONEY	Registration:	N57257
Model/Series:	M-20-J M-20-J	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	241605
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	December 20, 1986 Annual	Certified Max Gross Wt.:	2740 lbs
Time Since Last Inspection:	20 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	320 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Installed, not activated	Engine Model/Series:	IO-360
Registered Owner:	MOULTON, LAWRENCE W	Rated Power:	200 Horsepower
Operator:	LAWRENCE W. MOULTON	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:	SAT ,809 ft msl	Distance from Accident Site:	45 Nautical Miles
Observation Time:	19:55 Local	Direction from Accident Site:	150°
Lowest Cloud Condition:	Clear	Visibility	15 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	120°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	27°C / 10°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	TUCSON , AZ (TUS)	Type of Flight Plan Filed:	VFR
Destination:	(ERV)	Type of Clearance:	VFLF
Departure Time:	13:30 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	Grass/turf
Airport Elevation:		Runway Surface Condition:	Dry
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		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:	30.159124,-99.349761(est)

Administrative Information

Investigator In Charge (IIC):	Wandel, Warren
Additional Participating Persons:	RICHARD BOCHYNSKI; SAN ANTONIO , TX
Original Publish Date:	February 24, 1989
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=22581

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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](#).