



Aviation Investigation Final Report

Location:	65 MI.ENE OF MC, Alaska	Accident Number:	ANC82DA060
Date & Time:	July 16, 1982, 22:30 Local	Registration:	N891A
Aircraft:	PIPER PA-22	Aircraft Damage:	Substantial
Defining Event:		Injuries:	3 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

DURING FLIGHT, THE PILOT NOTICED A PROGRESSIVE LOSS OF POWER. HE ELECTED TO MAKE AN EMERGENCY LANDING ON A GRAVEL BAR. DURING THE LANDING, THE AIRCRAFT ROLLED THROUGH A SHALLOW SLOUGH WHERE THE LEFT MAIN GEAR HIT A LOG. THE NOSE GEAR THEN HIT A BANK AT THE EDGE OF THE SLOUGH AND THE PLANE WENT OVER ON ITS BACK. THE ENGINE DIED WHEN THE AIRCRAFT TURNED OVER. AN EXAMINATION OF THE ENGINE REVEALED THAT THE NO 3 ROCKER ARM EXHAUST VALVE ADJUSTMENT BOLT HAD FAILED AND WAS LOOSE IN THE VALVE COVER. THERE WAS EVIDENCE THAT THE BOLT MAY HAVE BEEN OVERTORQUED. THE BOLT SHOULD HAVE BEEN TORQUED TO 450 INCH POUNDS. A CHECK OF THE OTHER BOLTS REVEALED TAHT THEIR TORQUE VALUES RANGED FROM 150 TO 450 INCH POUNDS. THE ENGINE HAD A TOTAL OF 3.7 HOURS OF OPERATION SINCE IT HAD A TOP OVERHAUL.

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(PARTIAL) - MECH FAILURE/MALF
Phase of Operation: CRUISE - NORMAL

Findings

1. (C) ENGINE ASSEMBLY,OTHER - OVERTORQUE
2. (C) MAINTENANCE - INADEQUATE - OTHER MAINTENANCE PERSONNEL
3. (C) ENGINE ASSEMBLY,OTHER - FAILURE,TOTAL

Occurrence #2: FORCED LANDING

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER

Phase of Operation: LANDING - ROLL

Findings

4. (F) TERRAIN CONDITION - HIDDEN OBSTRUCTION(S)
5. (F) TERRAIN CONDITION - DIRT BANK/RISING EMBANKMENT

Occurrence #4: NOSE OVER

Phase of Operation: LANDING - ROLL

Factual Information

Pilot Information

Certificate:	Private	Age:	27, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Unknown
Other Aircraft Rating(s):		Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	May 27, 1981
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	86 hours (Total, all aircraft), 23 hours (Total, this make and model), 49 hours (Pilot In Command, all aircraft), 3 hours (Last 90 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	PIPER	Registration:	N891A
Model/Series:	PA-22 PA-22	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:		Serial Number:	22-192
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	1750 lbs
Time Since Last Inspection:	4 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	3684 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Not installed	Engine Model/Series:	O-290-D
Registered Owner:	PAUL MOORE & DAVE ARMSTRONG	Rated Power:	125 Horsepower
Operator:	PAUL MOORE & DAVE ARMSTRONG	Operating Certificate(s) Held:	
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Dusk
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 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:	45°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	WILLOW , AK (Z22)	Type of Flight Plan Filed:	None
Destination:	NIKOLI , AK (5N1)	Type of Clearance:	None
Departure Time:	20:35 Local	Type of Airspace:	

Airport Information

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

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	2 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):

Additional Participating Persons:

Original Publish Date: July 16, 1983

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=69666>

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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](#).