Aviation Investigation Final Report

Location:	MAYER, Arizona	**Accident Number:**	LAX92LA273
Date & Time:	July 1, 1992, 09:00 Local	**Registration:**	N9455G
Aircraft:	CESSNA U206E	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	4 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

THE ENGINE QUIT WITH A LOUD BANG ABOUT 15 MINUTES INTO THE CROSS COUNTRY FLIGHT. THE AIRCRAFT WAS OVER MOUNTAINOUS TERRAIN AND THE PILOT ATTEMPTED TO LAND IN A SMALL PASTURE. THE AIRCRAFT ENCOUNTERED ROUGH TERRAIN DURING THE LANDING ROLL OUT AND NOSED OVER. INVESTIGATION REVEALED THAT THE NUMBER 2 MAIN BEARING HAD SPUN, CLOSING OFF THE INTERNAL OIL PASSAGE IN THE CRANKSHAFT AND JOURNAL. THE ENGINE SUSTAINED A RESULTING OIL STARVATION FAILURE OF THE NUMBER 2 AND 3 CONNECTING RODS. REVIEW OF THE MAINTENANCE RECORDS ESTABLISHED THAT A MAINTENANCE FACILITY HAD FOUND A LARGE AMOUNT OF METAL PARTICLES IN THE OIL 40 HOURS PRIOR TO THE ACCIDENT. THE MAINTENANCE FACILITY WARNED THE PILOT ABOUT THE EXCESSIVE INTERNAL ENGINE WEAR, RECOMMENDING 'FURTHER INSPECTION PRIOR TO FLIGHT.' NO CORRECTIVE ACTION ENTRIES WERE NOTED IN THE LOGBOOK. THE ENGINE WAS FOUND TO HAVE ACCRUED 1,520 HOURS SINCE OVERHAUL. THE MANUFACTURER RECOMMENDS A TIME BETWEEN OVERHAUL INTERVAL OF 1,700 HOURS.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE FAILURE OF THE ENGINE DUE TO THE SLIPPAGE OF THE NUMBER 2 MAIN BEARING AND THE RESULTANT OIL STARVATION FAILURE OF THE NUMBER 2 CONNECTING ROD. THE NUMBER 2 MAIN BEARING SLIPPAGE WAS CAUSED BY THE FAILURE OF THE PILOT/OWNER TO OVERHAUL THE ENGINE IN A TIMELY FASHION WHEN INTERNAL WEAR PATTERNS INDICATED THAT A POTENTIAL BEARING PROBLEM EXISTED. A FACTOR IN THE ACCIDENT WAS THE UNSUITABLE NATURE OF THE TERRAIN FOR A FORCED LANDING.

Findings

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

Findings
1. (C) ENGINE ASSEMBLY,BEARING - SLIPPED
2. (C) MAINTENANCE,OVERHAUL,MAJOR - DELAYED - PILOT IN COMMAND
3. OPERATION WITH KNOWN DEFICIENCIES IN EQUIPMENT - ATTEMPTED - PILOT IN COMMAND
4. (C) LUBRICATING SYSTEM,OIL PORT/PASSAGE,INTERNAL - BLOCKED(TOTAL)
5. (C) FLUID,OIL - STARVATION
6. (C) ENGINE ASSEMBLY,CONNECTING ROD - FAILURE,TOTAL

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

Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
Phase of Operation: LANDING - ROLL

Findings
7. (F) TERRAIN CONDITION - NONE SUITABLE
8. (F) TERRAIN CONDITION - MOUNTAINOUS/HILLY
9. TERRAIN CONDITION - DIRT BANK/RISING EMBANKMENT

Factual Information

Pilot Information

Certificate:	Private	**Age:**	39,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 2 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	June 22, 1992
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	931 hours (Total, all aircraft), 200 hours (Total, this make and model), 888 hours (Pilot In Command, all aircraft), 19 hours (Last 90 days, all aircraft), 7 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	**Registration:**	N9455G
Model/Series:	U206E U206E	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	U2061655
Landing Gear Type:	Tricycle	**Seats:**	6
Date/Type of Last Inspection:	January 1, 1992 Annual	**Certified Max Gross Wt.:**	3600 lbs
Time Since Last Inspection:	43 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	4476 Hrs	**Engine Manufacturer:**	CONTINENTAL
ELT:	Installed, not activated	**Engine Model/Series:**	IO-520-F
Registered Owner:	COMBINED ENERGIES CORPORATION	**Rated Power:**	300 Horsepower
Operator:	COMBINED ENERGIES CORP	**Operating Certificate(s) Held:**	None
Operator Does Business As:	YOUNG BUILDERS	**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:	Clear	**Visibility**	30 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	10 knots / 15 knots	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	330°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	29°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	PHOENIX , AZ (DVT)	**Type of Flight Plan Filed:**	VFR
Destination:	ELY , NV (ELY)	**Type of Clearance:**	None
Departure Time:	08:45 Local	**Type of Airspace:**	Class G

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 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	3 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	4 None	**Latitude, Longitude:**	34.339057,-112.030143(est)

Administrative Information

Investigator In Charge (IIC):	Rich, Jeff
Additional Participating Persons:	MIKE BROWN; SCOTTSDALE , AZ
Original Publish Date:	August 26, 1993
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=27669