Aviation Investigation Final Report

Location:	Salt Lake City, Utah	**Accident Number:**	DEN02LA055
Date & Time:	June 15, 2002, 20:12 Local	**Registration:**	N7338M
Aircraft:	Cessna 175	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	2 Minor, 1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

While in cruise flight at 5,600 feet msl, the tachometer indicated the engine had lost 100 to 200 rpm (revolutions per minute) and shortly thereafter, the oil temperature "pegged high" but oil pressure remained steady at 25 psi. The engine vibrated and the upper cowling broke off, exposing a breach in the top of the casing aft of #3 cylinder. White smoke filled the cockpit, the engine seized, and the propeller stopped in the vertical position. A forced landing in salt water ensued. The last annual inspection on the airplane had been performed 9 years before the accident.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: total mechanical loss of engine power for reasons undetermined. Contributing factors were the lack of an annual inspection and the (forced landing in) salt water.

Findings

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

Findings
1. (C) POWERPLANT - FAILURE,TOTAL
2. (C) REASON FOR OCCURRENCE UNDETERMINED
3. (F) MAINTENANCE,ANNUAL INSPECTION - DISREGARDED - PILOT IN COMMAND

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

Findings
4. EMERGENCY PROCEDURE - PERFORMED - PILOT IN COMMAND

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings
5. (F) TERRAIN CONDITION - WATER
6. TOUCHDOWN - PERFORMED - PILOT IN COMMAND

Factual Information

On June 15, 2002, at 2012 mountain daylight time, a Cessna 175, N7338M, registered to and operated by the pilot, was destroyed when a forced landing was made in the Great Salt Lake, near Tooele, Utah. The pilot and one passenger received minor injuries, and the second passenger was not injured. Visual meteorological conditions prevailed, and no flight plan had been filed for the personal flight being conducted under Title 14 CFR Part 91. The flight originated in Ogden, Utah, approximately 2000, and was en route to Tooele, Utah.

According to the pilot's accident report, the airplane was in cruise flight at 5,600 feet msl (mean sea level) when he and his son, an airplane mechanic, became concerned when the tachometer indicated the engine had lost 100 to 200 rpm (revolutions per minute). Shortly thereafter, they noticed the oil temperature was "pegged high." Oil pressure remained normal and steady at 25 pounds per square inch (psi). "Within seconds the engine started to self-destruct," the pilot wrote, resulting in "violent and high amplitude" vibrations that shook the airplane. "Then the engine exploded with a series of loud bangs and the upper engine cowl jumped wildly." The cowling broke off and they saw what they thought was one of the crankshaft counterweights blown through the top of the casing aft of the #3 cylinder. White smoke came out of the front of the engine cowling, up and over the windshield, and filled the cockpit. The engine seized and the propeller stopped in the vertical position. The pilot retarded the throttle and mixture, and turned the magnetos and fuel selector off. After making a distress call, the pilot ditched the airplane in the lake.

Control tower personnel at Salt Lake City International Airport monitored the radio transmission and notified the Civil Air Patrol (CAP). A searching CAP airplane soon located the occupants swimming near the submerged airplane.

At a later date, the pilot attempted to retrieve the airplane but before he could secure it on shore, high winds and heavy seas washed it back into the lake. The engine was not recovered.

The pilot told a Teledyne Continental Motors investigator that all magnesium components had eroded away and the aluminum parts were "bubbling" in the salt water. From the decription given to him by the pilot, the investigator surmised that either a counterweight had separated, or the number 2 connecting rod may have broken off the crankshaft.

According to an FAA inspector with the Salt Lake City Flight Standards District Office, the pilot did not have a current medical certificate and he did not have a current biennial flight review. In addition, the last annual inspection on the airplane had been performed 9 years ago.

Pilot Information

Certificate:	Private	**Age:**	54,Male
Airplane Rating(s):	Single-engine land; Single-engine sea	**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 Expired	**Last FAA Medical Exam:**	February 15, 1996
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	200 hours (Total, all aircraft), 8 hours (Last 90 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N7338M
Model/Series:	175	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	55638
Landing Gear Type:	Tricycle	**Seats:**	4
Date/Type of Last Inspection:	Annual	**Certified Max Gross Wt.:**	2350 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	Teledyne Continental
ELT:	Installed, not activated	**Engine Model/Series:**	GO-300-A
Registered Owner:	David B. Leiser	**Rated Power:**	175 Horsepower
Operator:	Brent A. Carlson	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Dusk
Observation Facility, Elevation:	SLC,4227 ft msl	**Distance from Accident Site:**	14 Nautical Miles
Observation Time:	19:56 Local	**Direction from Accident Site:**	90°
Lowest Cloud Condition:	Few / 8500 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	5 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	10°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.94 inches Hg	**Temperature/Dew Point:**	30°C / 2°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Ogden, UT (OGD)	**Type of Flight Plan Filed:**	None
Destination:	Tooele, UT (TVY)	**Type of Clearance:**	Unknown
Departure Time:	20:00 Local	**Type of Airspace:**	Class E

Wreckage and Impact Information

Crew Injuries:	1 Minor	**Aircraft Damage:**	Destroyed
Passenger Injuries:	1 Minor, 1 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Minor, 1 None	**Latitude, Longitude:**	40.768611,-112.366111

Administrative Information

Investigator In Charge (IIC):	Scott, Arnold
Additional Participating Persons:	James A Ralph; FAA Flight Standards District Office; Salt Lake City, UT
Original Publish Date:	January 16, 2003
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=54938