 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: LAX05LA172		Aircraft Registration Number: N6292K	
		Occurrence Date: 05/14/2005		Most Critical Injury: Minor	
		Occurrence Type: Accident		Investigated By: NTSB	
Location/Time					
Nearest City/Place Geyserville		State CA	Zip Code 95441	Local Time 1550	Time Zone PDT
Airport Proximity: Off Airport/Airstrip		Distance From Landing Facility:			
Aircraft Information Summary					
Aircraft Manufacturer Republic		Model/Series RC-3		Type of Aircraft Airplane	
Revenue Sightseeing Flight: No			Air Medical Transport Flight: No		
Narrative					
<p>Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:</p> <p>On May 14, 2005, about 1550 Pacific daylight time, a Republic RC-3, N6292K, experienced a loss of engine power and made a forced landing in a vineyard in Franz Valley near Geyserville, California. The pilot/owner operated the airplane under the provisions of 14 CFR Part 91. The airplane sustained substantial damage. The pilot and one passenger were not injured; a third passenger received minor injuries. Visual meteorological conditions prevailed for the local area flight that departed Charles M. Schulz/Sonoma County Airport (STS), Santa Rosa, California, about 1530. The flight was destined for Lake Berryessa Seaport Base (E20), Napa, California, and no flight plan had been filed.</p> <p>The National Transportation Safety Board investigator-in-charge (IIC) interviewed the pilot. The pilot reported that the first indication of an engine problem was the rise in oil temperature with a corresponding decrease in oil pressure. He decided to turn back for STS, made it over a ridge and had to make a forced landing. The pilot stated that the airplane had just come out of an annual inspection 2 weeks prior to the accident. There were no mechanical anomalies noted on the two flights prior to the accident flight.</p> <p>The pilot submitted a written report. The pilot reported that about 7 miles east of the airport he noticed the oil temperature had risen 10 degrees (180 degrees to 190 degrees), and the airplane was not climbing. He turned back for STS, but didn't think that he would be able to clear the ridgeline. He then made a slight turn to the north and headed for the Healdsburg airport, but the oil temperature kept rising and was now at 200 degrees and climbing, with a corresponding decrease in oil pressure (dropping down to 25 pounds). A couple of minutes later he heard a very loud noise from the engine compartment followed by a complete loss of engine power. The pilot identified a vineyard to make the forced emergency landing. He stated that he kept the landing gear retracted and lowered the flaps and made a belly landing in the vineyard. After touchdown the nose dug into the soft ground and the airplane came to rest inverted.</p> <p>A pilot/mechanic witness, in the airplane, stated that after start-up they taxied to the run-up area. The run-up was normal and they took off towards the east. About 7 miles from the airport, he noted that the pilot was paying close attention to the engine gages. Up to that point the witness had not noticed anything wrong with the engine. He noted that the pilot was concerned with the rising oil temperature and initiated a turn back for the airport. The witness also noted a rise in oil temperature with a corresponding drop in oil pressure. At that point they both knew the engine was failing. He heard a loud bang, and the engine quit.</p> <p>Another witness in the rear passenger seat indicated that she heard "strange sounds - banging and clattering, etc." As the pilot turned back for the airport she reported that the engine noise increased and then the engine quit.</p> <p>According to the aircraft logbooks an annual inspection was completed on May 6, 2005. The airframe</p>					
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Narrative (Continued)

had a total time of 291.7 hours, and the engine had a total time since new of 296.2 hours.

TEST AND RESEARCH

A visual examination of the airframe revealed streaks of oil around the outside of the engine cowling. The cowling was removed revealing oil in the engine compartment, and a hole in the top of the engine case. A piece of material identified as a portion of separated engine case lying in the engine compartment. A divet was noted on the interior portion of the separated engine case. The IIC noted that the number 1 connecting rod (adjacent to the front main bearing journal) had separated. Rod bearing material along with a bolt end and nut assembly was at the bottom of the engine case. The connecting rod cap was lying on top of the engine case. The connecting rod cap exhibited bluing and deformation. The rod journal exhibited bronze/orange coloration as well as some deformation. Oil was drained from the oil sump, which contained metal debris. The top spark plugs were removed. According to the Champion Aviation Check-A-Plug chart AV-27, with the exception of the spark plugs for the numbers 1 and 3 cylinders; coloration was consistent with normal operation. The two sets of spark plugs for the numbers 1 and 3 cylinders were oil sooted with foreign debris around the electrode.

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Landing Facility/Approach Information					
Airport Name	Airport ID:	Airport Elevation Ft. MSL	Runway Used NA	Runway Length	Runway Width
Runway Surface Type:					
Runway Surface Condition:					
Approach/Arrival Flown: NONE					
VFR Approach/Landing: Forced Landing					
Aircraft Information					
Aircraft Manufacturer Republic		Model/Series RC-3		Serial Number 505	
Airworthiness Certificate(s): Normal					
Landing Gear Type: Retractable - Amphibian; Tailwheel					
Amateur Built Acft? No	Number of Seats: 4	Certified Max Gross Wt.	3150 LBS	Number of Engines: 1	
Engine Type: Reciprocating	Engine Manufacturer: Franklin	Model/Series: GA8-215-B9F	Rated Power: 215 HP		
- Aircraft Inspection Information					
Type of Last Inspection Annual	Date of Last Inspection 05/2005	Time Since Last Inspection 4 Hours	Airframe Total Time 295.7 Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed?/Type Yes /	ELT Operated? No	ELT Aided in Locating Accident Site? No			
Owner/Operator Information					
Registered Aircraft Owner Arthur W. McDonnell		Street Address			
		City Santa Rosa	State CA	Zip Code 95403	
Operator of Aircraft Arthur W. McDonnell		Street Address			
		City Santa Rosa	State CA	Zip Code 95403	
Operator Does Business As:			Operator Designator Code:		
- Type of U.S. Certificate(s) Held: None					
Air Carrier Operating Certificate(s):					
Operating Certificate:			Operator Certificate:		
Regulation Flight Conducted Under: Part 91: General Aviation					
Type of Flight Operation Conducted: Personal					

 <p>National Transportation Safety Board FACTUAL REPORT AVIATION</p>	NTSB ID: LAX05LA172
	Occurrence Date: 05/14/2005
	Occurrence Type: Accident

First Pilot Information

Name On File	City On File	State On File	Date of Birth On File	Age 75
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Sex: M	Seat Occupied: Left	Occupational Pilot?	Certificate Number: On File
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Certificate(s): Commercial

Airplane Rating(s): Multi-engine Land; Multi-engine Sea; Single-engine Land; Single-engine Sea

Rotorcraft/Glider/LTA: Helicopter

Instrument Rating(s): Airplane

Instructor Rating(s): None

Current Biennial Flight Review? 03/2005

Medical Cert.: Class 2	Medical Cert. Status:	Date of Last Medical Exam: 12/2004
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- Flight Time Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Multi-Engine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air
						Actual	Simulated			
Total Time	10000	28	4000	6000	500			300		
Pilot In Command(PIC)		28	4000	4000	200					
Instructor										
Instruction Received										
Last 90 Days		20	20							
Last 30 Days		6	6							
Last 24 Hours		1	1							

Seatbelt Used? Yes	Shoulder Harness Used? N/A	Toxicology Performed? No	Second Pilot? Yes
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Flight Plan/Itinerary

Type of Flight Plan Filed: None

Departure Point Santa Rosa	State CA	Airport Identifier STS	Departure Time 1530	Time Zone PDT
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Destination Lake Berryessa	State CA	Airport Identifier E20	
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Type of Clearance: None

Type of Airspace:

Weather Information

Source of Wx Information:

Unknown

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Weather Information					
WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
STS	1553	PDT	125 Ft. MSL	7 NM	50 Deg. Mag.
Sky/Lowest Cloud Condition: Few			4500 Ft. AGL	Condition of Light: Day	
Lowest Ceiling: None		Ft. AGL	Visibility: 10	SM	Altimeter: 29.95 "Hg
Temperature: 23 °C	Dew Point: 17 °C	Weather Conditions at Accident Site: Visual Conditions			
Wind Direction: 110		Wind Speed: 11		Wind Gusts:	
Visibility (RVR): Ft.		Visibility (RVV) SM			
Precip and/or Obscuration: No Obscuration; No Precipitation					

Accident Information		
Aircraft Damage: Substantial	Aircraft Fire: None	Aircraft Explosion: None

- Injury Summary Matrix	Fatal	Serious	Minor	None	TOTAL
First Pilot				1	1
Second Pilot					
Student Pilot					
Flight Instructor					
Check Pilot					
Flight Engineer					
Cabin Attendants					
Other Crew					
Passengers			1	1	2
- TOTAL ABOARD -			1	2	3
Other Ground					
- GRAND TOTAL -			1	2	3

National Transportation Safety Board

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AVIATION



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Occurrence Date: 05/14/2005

Occurrence Type: Accident

Administrative Information

Investigator-In-Charge (IIC)

Tealeye C. Cornejo

Additional Persons Participating in This Accident/Incident Investigation:

Tim Jarrard
Federal Aviation Administration
Oakland, CA