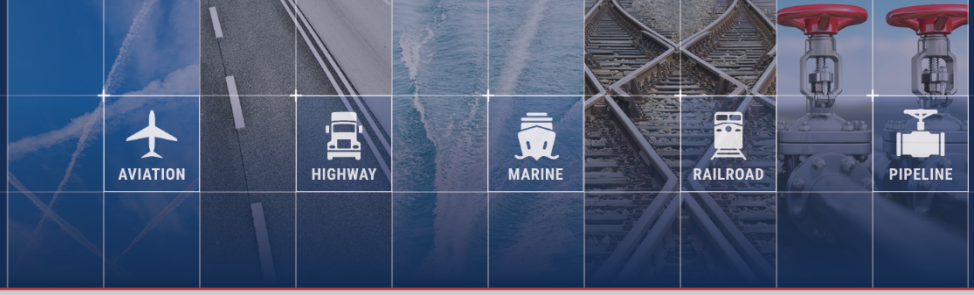

Aviation Investigation Final Report

Location:	RICHLAND, Missouri	**Accident Number:**	CHI94LA079
Date & Time:	February 6, 1994, 16:00 Local	**Registration:**	N63JR
Aircraft:	ROBERTS RV-6A	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 Serious, 1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

THE PILOT REPORTED THAT HE FLEW THE HOMEBUILT AIRPLANE LOCALLY FOR ABOUT 45 MINUTES, THEN MADE A FULL STOP LANDING AT ANOTHER AIRPORT. SOON THEREAFTER, HE ELECTED TO TAKEOFF ON THE RETURN FLIGHT. HE STATED THAT WHEN HE APPLIED FULL THROTTLE TO TAKE OFF, THE ENGINE STOPPED RUNNING. THE PILOT RESTARTED THE ENGINE, USING THE PRIMER, BUT IT QUIT RUNNING AGAIN SHORTLY AFTER STARTING. HE RESTARTED THE ENGINE AGAIN AND THIS TIME IT CONTINUED RUNNING. THE PILOT PERFORMED A FULL STATIC RUN-UP. FINDING NOTHING WRONG DURING THE RUN-UP, HE TOOK OFF AND FLEW BACK TO THE HOME AIRPORT. WHILE ON FINAL APPROACH TO LAND, THE ENGINE LOST POWER AGAIN. DURING A SUBSEQUENT EMERGENCY LANDING, THE AIRPLANE COLLIDED WITH TREES AND THE TERRAIN. AN ON-SCENE INVESTIGATION REVEALED A CLEAN AND FUNCTIONAL FUEL SYSTEM. THE TEMPERATURE AND DEW POINT WERE 56 AND 24 DEGREES, RESPECTIVELY, WHICH WOULD HAVE BEEN MARGINALLY CONDUCIVE FOR CARBURETOR ICE. NO PREIMPACT MECHANICAL PROBLEM WAS FOUND THAT WOULD HAVE RESULTED IN THE LOSS OF POWER.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: LOSS OF ENGINE POWER (DURING FLIGHT) FOR AN UNDETERMINED REASON, AFTER THE PILOT EXPERIENCED LOSS OF ENGINE POWER BEFORE TAKEOFF FOR AN UNKNOWN REASON.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: APPROACH - VFR PATTERN - FINAL APPROACH

Findings
1. (C) REASON FOR OCCURRENCE UNDETERMINED
2. (C) OPERATION WITH KNOWN DEFICIENCIES IN EQUIPMENT - PERFORMED - PILOT IN COMMAND
3. WEATHER CONDITION - CARBURETOR ICING CONDITIONS

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

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: EMERGENCY LANDING

Findings
4. OBJECT - TREE(S)

Occurrence #4: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: EMERGENCY LANDING

Factual Information

On February 6, 1994, at 1600 central standard time (CST), a Roberts RV-6A, N63JR, registered to James E. Roberts of Richland, Missouri, and piloted by a private pilot, was substantially damaged during a collision with trees and terrain while on final approach for landing on Runway 32 at the Richland Municipal Airport, Richland, Missouri. Visual meteorological conditions prevailed at the time of the accident. The 14 CFR Part 91 flight was not operating under a flight plan. The pilot reported no injuries, the passenger sustained serious injuries according to the pilot. The flight departed Camdenton, Missouri, at 1545 CST.

According to the pilot's statement on NTSB Form 6120.1/2, the pilot reported that "...the engine completely quit..." when he applied full throttle during takeoff. He stated he restarted the engine, "...did a normal mag and carb heat run-up... ." He said he did a "...full throttle static run-up..." to ensure proper engine operation. The pilot said he did not observe any problems with the engine and decided to takeoff and return to his home airport.

As the airplane turned onto final approach the pilot said he applied a small amount of power. The engine did not respond, the pilot said he applied full throttle and obtained 800 RPM.

The on-scene investigation revealed the airplane collided with trees approximately 200 yards away from the runway threshold. N63JR's wreckage was located 150 feet short of Runway 32.

A Federal Aviation Administration (FAA) Principal Operations Inspector (POI) representing the NTSB interviewed the pilot. According to the POI's record of interview N63JR's pilot stated he had fueled the airplane with automotive fuel one day before the accident flight. He stated he refueled early so any impurities missed by the cloth filter could settle. On the day of the flight the pilot stated he drained the fuel sumps and observed no impurities.

During takeoff, the pilot stated the engine abruptly stopped running when he added takeoff power. He stated he started the engine using the fuel primer and, shortly after starting, it stopped running. After the second restart the pilot reported a slight roughness. The pilot told the POI he did a static run-up to 2350 RPM and noticed no further problems. Statements made by the pilot regarding the events associated with the accident match those on his NTSB Form 6120.1/2.

The FAA's Principal maintenance Inspector (PMI) stated the engine had been on another homebuilt airplane. He said it was installed on N63JR's airframe as received from the previous owner. His examination of the fuel system revealed a clean carburetor interior. Its linkage was secure and operating correctly. No foreign matter or water was found in the carburetor float bowl. The engine driven fuel pump was tested and functioned within manufacturer's specifications. The fuel lines were examined and were found clean and unobstructed. The

PMI stated a fuel analysis could not be made due to the lack of any fuel samples.

Pilot Information

Certificate:	Private	**Age:**	58,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Right
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 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	1175 hours (Total, all aircraft), 6 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	ROBERTS	**Registration:**	N63JR
Model/Series:	RV-6A RV-6A	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	20471
Landing Gear Type:	Tricycle	**Seats:**	2
Date/Type of Last Inspection:	November 10, 1993 Annual	**Certified Max Gross Wt.:**	1650 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	LYCOMING
ELT:	Installed	**Engine Model/Series:**	O-320-E2D
Registered Owner:	JAMES E. ROBERTS	**Rated Power:**	150 Horsepower
Operator:		**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:	AIZ ,869 ft msl	**Distance from Accident Site:**	18 Nautical Miles
Observation Time:	15:15 Local	**Direction from Accident Site:**	330°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	4 knots / None	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	310°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	13°C / -4°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	CAMDENTON (K15)	**Type of Flight Plan Filed:**	None
Destination:	(M034)	**Type of Clearance:**	None
Departure Time:	15:45 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	RICHLAND MUNICIPAL MO34	**Runway Surface Type:**	
Airport Elevation:	1110 ft msl	**Runway Surface Condition:**	
Runway Used:	32	**IFR Approach:**	
Runway Length/Width:	3000 ft / 49 ft	**VFR Approach/Landing:**	Full stop;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 Minor	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 Serious	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Serious, 1 Minor	**Latitude, Longitude:**	37.859256,-92.390541(est)

Administrative Information

Investigator In Charge (IIC):	Gattolin, Frank
Additional Participating Persons:	ADAM A NOVAK; ST. LOUIS , MO CARL D'AGNESE; ST. LOUIS , MO
Original Publish Date:	October 19, 1995
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=9464