



# Aviation Investigation Final Report

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<b>Location:</b>	Page, Arizona	<b>Accident Number:</b>	WPR09CA462
<b>Date &amp; Time:</b>	September 22, 2009, 16:00 Local	<b>Registration:</b>	N129AL
<b>Aircraft:</b>	Agusta A109	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Fuel exhaustion	<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Positioning		

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## Analysis

The pilot reported that at 70 miles from his destination he determined that he would be landing closer to minimum fuel than he had planned. He continued to the destination and passed over one airport because it did not have any services. At 35 miles from the destination, the low fuel caution-warning for fuel tank 2 illuminated, followed by a low fuel caution-warning for fuel tank 1. The pilot thought that he would still land with some reserve and continued to fly to his destination airport. Approximately 1 mile from the destination airport the helicopter experienced a dual engine flame-out. The pilot autorotated to a sports field where the helicopter landed hard, sustaining damage to the main rotor blades, tail rotor, tail boom, and horizontal stabilizer. The pilot stated that the helicopter and engines had no mechanical failures or malfunctions during the flight.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A total loss of engine power due to fuel exhaustion as a result of the pilot's inadequate in-flight planning and his decision to continue flight with a known low fuel level state.

## Findings

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<b>Aircraft</b>	Fuel - Fluid level
<b>Personnel issues</b>	Decision making/judgment - Pilot
<b>Personnel issues</b>	Fuel planning - Pilot

## Factual Information

### History of Flight

<b>Maneuvering</b>	Fuel exhaustion (Defining event)
<b>Maneuvering</b>	Loss of engine power (total)
<b>Autorotation</b>	Hard landing

### Pilot Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	44, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Helicopter	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Helicopter	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 With waivers/limitations	<b>Last FAA Medical Exam:</b>	August 31, 2009
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	June 10, 2009
<b>Flight Time:</b>	4380 hours (Total, all aircraft), 120 hours (Total, this make and model), 4230 hours (Pilot In Command, all aircraft), 50 hours (Last 90 days, all aircraft), 20 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Agusta	<b>Registration:</b>	N129AL
<b>Model/Series:</b>	A109 K2	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	10029
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	5
<b>Date/Type of Last Inspection:</b>	September 4, 2009 AAIP	<b>Certified Max Gross Wt.:</b>	6283 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	2 Turbo shaft
<b>Airframe Total Time:</b>	5606 Hrs	<b>Engine Manufacturer:</b>	TURBOMECA
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	ARRIEL1
<b>Registered Owner:</b>	Trevor Corp	<b>Rated Power:</b>	738 Horsepower
<b>Operator:</b>	Omniflight Helicopters	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	KPGA,4316 ft msl	<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>	16:53 Local	<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	Indefinite (V V)	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	/	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>		<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>		<b>Temperature/Dew Point:</b>	22°C / -11°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Mesa, AZ (KIWA)	<b>Type of Flight Plan Filed:</b>	Company VFR
<b>Destination:</b>	Page, AZ (KPGA)	<b>Type of Clearance:</b>	VFR
<b>Departure Time:</b>	14:14 Local	<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>	Page Municipal Airport KPGA	<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>		<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>		<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	
<b>Total Injuries:</b>	1 None	<b>Latitude, Longitude:</b>	36.926109,-111.448333(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	McKenny, Van
<b>Additional Participating Persons:</b>	Steve Meisner; Federal Aviation Administration; Scottsdale, AZ
<b>Original Publish Date:</b>	April 19, 2010
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	This accident report documents the factual circumstances of this accident as described to the NTSB.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=74790">https://data.nts.gov/Docket?ProjectID=74790</a>

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