



# Aviation Investigation Final Report

<b>Location:</b>	SPOKANE, Washington	<b>Accident Number:</b>	SEA93LA092
<b>Date &amp; Time:</b>	April 10, 1993, 14:55 Local	<b>Registration:</b>	N29553
<b>Aircraft:</b>	TAYLORCRAFT      BL-65	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 Minor
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

DURING THE INITIAL CLIMBOUT THE ENGINE BEGAN RUNNING ROUGH AND THE PILOT ELECTED TO RETURN TO THE AIRPORT TO LAND DUE TO BUILDINGS AND POWER LINES IN HIS CLIMBOUT FLIGHT PATH. THE PILOT REPORTED THAT 'DUE TO THE TIGHTNESS OF THE TURN TO MISS AN AIRPORT BUILDING THE AIRPLANE LOST SUFFICIENT ALTITUDE AND AIRSPEED AND STALLED.' SUBSEQUENT EXAMINATION OF THE AIRCRAFT'S ENGINE REVEALED THAT THE NUMBER 4 CYLINDER EXHAUST VALVE SEAT HAD FAILED AND NO COMPRESSION COULD BE ACHIEVED FROM THE CYLINDER.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: FAILURE OF THE NUMBER 4 CYLINDER EXHAUST VALVE SEAT AND THE INADVERTENT STALLING OF THE AIRCRAFT BY THE PILOT IN COMMAND. FACTORS CONTRIBUTING TO THE ACCIDENT WERE BUILDINGS AND POWER LINES.

## Findings

Occurrence #1: LOSS OF ENGINE POWER(PARTIAL) - MECH FAILURE/MALF  
Phase of Operation: TAKEOFF - INITIAL CLIMB

### Findings

1. (C) ENGINE ASSEMBLY, VALVE, EXHAUST - FAILURE, PARTIAL

Occurrence #2: FORCED LANDING  
Phase of Operation: DESCENT - EMERGENCY  
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Occurrence #3: LOSS OF CONTROL - IN FLIGHT  
Phase of Operation: MANEUVERING - TURN TO LANDING AREA (EMERGENCY)

Findings

2. (F) OBJECT - BUILDING(NONRESIDENTIAL)
  3. (F) OBJECT - WIRE, TRANSMISSION
  4. (C) STALL/MUSH - INADVERTENT - PILOT IN COMMAND
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Occurrence #4: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: DESCENT - UNCONTROLLED

## Factual Information

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	21, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	November 19, 1992
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	512 hours (Total, all aircraft), 5 hours (Total, this make and model), 431 hours (Pilot In Command, all aircraft), 57 hours (Last 90 days, all aircraft), 15 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	TAYLORCRAFT	<b>Registration:</b>	N29553
<b>Model/Series:</b>	BL-65 BL-65	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	2396
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	April 2, 1993 Annual	<b>Certified Max Gross Wt.:</b>	1200 lbs
<b>Time Since Last Inspection:</b>	2 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	3026 Hrs	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	O-145-B2
<b>Registered Owner:</b>	MURPHY, VAUGH E.	<b>Rated Power:</b>	65 Horsepower
<b>Operator:</b>	MURPHY, VAUGH E.	<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>		<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>		<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Scattered / 1600 ft AGL	<b>Visibility</b>	15 miles
<b>Lowest Ceiling:</b>	Broken / 3000 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	8 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	300°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29 inches Hg	<b>Temperature/Dew Point:</b>	9°C / 4°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>		<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	Traffic advisory
<b>Departure Time:</b>	14:50 Local	<b>Type of Airspace:</b>	Class A;Class D;Class E

## Airport Information

<b>Airport:</b>	FELTS FIELD SFF	<b>Runway Surface Type:</b>	Concrete
<b>Airport Elevation:</b>	1953 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	21	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	4500 ft / 150 ft	<b>VFR Approach/Landing:</b>	Forced landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Minor	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 Minor	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 Minor	<b>Latitude, Longitude:</b>	

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Mccreary, Steven
<b>Additional Participating Persons:</b>	TEX GASTON; SPOKANE , WA
<b>Original Publish Date:</b>	October 13, 1993
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=43008">https://data.ntsb.gov/Docket?ProjectID=43008</a>

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).