Aviation Investigation Final Report

Location:	Morgan Hill, California	**Accident Number:**	LAX06LA271
Date & Time:	August 25, 2006, 13:30 Local	**Registration:**	N58980
Aircraft:	Boeing E75	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 Minor, 1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

While in an aerobatic maneuver, the pilot encountered an engine fire. The pilot leaned the mixture, extinguishing the fire, and after an unsuccessful restart attempt, preformed an emergency landing to a field. The airplane came to rest inverted. Post accident examination of the airplane showed that fuel was leaking at a rapid rate from the carburetor. After the carburetor was removed from the airframe, fuel was supplied to the bowl and the float floated to a level that shut off the flow of fuel. The carburetor fuel flow anomaly could not be reproduced following removal of the carburetor from the engine.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Excessive fuel flow through the carburetor which resulted in leaking fuel, and subsequent in-flight fire while maneuvering.

Findings

Occurrence #1: FIRE
Phase of Operation: MANEUVERING

Findings
1. (C) FUEL SYSTEM,CARBURETOR - EXCESSIVE FLOW/OUTPUT

Occurrence #2: FORCED LANDING

Phase of Operation: EMERGENCY LANDING

Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
Phase of Operation: EMERGENCY LANDING

Findings
2. TERRAIN CONDITION - ROUGH/UNEVEN

Factual Information

On August 25, 2006, at 1330 Pacific daylight time, a Boeing E 75 (Stearman), N58980, came to rest inverted following a forced landing in a field in Morgan Hill, California. The pilot was operating the privately registered airplane under the provisions of 14 Code of Federal Regulations Part 91. The commercial pilot sustained minor injuries, and one passenger (the owner of the airplane) was not injured. The airplane sustained substantial damage. Visual meteorological conditions prevailed and no flight plan was filed for the local area flight. The pilot departed from Reid-Hillview Airport, San Jose, California, at 1300.

According to the owner of the airplane, the purpose of the flight was to perform aerobatics in the local area. During one of the maneuvers, flames emanated from the right side of the engine. The pilot pulled the mixture to the lean position and the fire went out. A restart was attempted but was unsuccessful so the pilot performed a precautionary landing to a field. The airplane pitched forward just prior to touchdown and nosed-over.

The aircraft recovery personnel noted that when the airplane was righted from its inverted position, fuel poured from the carburetor area. They turned the fuel selector to the OFF position, placed the mixture control to idle cutoff, drained the remaining fuel from the tanks, and removed the wings for transport.

On November 17, 2006, a National Transportation Safety Board investigator examined the wreckage. The investigator turned the fuel selector to the ON position and placed the mixture control to full rich. Residual fuel from the airplane's fuel lines could be heard filling the carburetor bowl. Fuel was then observed leaking at a rapid rate from the carburetor area. The mixture control was placed in the idle cutoff position and fuel still leaked from the carburetor area. The fuel selector was then placed in the OFF position and fuel stopped flowing from the carburetor.

The carburetor, a Bendix Stromberg NAR6D, was removed from the engine and the investigator noted that the intake manifold displayed heavy black soot throughout. The throttle inlet and venturi was blackened with heavy soot. The carburetor halves were split to examine the float. The metallic float did not display any cracks or holes that would permit the float to sink. Fuel was added to the bowl and the float floated to a level that completely shut off the fuel inlet line. No anomalies were noted with the carburetor after its removal, with the exception of a leather seal that protected the accelerator pump plunger housing was torn. Thumb compression was obtained on each cylinder, with all of them producing compression. Dark soot was noted throughout the intake and exhaust systems.

Pilot Information

Certificate:	Commercial; Flight instructor	**Age:**	73,Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land; Multi-engine sea	**Seat Occupied:**	Front
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine	**Toxicology Performed:**	No
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	July 1, 2005
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	July 1, 2005
Flight Time:	24000 hours (Total, all aircraft), 300 hours (Total, this make and model), 23800 hours (Pilot In Command, all aircraft), 165 hours (Last 90 days, all aircraft), 40 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Boeing	**Registration:**	N58980
Model/Series:	E75	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Restricted (Special)	**Serial Number:**	75-5800
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	November 1, 2005 Annual	**Certified Max Gross Wt.:**	2950 lbs
Time Since Last Inspection:	25 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	3900 Hrs at time of accident	**Engine Manufacturer:**	Teledyne Continental
ELT:	Installed, not activated	**Engine Model/Series:**	R-670
Registered Owner:	Javier and Anna Garcia	**Rated Power:**	220 Horsepower
Operator:	On File	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KRHV,135 ft msl	**Distance from Accident Site:**	14 Nautical Miles
Observation Time:	13:51 Local	**Direction from Accident Site:**	310°
Lowest Cloud Condition:	Clear	**Visibility**	5 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	5 knots / None	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.84 inches Hg	**Temperature/Dew Point:**	27°C / 12°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Reid-Hillview, CA (RHV)	**Type of Flight Plan Filed:**	None
Destination:	(RHV)	**Type of Clearance:**	None
Departure Time:	13:10 Local	**Type of Airspace:**	

Wreckage and Impact Information

Crew Injuries:	1 Minor	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Minor, 1 None	**Latitude, Longitude:**	37.148612,-121.643058

Administrative Information

Investigator In Charge (IIC):	Dunks, Kristi
Additional Participating Persons:	Joseph Abramski; Federal Aviation Administration; San Jose, CA
Original Publish Date:	April 25, 2007
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=64407