



National Transportation Safety Board Aviation Accident Final Report

Location:	Symrna, TN	Accident Number:	ERA09LA498
Date & Time:	09/01/2009, 1314 CDT	Registration:	N318JT
Aircraft:	Hahn R-W22 Tiger Moth Rep	Aircraft Damage:	Destroyed
Defining Event:	Loss of engine power (partial)	Injuries:	1 Serious
Flight Conducted Under:	Part 91: General Aviation - Business		

Analysis

The accident flight was the airplane's first flight with a newly installed engine. The pilot executed a normal takeoff and, during initial climbout, the engine began to overheat. Subsequently, engine power diminished and the pilot made a forced landing into the trees at the end of the runway. Examination of the airplane by a Federal Aviation Administration inspector revealed no evidence of preimpact mechanical malfunction. Due to the extensive fire damage of the automobile engine, the reason for the loss of engine power could not be determined.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A loss of engine power for undetermined reasons.

Findings

Not determined	Not determined - Unknown/Not determined (Cause)
----------------	---

Factual Information

On September 1, 2009, about 1314 central daylight time, an experimental amateur-built Hahn R-W22 Tiger Moth Replica, N318JT, lost engine power and collided with trees at Smyrna Airport (MQY), Smyrna, Tennessee. The airline transport-rated pilot received minor injuries. The airplane was substantially damaged by impact forces, and post crash fire. The flight was operated as a personal flight under the provisions of 14 Code of Federal Regulations (CFR) Part 91, and no flight plan was filed. Visual meteorological conditions prevailed at the time of the accident. The flight was originating at the time of the accident.

The pilot stated that this was the airplane's first flight with a newly installed engine. The owner of the airplane informed the Federal Aviation Administration (FAA) inspector that the engine was purchased from a local salvage yard, and that it was taken from a 1997 Geo Metro. The pilot stated that he taxied to the end of runway 32, which is 8037 feet long. He said that during the initial climbout, he was conducting engine and instruments checks when he noticed that the engine began to overheat. Subsequently the engine power diminished, and the airplane only climbed to approximately 200-300 feet agl. The pilot said that at that time he was unable to maintain altitude and therefore he made a forced landing in the trees at the end of the runway. A post crash fire ensued and the airplane was totally consumed by the fire. The pilot did not report any flight control malfunctions prior to the accident.

Examination of the airplane by an FAA inspector revealed that the airplane collided with trees at the end of the runway. The airframe and flight control system components revealed no evidence of preimpact mechanical malfunction. Due to the extensive fire damage of the automobile engine, the reason for loss of engine power could not be determined.

History of Flight

Initial climb	Loss of engine power (partial) (Defining event)
Emergency descent	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Airline Transport	Age:	45, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Single
Other Aircraft Rating(s):		Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 With Waivers/Limitations	Last Medical Exam:	04/16/2009
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	12000 hours (Total, all aircraft), 1 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	Hahn	Registration:	N318JT
Model/Series:	R-W22 Tiger Moth Rep	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental	Serial Number:	001
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	07/25/2009, Conditional	Certified Max Gross Wt.:	1320 lbs
Time Since Last Inspection:	0 Hours	Engines:	1
Airframe Total Time:	0 Hours	Engine Manufacturer:	
ELT:	Not installed	Engine Model/Series:	
Registered Owner:	Tracy L. Hahn	Rated Power:	
Operator:	Tracy L. Hahn	Air Carrier Operating Certificate:	None

Meteorological Information and Flight Plan

Observation Facility, Elevation:	MQY, 543 ft msl	Observation Time:	1331 CDT
Distance from Accident Site:	1 Nautical Miles	Condition of Light:	Day
Direction from Accident Site:	140°	Conditions at Accident Site:	Visual Conditions
Lowest Cloud Condition:	Clear	Temperature/Dew Point:	29°C / 13°C
Lowest Ceiling:	None	Visibility	10 Miles
Wind Speed/Gusts, Direction:	7 knots, 350°	Visibility (RVR):	
Altimeter Setting:	30.17 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	No Precipitation		
Departure Point:	Symrna, TN (MQY)	Type of Flight Plan Filed:	None
Destination:	Symrna, TN (MQY)	Type of Clearance:	VFR
Departure Time:	1314 CDT	Type of Airspace:	

Airport Information

Airport:	Symrna Airport (MQY)	Runway Surface Type:	Concrete
Airport Elevation:	543 ft	Runway Surface Condition:	Dry
Runway Used:	32	IFR Approach:	None
Runway Length/Width:	8037 ft / 150 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Destroyed
Passenger Injuries:	N/A	Aircraft Fire:	On-Ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious		

Administrative Information

Investigator In Charge (IIC):	Eric Alleyne	Adopted Date:	12/15/2009
Additional Participating Persons:	Michael A Chasteen; FAA/FSDO; Nashville, TN		
Publish Date:	12/15/2009		
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=74645		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report.