



National Transportation Safety Board Aviation Accident Final Report

Location:	CENTERVILLE, AL	Accident Number:	ATL97LA053
Date & Time:	04/01/1997, 1622 CST	Registration:	N301A
Aircraft:	Catchot HAULER	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Minor

Flight Conducted Under: Part 91: General Aviation - Personal

Analysis

The pilot reported that takeoff and climb to 2000 feet were normal. He said that about 20 minutes after takeoff, smoke filled the cockpit. He also noticed that the engine tachometer needle had dropped to zero and the engine had lost power. The pilot, selected a nearby field for an emergency landing. The airplane collided with two trees short of the intended touchdown point. Examination of the airplane disclosed that the engine was equipped with a dual electronic ignition system. Two three-ohm coils were to have been installed on the engine (at the manufacturer) as the ignition source instead of magnetos. Examination of the coil assemblies disclosed that both assemblies had shorted and that they were not functional. Subsequent research disclosed that the three-ohm coils also require the installation of a two-ohm ballast resistor into the ignition system. No ballast resistors were installed on N301A. Also, no airworthiness certificate had been issued for this airplane.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the engine manufacturer's failure to install ballast resistors in the ignition system, which resulted in an electrical short in the dual ignition system and subsequent loss of engine power.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF
Phase of Operation: CRUISE - NORMAL

Findings

1. (C) IGNITION SYSTEM - IMPROPER
2. (C) INSTALLATION - IMPROPER - MANUFACTURER
3. (C) IGNITION SYSTEM,IGNITION COIL - SHORTED

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)

Factual Information

On April 1, 1997, at 1622 central standard time, a Catchot Hauler, an experimental airplane, N301A, collided with trees during an emergency landing in a field near Centerville, Alabama. The personal flight operated under the provisions of Title 14 CFR Part 91 with no flight plan filed. Visual weather conditions prevailed at the time of the accident. The airplane sustained substantial damage, and the commercial rated pilot received minor injuries. The flight departed Bessemer, Alabama, at 1600.

The airplane owner had taken N301A to Bessemer, where he had contracted for another builder of the Hauler airplanes to custom build the engine cowling. Since the airplane owner was a low flight time pilot, a friend, with more flight experience agreed to fly the airplane back to Wiggins, Mississippi, after the work was completed.

The pilot reported that the takeoff and the climb to 2000 feet were normal; all systems also appeared to have been operating normally. Approximately twenty minutes after takeoff, the pilot stated that smoke filled the cockpit. The pilot also noticed that the engine tachometer needle had dropped to zero; within one minute, the engine quit. After attempting to clear the cockpit of the smoke, and attempting to isolate the source of the smoke, the pilot, selected a nearby field for an emergency landing. The pilot established a final approach to the field. The airplane collided with two trees short of the intended touchdown point.

An examination of the airplane disclosed that the engine was equipped with a dual electronic ignition system. Two three ohm coils were installed on the engine from the manufacturer as the ignition source instead of magnetos. Examination the coils assemblies disclosed that both assemblies had electrical shorts, and they were not functional. Subsequent research by the owner, disclosed that the three ohm coils also require the installation of a two ohms ballast resistor into the ignition system. No ballast resistors were installed on N301A. An airworthiness certificate had not been issued for the airplane.

Pilot Information

Certificate:	Commercial	Age:	53, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	None None	Last FAA Medical Exam:	
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	7500 hours (Total, all aircraft), 1 hours (Total, this make and model), 6000 hours (Pilot In Command, all aircraft), 40 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Catchot	Registration:	N301A
Model/Series:	HAULER HAULER	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:		Serial Number:	1001
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	1200 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	15 Hours	Engine Manufacturer:	Mosler
ELT:	Installed, not activated	Engine Model/Series:	82X
Registered Owner:	ANGUS L. CATCHOT SR.	Rated Power:	82 hp
Operator:	ANGUS L. CATCHOT SR.	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	KBH, 251 ft msl	Distance from Accident Site:	5 Nautical Miles
Observation Time:	1550 CST	Direction from Accident Site:	90°
Lowest Cloud Condition:	Scattered / 12000 ft agl	Visibility	15 Miles
Lowest Ceiling:	Broken / 15000 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	70°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	13° C / 2° C
Precipitation and Obscuration:			
Departure Point:	BESSEMER, AL (2A3)	Type of Flight Plan Filed:	None
Destination:	WIGGINS, MS (MS06)	Type of Clearance:	None
Departure Time:	1600 CST	Type of Airspace:	Class A

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC): PHILLIP POWELL Report Date: 01/30/1998

Additional Participating Persons: RODGER HOLMSTROM

Publish Date:

Investigation Docket: NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov, or at 800-877-6799. Dockets released after this date are available at <http://dms.nts.gov/pubdms/>.

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