



Aviation Investigation Final Report

Location:	SUMMERVILLE, South Carolina	Accident Number:	ATL91LA009
Date & Time:	October 26, 1990, 15:20 Local	Registration:	N6142D
Aircraft:	PIPER PA-22-150	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Minor, 1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

DURING THE INITIAL CLIMB AFTER TAKE OFF SMOKE ENTERED THE CABIN UNDER THE CONTROL PANEL. BEFORE THE AIRPLANE COULD BE RETURNED TO THE RUNWAY, FLAMES WERE VISIBLE AT THE PASSENGERS FEET. AFTER LANDING ON THE OPPOSITE RUNWAY IT WAS DISCOVERED THAT EXHAUST GASES HAD IMPINGED ON THE FIREWALL. THE HEAT HAD IGNITED CABIN INSULATION. AN FAA INSPECTOR FOUND THAT THE EXHAUST STACK INSIDE THE CARBURETOR MUFF HAD SEPARATED. EXHAUST GAS HAD BEEN DIRECTED AGAINST THE FIREWALL. THE A/C WS LAST INSPECTED 11 MONTHS PRIOR TO THE ACCIDENT. THE EXHAUST SYSTEM HAD NEVER BEEN REPLACED.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: AN ERODED EXHAUST STACK WHICH ALLOWED HOT GASES TO IMPINGE UPON THE FIREWALL, AND IGNITE CABIN INSULATION.

Findings

Occurrence #1: FIRE
Phase of Operation: TAKEOFF - INITIAL CLIMB

- Findings
1. (C) EXHAUST SYSTEM,STACK - ERODED

Factual Information

Pilot Information

Certificate:	Private	Age:	41, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Unknown
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	September 24, 1990
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	59 hours (Total, all aircraft), 4 hours (Total, this make and model), 36 hours (Pilot In Command, all aircraft), 4 hours (Last 90 days, all aircraft), 4 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	PIPER	Registration:	N6142D
Model/Series:	PA-22-150 PA-22-150	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:		Serial Number:	22-4786
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	November 4, 1989 Annual	Certified Max Gross Wt.:	2000 lbs
Time Since Last Inspection:	67 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	1944 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Installed, not activated	Engine Model/Series:	O-320
Registered Owner:		Rated Power:	150 Horsepower
Operator:	ZIEBELL, GRANT G.	Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	CHS ,46 ft msl	Distance from Accident Site:	10 Nautical Miles
Observation Time:	15:50 Local	Direction from Accident Site:	140°
Lowest Cloud Condition:	Clear	Visibility	15 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	10 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	360°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	18°C / -18°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:		Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	15:00 Local	Type of Airspace:	

Airport Information

Airport:	JETBURG PRIVATE	Runway Surface Type:	Grass/turf
Airport Elevation:	60 ft msl	Runway Surface Condition:	Dry
Runway Used:	3	IFR Approach:	None
Runway Length/Width:	2800 ft / 100 ft	VFR Approach/Landing:	Touch and go

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor	Aircraft Fire:	In-flight
Ground Injuries:	N/A	Aircraft Explosion:	In-flight
Total Injuries:	1 Minor, 1 None	Latitude, Longitude:	33.049926,-80.190773(est)

Administrative Information

Investigator In Charge (IIC): Hicks], Preston

Additional Participating Persons:

Original Publish Date: March 12, 1993

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=8352>

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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](#).