



National Transportation Safety Board

Aviation Accident Data Summary

Location:	PROVO, UT	Accident Number:	DEN90LA054
Date & Time:	02/03/1990, 0830 MST	Registration:	N21492
Aircraft:	PIPER PA-32RT-300T	Injuries:	1 None
Flight Conducted Under:	Part 91: General Aviation - Positioning		

Analysis

DURING FLT, THE PLT NOTED A DROP IN MANIFOLD PRESSURE & DECIDED TO MAKE A PRECAUTIONARY LANDING. WHILE ON A BASE LEG TO LAND, HEAVY SMOKE & FUMES FILLED THE CABIN & REQUIRED THE PLT TO LOOK OUT THE SIDE VENT WINDOW TO COMPLETE THE LANDING. AFTER THE AIRCRAFT STOPPED ON THE RUNWAY, A FIRE IN THE ENGINE COMPARTMENT WAS EXTINGUISHED. AN EXAM REVEALED THAT THE LEFT INTERMEDIATE EXHAUST PIPE (LYCOMING PART NO: LW-15811) HAD PARTIALLY SEPARATED AT THE FLANGE. THE ENGINE CROSSOVER EXHAUST ASSEMBLY HAD BEEN MODIFIED IN ACCORDANCE WITH AD 89-12-04 & TEXTRON LYCOMING SERVICE BULLETIN #484, WHICH WERE INTENDED TO PREVENT THIS KIND OF FAILURE/SEPARATION.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: IMPROPER INSTALLATION BY MAINTENANCE PERSONNEL AND FATIGUE FAILURE AND LEAKAGE OF THE LEFT INTERMEDIATE EXHAUST PIPE, WHICH RESULTED IN AN IN-FLIGHT FIRE IN THE ENGINE COMPARTMENT. CONTRIBUTING FACTORS WERE: INADEQUATE SERVICE BULLETIN PROVIDED BY THE MANUFACTURER AND INSUFFICIENT STANDARDS PROVIDED BY THE (FAA) AIRWORTHINESS DIRECTIVE.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: CRUISE - NORMAL

Findings

1. (C) MAINTENANCE, INSTALLATION - IMPROPER - COMPANY MAINTENANCE PERSONNEL
2. (F) MAINTENANCE, SERVICE BULLETIN/LETTER - INADEQUATE - MANUFACTURER
3. (F) INSUFFICIENT STANDARDS/REQUIREMENTS - FAA(ORGANIZATION)
4. (C) EXHAUST SYSTEM, MANIFOLD/PIPE - FATIGUE
5. (C) EXHAUST SYSTEM - LEAK

Occurrence #2: FIRE
Phase of Operation: APPROACH - VFR PATTERN - BASE LEG/BASE TO FINAL

Findings

6. (C) ENGINE COMPARTMENT - FIRE

Occurrence #3: FORCED LANDING
Phase of Operation: LANDING

Pilot Information

Certificate:	Commercial	Age:	60
Airplane Rating(s):	Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	None
Flight Time:	1682 hours (Total, all aircraft), 24 hours (Total, this make and model), 1456 hours (Pilot In Command, all aircraft), 9 hours (Last 90 days, all aircraft), 4 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	PIPER	Registration:	N21492
Model/Series:	PA-32RT-300T PA-32RT-30	Engines:	1 Reciprocating
Operator:	ALPINE AVIATION INC.	Engine Manufacturer:	LYCOMING
Operating Certificate(s) Held:	On-demand Air Taxi (135)	Engine Model/Series:	TIO-540-S1AD
Flight Conducted Under:	Part 91: General Aviation - Positioning		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	, 0 ft msl	Weather Information Source:	Pilot
Lowest Ceiling:	None / 0 ft agl	Wind Speed/Gusts, Direction:	/ ,
Temperature:		Visibility	50 Miles
Precipitation and Obscuration:			
Departure Point:	SALT LAKE CITY, UT (SLC)	Destination:	MOAB, UT (CNY)

Airport Information

Airport:	PROVO (PVU)	Runway Surface Type:	Asphalt
Runway Used:	13	Runway Surface Condition:	Dry
Runway Length/Width:	7096 ft / 150 ft		

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	In-Flight
Ground Injuries:	N/A	Aircraft Explosion:	None
Latitude, Longitude:			

Administrative Information

Investigator In Charge (IIC): ROBERT B COLLINS

Adopted Date: 11/16/1990

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/>.

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.