



National Transportation Safety Board Aviation Accident Final Report

Location:	Riverside, CA	Accident Number:	LAX04LA084
Date & Time:	01/01/2004, 0920 PST	Registration:	N589Q
Aircraft:	Piper PA-32R-300	Aircraft Damage:	Substantial
Defining Event:		Injuries:	4 None
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

Following a catastrophic engine failure in cruise, the airplane collided with multiple ground obstacles during a forced landing in a field. The pilot reported that while in cruise flight he first noticed a "burning smell," which was followed a short time later by a low oil pressure indication. The pilot then felt a vibration, followed by a brief engine overspeed to 3,000 rpm, and then the engine lost all power. He performed a forced landing in a field and collided with multiple ground obstacles. Post accident examination of the engine at the accident site revealed that the No. 6 connecting rod had penetrated the engine crank case. An excess of engine oil was found on the bottom of the airplane. Further examination revealed an oil filter gasket, Lycoming part number LW-13388, was extruded at the base of the filter assembly and had allowed virtually all engine oil to escape. A Lycoming Mandatory Service Bulletin MSB-543, and an emergency Airworthiness Directive (AD) 2000-18-53, that was later superseded by AD 2002-12-17, was applicable to this potential problem, and required repetitive inspections and gasket replacement or replacement of the gasket adapter plate with a different part number. The investigation could find no evidence of compliance with either AD.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: engine oil exhaustion due to the extrusion of an oil filter converter plate gasket and the failure of the aircraft owner to comply with a mandatory Service Bulletin and a Federal Aviation Administration emergency Airworthiness Directive.

Findings

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

Findings

1. (C) LUBRICATING SYSTEM,OIL GASKET - RUPTURED
 2. FLUID,OIL - EXHAUSTION
 3. (C) MAINTENANCE,COMPLIANCE WITH AD - NOT PERFORMED - COMPANY/OPERATOR MANAGEMENT
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Occurrence #2: FORCED LANDING
Phase of Operation: EMERGENCY DESCENT/LANDING

Occurrence #3: ON GROUND/WATER COLLISION WITH OBJECT
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

4. OBJECT - FENCE
5. OBJECT - POLE

Factual Information

On January 1, 2004, at 0920 Pacific standard time, a Piper PA-32R-300, N589Q, lost engine power and force landed in a field at Riverside, California. The airplane was operated by the pilot under the provisions of 14 CFR Part 91. The private pilot and three passengers were not injured, and the airplane was substantially damaged. Visual meteorological conditions prevailed, and no flight plan had been filed. The flight originated at Oceanside, California, at 0850, and was destined for Big Bear, California.

The pilot reported that while in cruise flight he first noticed a "burning smell," which was followed a short time later by a low oil pressure indication. The pilot then felt a vibration, followed by a brief engine overspeed to 3,000 rpm, and then lost engine power. He performed a forced landing in a field 1/2 mile northeast of March ARB and collided with multiple ground obstacles.

Post accident examination of the engine by a Federal Aviation Administration (FAA) inspector at the accident site revealed that the No. 6 connecting rod had penetrated the engine crank case. An excess of engine oil was found on the bottom of the airplane. Further examination revealed an oil filter gasket, Lycoming part number LW-13388 was extruded at the base of the filter assembly. The engine accessory case and the firewall was oil soaked.

On September 5, 2000, the FAA issued emergency Airworthiness Directive (AD) 2000-18-53, which was applicable to Lycoming IO-540-K1G5D engines. That AD was prompted by reports of certain oil filter converter plate gaskets, P/N LW-13388, extruding from the seat of the oil filter converter plate. The protruding or swelling of the gasket allowed oil to leak from between the plate and accessory housing. According to the text of the AD, it was intended to prevent complete loss of engine oil and subsequent seizing of the engine and possible fire, caused by oil leakage between the converter plate and accessory housing.

The AD required the following:

1. For engines with more than 50 hours time-since-new (TSN), time-since-overhaul (TSO), or time-since-last replacement of the oil filter plate gasket, replacement of the oil filter converter plate gasket part number (P/N) LW-13388, or the converter plate kit P/N LW-13904.
2. For engines with fewer than 50 hours TSN, TSO, or time-since-last replacement of the oil filter converter plate gasket P/N LW-13388, or the converter plate kit P/N LW-13904, inspection of the oil filter base for signs of oil leakage and evidence of gasket extrusion.
3. Replacement of converter plate gasket P/N LW-13388 at intervals not to exceed 50 hours TIS since the last replacement of the gasket. The actions are required to be done in accordance with Textron Lycoming Mandatory Service Bulletin (MSB) 543A, dated August 30, 2000, and Textron Lycoming Service Instruction number 1453, dated May 9, 1991.

After emergency AD 2000-18-53 was issued, Textron Lycoming has issued a service bulletin supplement that relieves the requirements of MSB 543A and that eliminates the need for gasket replacement every 50 hours TSN, TSO, or time since the last replacement.

AD 2002-12-17, which supercedes AD 2000-18-53, was then issued by the FAA and required the following actions:

1. Before further flight after the effective date of the AD, for engines with more than 50 hours

TSN or TSO, or time-since-last replacement of the oil filter plate gasket P/N LW-13388, replacement of the oil filter converter plate gasket or the converter plate kit P/N LW-13904.

2. Within 10 hours TIS or within 3 days after the effective date of this AD, whichever occurs earlier, for engines with fewer than 50 hours TSN, TSO, or time-since-last replacement of the oil filter converter plate gasket P/N LW-13388, or the converter plate kit P/N LW-13904, inspection of the oil filter base for signs of oil leakage and evidence of gasket extrusion.

3. Replacement of the converter plate gasket P/N LW-13388 at intervals not to exceed 50 hours TIS since the last replacement of the gasket.

4. As terminating action to the repetitive gasket replacement specified in this AD, replacement of the oil filter converter plate gasket or the oil filter converter plate with a converter plate kit, in accordance with Part II and Part III of Textron Lycoming Supplement 1 to MSB 543A, dated October 4, 2000.

The investigation could find no evidence that either of the AD's were complied with.

Pilot Information

Certificate:	Private	Age:	43, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	300 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N589Q
Model/Series:	PA-32R-300	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	32R-7780492
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	05/09/2003, Annual	Certified Max Gross Wt.:	3600 lbs
Time Since Last Inspection:	38 Hours	Engines:	1 Reciprocating
Airframe Total Time:	4924 Hours at time of accident	Engine Manufacturer:	Textron Lycoming
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	IO-540-KIG5D
Registered Owner:	Airtravel Enterprises Inc.	Rated Power:	300 hp
Operator:	Michael Woodin	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	KRIV, 1535 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	0856 PST	Direction from Accident Site:	45°
Lowest Cloud Condition:	Few / 10000 ft agl	Visibility	50 Miles
Lowest Ceiling:	Broken / 20000 ft agl	Visibility (RVR):	
Wind Speed/Gusts:	Light and Variable /	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.2 inches Hg	Temperature/Dew Point:	6°C / 1°C
Precipitation and Obscuration:			
Departure Point:	Oceanside, CA (OKB)	Type of Flight Plan Filed:	None
Destination:	BIG BEAR, CA (L35)	Type of Clearance:	VFR
Departure Time:	0850 PST	Type of Airspace:	Class C

Airport Information

Airport:	March Air Reserve Base (RIV)	Runway Surface Type:	Unknown
Airport Elevation:	1535 ft	Runway Surface Condition:	Unknown
Runway Used:	NA	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced Landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	3 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	4 None	Latitude, Longitude:	33.880000, -117.258333

Administrative Information

Investigator In Charge (IIC):	GEORGE E PETTERSON	Report Date:	06/08/2005
Additional Participating Persons:	Gabe Sarano; Federal Aviation Administration; Riverside, CA		
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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