



Aviation Investigation Final Report

Location:	MONROE, Connecticut	Accident Number:	NYC99LA112
Date & Time:	May 16, 1999, 07:40 Local	Registration:	N194PA
Aircraft:	Abrams TORNADO	TITAN	Aircraft Damage: Substantial
Defining Event:		Injuries:	1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

While in cruise flight, the homebuilt airplane's engine lost total power. During the forced landing, the airplane's left wing contacted the ground and the airplane nosed over. Examination of the engine revealed that the magneto (mag) cylinder connecting rod bearing had failed. Additionally, the 2-cycle engine had been manufactured as a snowmobile engine.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The failure of the magneto (mag) cylinder bearing resulting in a total loss of power and subsequent forced landing.

Findings

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

Findings

1. (C) ENGINE ASSEMBLY, BEARING - FAILURE

Occurrence #2: FORCED LANDING
Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: NOSE OVER
Phase of Operation: EMERGENCY LANDING

Findings

2. TERRAIN CONDITION - GROUND

Factual Information

On May 16, 1999, about 0740 eastern daylight time, a homebuilt Titan Tornado, N194PA, was substantially damaged during a forced landing and collision with terrain in Monroe, Connecticut. The certificated private pilot was seriously injured. Visual meteorological conditions prevailed and no flight plan had been filed for the flight that departed the Twin Pine Airport, Pennington, New Jersey, about 0630, destined for the Waterbury-Oxford Airport, Oxford, Connecticut. The personal flight was conducted under 14 CFR Part 91.

The airplane was owned and built by the pilot.

In a written statement, the pilot said he was flying at 1,500 feet above the ground, when the airplane's engine "missed" once and then lost total power. The pilot stated the airplane was too low to attempt a restart, and he established a glide for landing.

During the forced landing, the airplane's left wing contacted the ground and the airplane nosed over.

Examination of the wreckage by a Federal Aviation Administration (FAA) Inspector, revealed metallic particles inside the engine's crankcase. The engine was retained for further examination.

The engine was reexamined on May 26, 1999, by an NTSB Investigator, the FAA Inspector, and a representative of the engine manufacturer. The examination revealed that the mag cylinder connecting rod bearing had failed. Additionally, the 2 cycle Rotax 583 engine had been manufactured as a snowmobile engine.

Pilot Information

Certificate:	Private	Age:	40, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Front
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical—no waivers/lim.	Last FAA Medical Exam:	October 19, 1998
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	1596 hours (Total, all aircraft), 450 hours (Total, this make and model), 1535 hours (Pilot In Command, all aircraft), 49 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Abrams	Registration:	N194PA
Model/Series:	TITAN TORNADO TITAN TORN	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	T93XXX60HK00
Landing Gear Type:	Tricycle	Seats:	1
Date/Type of Last Inspection:	June 17, 1998 Annual	Certified Max Gross Wt.:	900 lbs
Time Since Last Inspection:	55 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	394 Hrs	Engine Manufacturer:	Rotax
ELT:	Installed, not activated	Engine Model/Series:	583
Registered Owner:	PHILIP K. ABRAMS	Rated Power:	96 Horsepower
Operator:		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:	DXR ,458 ft msl	Distance from Accident Site:	15 Nautical Miles
Observation Time:	07:53 Local	Direction from Accident Site:	280°
Lowest Cloud Condition:	Unknown	Visibility	10 miles
Lowest Ceiling:	Broken	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	9°C / 6°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	TWIN PINES , NJ (N75)	Type of Flight Plan Filed:	None
Destination:	OXFORD , CT (OXC)	Type of Clearance:	None
Departure Time:	06:30 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC):	Schiada, Luke
Additional Participating Persons:	BOB HENNIGAN; WINDSOR LOCKS , CT GLENN SAUNDERS; VERNON
Original Publish Date:	April 19, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=46349

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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](#).