



National Transportation Safety Board Aviation Accident Final Report

Location:	Loxley, AL	Accident Number:	ERA11LA242
Date & Time:	04/11/2011, 1216 CDT	Registration:	N122AN
Aircraft:	WSK-MIELEC AN-2	Aircraft Damage:	Substantial
Defining Event:	Loss of engine power (total)	Injuries:	3 None
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

According to the pilot, during cruise flight the engine began to run rough and lose power. He heard a loud metallic sound; the engine vibrated violently and then lost power. He performed a forced landing to a farm field, and the airplane nosed over in the soft terrain, resulting in substantial damage to the wings. A postaccident inspection revealed that the crankshaft would not rotate. An internal inspection of the cylinders and spark plugs did not reveal a reason for the power loss. The oil system was examined and there were large amounts of metal particles in the oil. Due to a lack of suitable equipment and facilities, further disassembly of the engine was not attempted.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A loss of engine power due to internal failure.

Findings

Aircraft	Engine (reciprocating) - Failure (Cause)
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Factual Information

On April 11, 2011, about 1216 central daylight time, a WSK-Meilec AN-2, N122AN, was substantially damaged following a loss of engine power and forced landing near Loxley, Alabama. The certificated commercial pilot and two passengers were not injured. The airplane was registered to and operated by Vertol Systems Company, Inc. under the provisions of 14 Code of Federal Regulations Part 91, as a personal flight. Day, visual meteorological conditions prevailed and no flight plan was filed. The flight originated from Fort Walton Beach, Florida (DTL), about 1118, and was destined for De Ridder, Louisiana (DRI).

The pilot reported that, while in cruise flight at 1,000 feet above ground level, the engine began to run rough and lose power. He then heard a loud, "metal-on-metal" sound, the engine vibrated violently, and it subsequently quit completely. The airplane was force landed in a farm field and nosed over in the soft terrain.

An inspector with the Federal Aviation Administration responded to the accident site and examined the airplane and engine. Structural damage to the wings was evident. The radial engine was a WSK-PZL model ASZ-621R. The spark plugs were removed and all cylinders were inspected with a borescope. No abnormal characteristics were noted. The engine could not be rotated manually. Examination of the engine oil screens revealed an "extreme" amount of metal particles in the oil supply. Due to a lack of suitable equipment and facilities, a more detailed examination of the engine was not performed.

History of Flight

Enroute-cruise	Loss of engine power (total) (Defining event)
Emergency descent	Off-field or emergency landing
Landing-landing roll	Nose over/nose down

Pilot Information

Certificate:	Flight Instructor; Commercial	Age:	46, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	Seatbelt
Instrument Rating(s):	Airplane; Helicopter	Second Pilot Present:	No
Instructor Rating(s):	Airplane Single-engine; Helicopter; Instrument Helicopter	Toxicology Performed:	No
Medical Certification:	Class 2 Without Waivers/Limitations	Last Medical Exam:	08/30/2010
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	02/05/2010
Flight Time:	4888 hours (Total, all aircraft), 21 hours (Total, this make and model), 3812 hours (Pilot In Command, all aircraft), 68 hours (Last 90 days, all aircraft), 26 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	WSK-MIELEC	Registration:	N122AN
Model/Series:	AN-2	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Experimental	Serial Number:	1G176-31
Landing Gear Type:	Tailwheel	Seats:	4
Date/Type of Last Inspection:	09/01/2010, 100 Hour	Certified Max Gross Wt.:	12100 lbs
Time Since Last Inspection:	21 Hours	Engines:	1 Reciprocating
Airframe Total Time:	10371 Hours	Engine Manufacturer:	WSK-PZL
ELT:	Installed, not activated	Engine Model/Series:	ASZ-621R
Registered Owner:	Vertol Systems Company, Inc.	Rated Power:	1000 hp
Operator:	Vertol Systems Company, Inc.	Air Carrier Operating Certificate:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	BFM, 26 ft msl	Observation Time:	1553 CDT
Distance from Accident Site:	25 Nautical Miles	Direction from Accident Site:	270°
Lowest Cloud Condition:	Few / 1300 ft agl	Temperature/Dew Point:	26° C / 22° C
Lowest Ceiling:	Broken / 6500 ft agl	Visibility	10 Miles
Wind Speed/Gusts, Direction:	13 knots/ 21 knots, 170°	Visibility (RVR):	
Altimeter Setting:	29.95 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Ft Walton Beach, FL (DTS)	Type of Flight Plan Filed:	None
Destination:	De Ridder, LA (DRI)	Type of Clearance:	None
Departure Time:	1118 CDT	Type of Airspace:	

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	2 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 None	Latitude, Longitude:	30.584167, -87.788056 (est)

Administrative Information

Investigator In Charge (IIC): Ralph E Hicks **Adopted Date:** 11/17/2011

Additional Participating Persons: Joel Clark; FAA/FSDO; Birmingham, AL

Publish Date: 11/17/2011

Investigation Docket: <http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=78863>

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