



National Transportation Safety Board Aviation Accident Data Summary

Location:	Uvalde, TX	Accident Number:	DFW08LA223
Date & Time:	09/01/2008, 1400 CDT	Registration:	N8472V
Aircraft:	ROCKWELL INTERNATIONAL S-2R	Injuries:	1 None
Flight Conducted Under:	Part 137: Agricultural		

Analysis

The engine of the agricultural airplane lost power while it was maneuvering at low altitude. The airplane impacted thick vegetation and terrain, causing substantial damage to the right wing, nose and tail. A subsequent teardown examination of the engine showed little evidence that the engine was operating at the time of impact, but the ingestion of vegetation into the combustor and the torsional failure of the torsion shaft suggests that there was some rotation of the engine at the time of impact. The engine examination also revealed that several turbine rotors had damage and missing blade material due to short term operation of the engine at an over temperature condition. There was evidence that the rotors had been operating for several hours after the over temperature event that caused the stress rupture of the blades. Further, the examination showed that the first stage turbine rotor and the prop pitch control cam did not conform to Honeywell specifications and were not authorized replacement parts, and a previous weld repair on the engine combustor plenum did not conform to standard practices for weld repairs on aerospace parts.

Flight Events

Prior to flight - Aircraft maintenance event
Maneuvering-low-alt flying - Loss of engine power (total)
Uncontrolled descent - Collision with terr/obj (non-CFIT)

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be:
A total loss of engine power due to the improper use of unauthorized replacement parts in the engine and repeated operation of the engine in an over-temperature condition.

Findings

Aircraft-Aircraft power plant-Engine (turbine/turboprop)-Turbine section-Damaged/degraded - C
Aircraft-Aircraft power plant-Engine (turbine/turboprop)-Turbine section-Incorrect service/maintenance - C
Aircraft-Aircraft power plant-Engine (turbine/turboprop)-(general)-Failure - C
Aircraft-Aircraft handling/service-Maintenance/inspections-Return to service-Incorrect service/maintenance - C
Personnel issues-Task performance-Maintenance-Unauthorized maint/repair-Not specified - C

Pilot Information

Certificate:	Commercial	Age:	28
Airplane Rating(s):	Single-engine Land	Instrument Rating(s):	None
Other Aircraft Rating(s):	None	Instructor Rating(s):	None
Flight Time:	2300 hours (Total, all aircraft), 400 hours (Total, this make and model), 2220 hours (Pilot In Command, all aircraft), 400 hours (Last 90 days, all aircraft), 150 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	ROCKWELL INTERNATIONAL	Registration:	N8472V
Model/Series:	S-2R	Engines:	1 Turbo Prop
Operator:	LINDEMAN, RUSTY	Engine Manufacturer:	Honeywell Garrett
Air Carrier Operating Certificate:	None	Engine Model/Series:	TPE 331-1-151
Flight Conducted Under:	Part 137: Agricultural		

Meteorological Information and Flight Plan

Observation Facility, Elevation:	KUVA, 942 ft msl	Weather Information Source:	Weather Observation Facility
Conditions at Accident Site:	Visual Conditions	Lowest Ceiling:	None
Condition of Light:	Day	Wind Speed/Gusts, Direction:	Calm
Temperature:	34°C / 19°C	Visibility:	10 Miles
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	D'Hanis, TX (4TS8)	Destination:	D'Hanis, TX (4TS8)

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None

Administrative Information

Investigator In Charge (IIC):	Thomas Latson	Adopted Date:	05/06/2010
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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