



# National Transportation Safety Board Aviation Accident Data Summary

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<b>Location:</b>	Marana, AZ	<b>Accident Number:</b>	SEA08LA149
<b>Date &amp; Time:</b>	06/01/2008, 0816 MST	<b>Registration:</b>	N62JV
<b>Aircraft:</b>	Van Heeswyk Lightning	<b>Injuries:</b>	1 Fatal
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

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## Analysis

While maneuvering adjacent to a private airstrip at a low altitude, witnesses reported observing the propeller assembly separate from the airplane. The pilot maneuvered towards the airstrip and leveled out on runway heading about mid-length of the runway. As the airplane crossed over the end of the runway, it banked to the left and descended into terrain, impacting an open desert field adjacent to several residential homes. Examination of the airplane revealed that the airframe and both wings were structurally damaged. The propeller assembly, including the propeller flange extension were found separated from the engine crankshaft. No further anomalies were noted with the airframe and engine that would have precluded normal operation. The attachment bolts were installed on a painted surface of the propeller flange extension. The paint surrounding this area was flaking away from the surface. Evidence of thread locking material was observed in the threaded areas consistent with installation instructions. Examination of the attachment bolts revealed that four of the six bolts exhibited fracture surfaces consistent with fatigue. One of the four bolts exhibited a multifaceted fracture surface with multiple origins around the circumference. Hardness of this bolt was checked and found to be within the specified hardness range.

## Flight Events

Maneuvering - Part(s) separation from AC  
Emergency descent - Part(s) separation from AC  
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:  
The insufficient clamping force resulting in a fatigue fracture of the propeller extension attachment bolts and subsequent separation of the propeller assembly in flight. Contributing to the accident was the pilot's failure to maintain sufficient airspeed to avoid an inadvertent stall while maneuvering during the emergency approach to the airport.

## Findings

Aircraft-Aircraft oper/perf/capability-Performance/control parameters-(general)-Not attained/maintained - F  
Aircraft-Aircraft propeller/rotor-Propeller system-(general)-Fatigue/wear/corrosion - C

## Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	62
<b>Airplane Rating(s):</b>	Single-engine Land	<b>Instrument Rating(s):</b>	None
<b>Other Aircraft Rating(s):</b>	None	<b>Instructor Rating(s):</b>	None
<b>Flight Time:</b>	640 hours (Total, all aircraft), 10 hours (Total, this make and model), 5 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Manufacturer:</b>	Van Heeswyk	<b>Registration:</b>	N62JV
<b>Model/Series:</b>	Lightning	<b>Engines:</b>	Reciprocating
<b>Operator:</b>	On file	<b>Engine Manufacturer:</b>	Jabaru
<b>Air Carrier Operating Certificate:</b>	None	<b>Engine Model/Series:</b>	3300
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

## Meteorological Information and Flight Plan

<b>Observation Facility, Elevation:</b>	KTUS, 2643 ft msl	<b>Weather Information Source:</b>	Weather Observation Facility
<b>Conditions at Accident Site:</b>	Visual Conditions	<b>Lowest Ceiling:</b>	None
<b>Condition of Light:</b>	Day	<b>Wind Speed/Gusts, Direction:</b>	6 knots, 150°
<b>Temperature:</b>	24° C / -8° C	<b>Visibility</b>	10 Miles
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Tucson, AZ (KRYN)	<b>Destination:</b>	

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Fatal	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	N/A	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Joshua Cawthra	<b>Adopted Date:</b>	12/08/2008
<b>Investigation Docket:</b>	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 <a href="mailto:pubinq@ntsb.gov">pubinq@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

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