



# Aviation Investigation Final Report

<b>Location:</b>	Algona, Iowa	<b>Accident Number:</b>	CHI04LA187
<b>Date &amp; Time:</b>	July 2, 2004, 17:15 Local	<b>Registration:</b>	N3248T
<b>Aircraft:</b>	Beech A36	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	4 None
<b>Flight Conducted Under:</b>	Part 91: General aviation		

## Analysis

The airplane was substantially damaged during a forced landing on a road. The pilot reported that while in level flight the engine "blew up." He executed a forced landing on a road and elected to delay lowering of the landing gear until the airplane had cleared a car that was traveling in the opposite direction. Once clear of the car, the pilot lowered the landing gear, but it did not fully extend due to the low altitude. Examination of the engine revealed a hole in the crankcase adjacent to the number 6 connecting rod journal. Additionally, the number 6 connecting rod and piston were found fractured. No determination could be made regarding the failure of the connecting rod.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The failure of the connecting rod which resulted in the loss of engine power during cruise flight and subsequent forced landing. A contributing factor was the delayed lowering of the landing gear in order to clear the other vehicle encountered during the forced landing.

## Findings

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

### Findings

1. (C) ENGINE ASSEMBLY,CONNECTING ROD - FAILURE,TOTAL

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Occurrence #2: FORCED LANDING  
Phase of Operation: EMERGENCY DESCENT/LANDING  
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Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: EMERGENCY DESCENT/LANDING

Findings

2. (F) OBJECT - VEHICLE
3. (F) GEAR EXTENSION - DELAYED - PILOT IN COMMAND
4. TERRAIN CONDITION - ROADWAY/HIGHWAY

## Factual Information

On July 2, 2004, about 1715 central daylight time, a Beech model A36, N3248T, piloted by a commercial pilot, was substantially damaged as a result of a forced landing following a loss of engine power and subsequent in-flight fire. The 14 CFR Part 91 business flight was operating in visual meteorological conditions without a flight plan. No injuries were reported. The flight originated from the Mason City Municipal Airport, Mason City, Iowa, at 1630, and was bound for the Joe Foss Field Airport, Sioux Falls, South Dakota.

The pilot reported that about 15 minutes into the flight, while level at 4,500 feet mean sea level, the airplane engine "blew up." The pilot stated that he executed a forced landing on a road. He stated that he kept the landing gear retracted to insure that he could clear a car that was traveling in the opposite direction. The pilot stated that once clear of the car he lowered the landing gear, but due to the low altitude, the landing gear did not fully extend before contact with the road occurred.

Examination of the engine revealed a hole in the top of the crankcase near the number 5 and 6 cylinders. The hole in the crankcase was aligned with the number 6 connecting rod journal. All of the engine accessories remained intact and attached to the engine.

Fractured pieces of the number 6 connecting rod, piston and piston pin were found within the crankcase. The fractured piston exhibited signatures consistent with overload failure. The fracture surfaces of the connecting rod were smeared and no determination could be made concerning the fracture surfaces.

The number 5 piston was lodged within its cylinder. The connecting rod remained attached to the piston. The connecting rod cap was separated from the connecting rod. The fracture surfaces were smeared and no determination could be made concerning the fracture surfaces.

Examination of the main bearings and the connecting rod bearings of the undamaged connecting rods revealed no evidence of oil starvation.

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	60, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 With waivers/limitations	<b>Last FAA Medical Exam:</b>	March 1, 2004
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	April 1, 2004
<b>Flight Time:</b>	6933 hours (Total, all aircraft), 5868 hours (Total, this make and model), 6834 hours (Pilot In Command, all aircraft), 194 hours (Last 90 days, all aircraft), 67 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Beech	<b>Registration:</b>	N3248T
<b>Model/Series:</b>	A36	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	E-2948
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	6
<b>Date/Type of Last Inspection:</b>	February 1, 2004 Annual	<b>Certified Max Gross Wt.:</b>	3600 lbs
<b>Time Since Last Inspection:</b>	274 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	2334 Hrs at time of accident	<b>Engine Manufacturer:</b>	Continental
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	IO-550B6F
<b>Registered Owner:</b>	Broin Enterprise, Inc.	<b>Rated Power:</b>	300 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	KAXA,1219 ft msl	<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>	17:15 Local	<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Scattered / 2800 ft AGL	<b>Visibility</b>	3 miles
<b>Lowest Ceiling:</b>	Broken / 6500 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	4 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	200°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29.92 inches Hg	<b>Temperature/Dew Point:</b>	22°C / 19°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	MASON CITY, IA (MCW )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	SIOUX FALLS, SD (FSD )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	22:00 Local	<b>Type of Airspace:</b>	

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	3 None	<b>Aircraft Fire:</b>	In-flight
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	4 None	<b>Latitude, Longitude:</b>	43.070915,-94.229621(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Brannen, John
<b>Additional Participating Persons:</b>	Don Land; FAA; Des Moines, IA Eddie Weber; Raytheon; Wichita, KS Terry Horton; Teledyne Continental Motors; Mobile, AL
<b>Original Publish Date:</b>	July 31, 2006
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=59653">https://data.nts.gov/Docket?ProjectID=59653</a>

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