



## National Transportation Safety Board Aviation Accident Factual Report

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<b>Location:</b>	Kingman, AZ	<b>Accident Number:</b>	LAX02LA147
<b>Date &amp; Time:</b>	05/01/2002, 1858 PDT	<b>Registration:</b>	N90802
<b>Aircraft:</b>	Air Tractor AT-802A	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 None

**Flight Conducted Under:** Part 91: General Aviation - Positioning

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On May 1, 2000, at 1858 Pacific daylight time, an Air Tractor AT-802A, N90802, main landing gear collapsed during landing roll at the Kingman, Arizona, airport. The airline transport certificated pilot, the sole occupant, was not injured. The airplane was substantially damaged. The flight departed from Eagle Airpark, Bullhead City, Arizona, about 1840. The repositioning flight of the agricultural application aircraft was operated under 14 CFR Part 91 by Eagle Aviation. Visual meteorological conditions prevailed and no flight plan was filed.

The pilot told an inspector from the Federal Aviation Administration (Las Vegas, Nevada) Flight Standards District Office (FSDO) that the landing gear strut collapsed unexpectedly, and without warning, during the landing roll, and the airplane ground looped to the right. It was not subjected to an abnormal load during landing and the airplane was relatively light with no chemical load aboard and about 1,300 pounds of fuel.

The inspector examined the airplane and said the left landing gear leaf broke inside the saddle. There was rust and beach marks in the fracture face indicative of a pre-existing crack. The model year 2000 airplane had about 1,100 hours total flying time and had recently received a 100-hour maintenance inspection; however, the inspector said the area where the crack occurred was difficult to inspect.

The FSDO inspector said the left landing gear strut, a single spring steel leaf, separated in the shoulder area where the strut enters the saddle at the fuselage skin line. The left landing gear wheel was broken in the outboard flange area and the tire was deflated. The tire exhibited deep radial scratch marks on the outboard side wall. The aileron hinge bracket at the left wing tip was bent inboard and striations on the left wing lower surface were oriented spanwise. The left wing outer half-span was bent upward accompanied by compression wrinkling of the upper wing skin.

Examination of the fracture by a metallurgical laboratory revealed that the strut met the manufacturer's chemical, hardness, and materials specifications for the component. The fracture through the strut was characterized by two distinct modes. The first was 0.08 inches in depth and 0.37 inches in width and exhibited features consistent with fatigue. The fatigue

crack had multiple initiation sites along the top surface in an area that had fretting damage. The remainder of the fracture face displayed gross overload features. According to the laboratory report, the transverse failure of the strut resulted from an overload condition, with high side and drag loads, well in excess of the design ultimate load for the component. The complete metallurgical report is in the docket for this accident.

## Pilot Information

<b>Certificate:</b>	Airline Transport; Commercial	<b>Age:</b>	56, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Single
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane; Helicopter	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2	<b>Last FAA Medical Exam:</b>	01/01/2002
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	05/01/2001
<b>Flight Time:</b>	30000 hours (Total, all aircraft), 200 hours (Total, this make and model), 28000 hours (Pilot In Command, all aircraft), 95 hours (Last 90 days, all aircraft), 40 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Air Tractor	<b>Registration:</b>	N90802
<b>Model/Series:</b>	AT-802A	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Restricted	<b>Serial Number:</b>	92
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	1
<b>Date/Type of Last Inspection:</b>	03/01/2002, Annual	<b>Certified Max Gross Wt.:</b>	9200 lbs
<b>Time Since Last Inspection:</b>	33 Hours	<b>Engines:</b>	1 Turbo Prop
<b>Airframe Total Time:</b>	1107 Hours	<b>Engine Manufacturer:</b>	Pratt & Whitney Canada
<b>ELT:</b>		<b>Engine Model/Series:</b>	PT6-65
<b>Registered Owner:</b>	William R. Dare	<b>Rated Power:</b>	750 hp
<b>Operator:</b>	William R. Dare	<b>Operating Certificate(s) Held:</b>	
<b>Operator Does Business As:</b>	Eagle Aviation	<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	IGM, 3449 ft msl	Distance from Accident Site:	
Observation Time:	1856 MST	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	10 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	220°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.82 inches Hg	Temperature/Dew Point:	17° C / -9° C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Bullhead City, AZ (A09)	Type of Flight Plan Filed:	None
Destination:	Kingman, AZ (IGM)	Type of Clearance:	None
Departure Time:	1840 PDT	Type of Airspace:	

## Airport Information

Airport:	Kingman (IGM)	Runway Surface Type:	Asphalt
Airport Elevation:	3449 ft	Runway Surface Condition:	Dry
Runway Used:	21	IFR Approach:	None
Runway Length/Width:	6831 ft / 150 ft	VFR Approach/Landing:	Full Stop

## 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
Total Injuries:	1 None	Latitude, Longitude:	35.265833, -113.941111

## Administrative Information

Investigator In Charge (IIC):	RICHARD B PARKER
Additional Participating Persons:	Frank Vavra; Federal Aviation Administration; Las Vegas, NV T Hirsch; Air Tractor, Inc.; Olney, TX
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 <a href="mailto:pubin@ntsb.gov">pubin@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> .