



# Aviation Investigation Final Report

<b>Location:</b>	WINDOW ROCK, Arizona	<b>Accident Number:</b>	LAX87DUJ07
<b>Date &amp; Time:</b>	July 5, 1987, 09:30 Local	<b>Registration:</b>	N68WK
<b>Aircraft:</b>	KIESEL MIDGET MUSTANG	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 Minor
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

THE AIRCRAFT LOST POWER SHORTLY AFTER TAKEOFF AND COLLIDED WITH A DIRT BANK DURING THE SUBSEQUENT FORCED LANDING. ENGINE EXAMINATION REVEALED AN OPEN INTAKE VALVE ON THE NUMBER 4 CYLINDER AND THE PILOT STATED A 'BENT AND CRACKED CRANKSHAFT FROM A PRIOR ACCIDENT' WAS DISCOVERED DURING THE ENGINE EXAMINATION. THE ENGINE MANUFACTURER STATED THAT AN OPEN INTAKE VALVE COULD INDUCE SIGNIFICANT POWER LOSS BY ALLOWING EXHAUST GASSES TO PRESSURIZE THE INTAKE MANIFOLD, THEREBY ALTERING THE FUEL/AIR MIXTURE. THE MAINTENANCE RECORDS ESTABLISHED THAT THE AIRCRAFT HAD FLOWN ONLY NINE HOURS SINCE THE LAST CONDITION INSPECTION.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

### Findings

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

#### Findings

- (C) ENGINE ASSEMBLY, VALVE, INTAKE - OPEN

2. (C) MAINTENANCE, INSPECTION - IMPROPER - OTHER MAINTENANCE PERSONNEL

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Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

Findings

3. (F) TERRAIN CONDITION - NONE SUITABLE

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Occurrence #3: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

4. (F) TERRAIN CONDITION - DIRT BANK/RISING EMBANKMENT

## Factual Information

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	40, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Front
<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>	Airplane single-engine	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	February 17, 1987
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	1517 hours (Total, all aircraft), 8 hours (Total, this make and model), 1398 hours (Pilot In Command, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	KIESEL	<b>Registration:</b>	N68WK
<b>Model/Series:</b>	MIDGET MUSTANG MIDGET MUS	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	Yes
<b>Airworthiness Certificate:</b>	Experimental (Special)	<b>Serial Number:</b>	711
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	1
<b>Date/Type of Last Inspection:</b>	June 29, 1987 Annual	<b>Certified Max Gross Wt.:</b>	937 lbs
<b>Time Since Last Inspection:</b>	9 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	O-235-C
<b>Registered Owner:</b>	JOHN W HUTCHISON	<b>Rated Power:</b>	115 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	GUI ,6469 ft msl	<b>Distance from Accident Site:</b>	20 Nautical Miles
<b>Observation Time:</b>	09:00 Local	<b>Direction from Accident Site:</b>	125°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	50 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	/	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	240°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	20°C / -6°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	(P34 )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	(P34 )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	09:20 Local	<b>Type of Airspace:</b>	Airport advisory area

## Airport Information

<b>Airport:</b>	WINDOW ROCK P34	<b>Runway Surface Type:</b>	Macadam
<b>Airport Elevation:</b>	6737 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	2	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	7000 ft / 80 ft	<b>VFR Approach/Landing:</b>	Touch and go;Traffic pattern

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Minor	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Minor	<b>Latitude, Longitude:</b>	35.689697,-108.97998(est)

## Administrative Information

**Investigator In Charge (IIC):** Newberry, Earl

**Additional Participating Persons:**

**Original Publish Date:** April 24, 1989

**Last Revision Date:**

**Investigation Class:** [Class](#)

**Note:**

**Investigation Docket:** <https://data.nts.gov/Docket?ProjectID=25311>

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