



# Aviation Investigation Final Report

<b>Location:</b>	WHEATLEY, Arkansas	<b>Accident Number:</b>	FTW94LA281
<b>Date &amp; Time:</b>	August 27, 1994, 10:30 Local	<b>Registration:</b>	N148RA
<b>Aircraft:</b>	WSK PZL MIELEC DROMADER	M-18A	<b>Aircraft Damage:</b> Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 137: Agricultural		

## Analysis

FOLLOWING A TOTAL LOSS OF ENGINE POWER, A FORCED LANDING WAS MADE TO A BEAN FIELD. DURING THE LANDING ROLL, THE BEAN PLANTS PILED UP IN FRONT OF THE WHEEL AND THE AIRPLANE NOSED OVER TO THE INVERTED POSITION. STRUCTURAL DAMAGE OCCURRED TO THE LEFT WING, HORIZONTAL STABILIZER, AND RUDDER. AN INSPECTION DISCLOSED THAT THE # 5 CYLINDER HEAD WAS CRACKED. CAUSE OF THE CRACK WAS UNDETERMINED.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: TOTAL LOSS OF ENGINE POWER DUE TO A CRACKED CYLINDER. A FACTOR WAS THE LACK OF SUITABLE TERRAIN FOR THE FORCED LANDING.

## Findings

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

### Findings

1. (C) ENGINE ASSEMBLY,CYLINDER - CRACKED

Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY  
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Occurrence #3: NOSE OVER  
Phase of Operation: LANDING - ROLL

Findings

2. (F) TERRAIN CONDITION - NONE SUITABLE
3. TERRAIN CONDITION - CROP

## Factual Information

On August 27, 1994, at 1030 central daylight time, a Mielec M-18A Dromader, was substantially damaged while maneuvering near Wheatley, Arkansas. The commercial pilot was not injured. Visual meteorological conditions prevailed for the aerial application flight.

The pilot reported that while applying sodium chlorate to a rice field the engine lost power. During the landing roll in a bean field the plants piled up in front of the wheels and the airplane nosed over to the inverted position. Structural damaged occurred to the left wing, horizontal stabilizer, and rudder.

Examination of the engine by a Federal Aviation Administration (FAA) inspector disclosed that the number 5 cylinder head was cracked. The cause of the crack was not determined.

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	41, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Center
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	May 2, 1994
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	2113 hours (Total, all aircraft), 1044 hours (Total, this make and model), 2113 hours (Pilot In Command, all aircraft), 498 hours (Last 90 days, all aircraft), 200 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	WSK PZL MIELEC	<b>Registration:</b>	N148RA
<b>Model/Series:</b>	M-18A DROMADER M-18A DROM	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Restricted (Special)	<b>Serial Number:</b>	12013-21
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	1
<b>Date/Type of Last Inspection:</b>	March 10, 1994 100 hour	<b>Certified Max Gross Wt.:</b>	9260 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	PZL-WARSZANA
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	ASZ-621R-M18
<b>Registered Owner:</b>	IVES BROTHERS, INC	<b>Rated Power:</b>	986 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	VXVG

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>		<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>		<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Scattered / 4000 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	5 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	140°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	27°C / 21°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>		<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	10:15 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>		<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>		<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	Forced landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<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 None	<b>Latitude, Longitude:</b>	34.909149,-91.100936(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Wigington, Douglas
<b>Additional Participating Persons:</b>	BYRON H GLASS; LITTLE ROCK , AR
<b>Original Publish Date:</b>	February 24, 1995
<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=19148">https://data.nts.gov/Docket?ProjectID=19148</a>

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