



# Aviation Investigation Final Report

<b>Location:</b>	ANCHORAGE, Alaska	<b>Incident Number:</b>	ANC911A046
<b>Date &amp; Time:</b>	March 27, 1991, 16:23 Local	<b>Registration:</b>	N173RV
<b>Aircraft:</b>	NIHON                      YS-11A-600	<b>Aircraft Damage:</b>	Minor
<b>Defining Event:</b>		<b>Injuries:</b>	4 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Instructional		

## Analysis

THE CREW OF FOUR WERE ON A TRAINING FLIGHT AND WERE PREPARING TO PERFORM APPROACH TO LANDING STALLS. DURING THE MANEUVER, THEY NOTICED THE NOSE GEAR WOULD NOT EXTEND. UNABLE TO EXTEND THE NOSE GEAR, THEY LANDED WITH THE NOSE GEAR UP CAUSING MINOR DAMAGE TO THE AIRPLANE. SUBSEQUENT EXAMINATION REVEALED THAT THE RIVETS WHICH RETAIN THE CENTERING CAM SHEAR PINS WERE SHEARED. THE SHEAR PINS WERE NOT SHEARED. AN EXAMINATION BY MITSUBISHI HEAVY INDUSTRIES, NAGOYA AIRPLANE WORKS, INDICATED THAT THE SHEAR PINS MAY HAVE BEEN INSTALLED IN REVERSE. THE OVERHAUL MANUAL ALSO CONTAINED AMBIGUOUS INFORMATION CONCERNING THE INFORMATION. THE GRAPHICAL DISPLAY SHOWED THE INSTALLATION INCORRECTLY, BUT THE TEXT EXPLAINED THE INSTALLATION CORRECTLY.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this incident to be: A JAMMED NOSE GEAR DUE TO INCORRECT INSTALLATION OF THE SHEAR PIN. CONTRIBUTING TO THE ACCIDENT WAS THE INSUFFICIENTLY DEFINED MAINTENANCE PROCEDURE.

## Findings

Occurrence #1: GEAR NOT EXTENDED  
Phase of Operation: LANDING

#### Findings

1. (C) LANDING GEAR,NOSE GEAR ASSEMBLY - JAMMED
2. (C) MAINTENANCE,MAJOR REPAIR - IMPROPER - COMPANY MAINTENANCE PERSONNEL
3. (F) CONDITION(S)/STEP(S) INSUFFICIENTLY DEFINED - MANUFACTURER

## Factual Information

### Pilot Information

<b>Certificate:</b>	Airline transport; Commercial; Flight instructor; Private	<b>Age:</b>	42, Male
<b>Airplane Rating(s):</b>	Single-engine land; Single-engine sea; Multi-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>	Yes
<b>Instructor Rating(s):</b>	Airplane single-engine	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	January 3, 1991
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	12000 hours (Total, all aircraft), 4694 hours (Total, this make and model), 2788 hours (Pilot In Command, all aircraft), 125 hours (Last 90 days, all aircraft), 39 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	NIHON	<b>Registration:</b>	N173RV
<b>Model/Series:</b>	YS-11A-600 YS-11A-600	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Transport	<b>Serial Number:</b>	2173
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	3
<b>Date/Type of Last Inspection:</b>	January 27, 1991 Continuous airworthiness	<b>Certified Max Gross Wt.:</b>	55110 lbs
<b>Time Since Last Inspection:</b>	126 Hrs	<b>Engines:</b>	2 Turbo prop
<b>Airframe Total Time:</b>	19730 Hrs	<b>Engine Manufacturer:</b>	Rolls-Royce
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	542-10K
<b>Registered Owner:</b>	REEVE ALEUTIAN AIRWAYS, INC.	<b>Rated Power:</b>	2775 Horsepower
<b>Operator:</b>	REEVE ALEUTIAN AIRWAYS, INC.	<b>Operating Certificate(s) Held:</b>	Flag carrier (121), On-demand air taxi (135)
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	RAAA

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	ANC ,144 ft msl	<b>Distance from Accident Site:</b>	1 Nautical Miles
<b>Observation Time:</b>	16:23 Local	<b>Direction from Accident Site:</b>	40°
<b>Lowest Cloud Condition:</b>	Scattered / 2500 ft AGL	<b>Visibility</b>	1 miles
<b>Lowest Ceiling:</b>	Overcast / 4000 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	7 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	60°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29 inches Hg	<b>Temperature/Dew Point:</b>	3°C / -1°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>		<b>Type of Flight Plan Filed:</b>	IFR
<b>Destination:</b>		<b>Type of Clearance:</b>	VFR
<b>Departure Time:</b>	13:12 Local	<b>Type of Airspace:</b>	Class D;Class E

## Airport Information

<b>Airport:</b>	ANCHORAGE ANC	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	144 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	6	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	10600 ft / 150 ft	<b>VFR Approach/Landing:</b>	Full stop

## Wreckage and Impact Information

<b>Crew Injuries:</b>	4 None	<b>Aircraft Damage:</b>	Minor
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	4 None	<b>Latitude, Longitude:</b>	61.160049,-149.99028(est)

## Administrative Information

**Investigator In Charge (IIC):** Kobelnyk, George

**Additional Participating Persons:** NONE;

**Original Publish Date:** May 5, 1993

**Last Revision Date:**

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

**Note:**

**Investigation Docket:** <https://data.ntsb.gov/Docket?ProjectID=5497>

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