



National Transportation Safety Board Aviation Accident Final Report

Location:	VAN NUYS, CA	Accident Number:	LAX95LA232
Date & Time:	07/01/1995, 0750 PDT	Registration:	N444RJ
Aircraft:	CESSNA 401A	Aircraft Damage:	Substantial
Defining Event:		Injuries:	5 None

Flight Conducted Under: Part 91: General Aviation - Personal

Analysis

THE AIRCRAFT WAS MAKING A RIGHT-HAND TURN IN THE RUN-UP AREA AT A SLOW SPEED WHEN THE LEFT MAIN LANDING GEAR COLLAPSED. THE SIDE BRACE FOR THE MAIN LANDING GEAR IS ATTACHED TO A CASTING, WHICH IN TURN IS BOLTED TO THE INBOARD WING RIB IN THE LANDING GEAR WHEEL WELL. EXAMINATION REVEALED THAT THE WING RIB WEB CRACKED AROUND THE CASTING, WHICH ALLOWED THE SIDE BRACE TO MOVE AND THE LANDING GEAR TO COLLAPSE. PORTIONS OF THE CRACK APPEARED DISCOLORED AND OLD. REVIEW OF THE AIRCRAFT MAINTENANCE RECORDS REVEALED NO HISTORY OF LANDING GEAR DAMAGE OR HARD LANDING RELATED MAINTENANCE ACTIVITY. THE AIRCRAFT WAS LAST INSPECTED DURING AN ANNUAL INSPECTION 7 MONTHS AND 60 FLIGHT HOURS PRIOR TO THE ACCIDENT. CESSNA AIRCRAFT COMPANY REPORTED THAT IN RESPONSE TO CRACKS FOUND ON THE INBOARD WING RIB WEB AROUND THE SIDE BRACE FITTING, SERVICE LETTER ME76-2 WAS ISSUED ON JANUARY 5, 1976. THE LETTER DETAILS THE INSTALLATION OF A STEEL REINFORCEMENT/DOUBLER PLATE ON THE WING RIB WEB BEHIND THE LANDING GEAR SIDE BRACE FITTING. INSPECTION OF THE AIRCRAFT REVEALED THAT SERVICE LETTER ME76-2 WAS NOT ACCOMPLISHED.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the failure of the wing rib web due to undetected cracking in an area of known crack development around the landing gear side brace fitting. The operator's failure to accomplish a Service Letter addressing the problem is a factor in the accident.

Findings

Occurrence #1: GEAR COLLAPSED

Phase of Operation: TAXI - TO TAKEOFF

Findings

1. (C) WING, WING RIB - CRACKED
2. (F) MAINTENANCE, SERVICE BULLETIN/LETTER - NOT COMPLIED WITH - COMPANY/OPERATOR MANAGEMENT
3. LANDING GEAR, MAIN GEAR - COLLAPSED

Factual Information

On July 1, 1995, at 0750 hours Pacific daylight time, a Cessna 401A, N444RJ, sustained a left main landing gear collapse while taxiing for departure at Van Nuys, California. The aircraft was owned and operated by the pilot, and was beginning a cross-country flight to Cabo San Lucas, Mexico. Visual meteorological conditions prevailed at the time. The aircraft incurred substantial damage to the left wing, left wing tip fuel tank, and the associated engine and propeller. Neither the certificated private pilot nor his four passengers were injured.

According to the pilot's statement and witness observations, the aircraft was making a right-hand turn in the run-up area at a slow speed when the left main landing gear collapsed.

The side brace for the main landing gear is attached to a casting, which in turn is bolted to the inboard wing rib in the landing gear wheel well. Examination of the aircraft by an FAA airworthiness inspector revealed that the wing rib web cracked around the casting, which allowed the side brace to move and the landing gear to collapse. The inspector reported that portions of the crack appeared discolored and old.

Review of the aircraft maintenance records revealed no history of landing gear damage or hard landing related maintenance activity. The aircraft was last inspected during an annual inspection 7 months and 60 flight hours prior to the accident.

Cessna Aircraft Company was contacted for information regarding known wing rib web failures. Cessna stated that there are no known total landing gear collapse incidents due to cracks in the wing rib web. The company reported that in response to cracks found on the inboard wing rib web around the side brace fitting, Service Letter ME76-2 was issued on January 5, 1976. The letter details the installation of a steel reinforcement/doubler plate on the wing rib web behind the landing gear side brace fitting.

Inspection of the aircraft revealed that Service Letter ME76-2 was not accomplished.

Pilot Information

Certificate:	Private	Age:	61, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	06/08/1994
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	1774 hours (Total, all aircraft), 1423 hours (Pilot In Command, all aircraft), 47 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	Registration:	N444RJ
Model/Series:	401A 401A	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	401A0017
Landing Gear Type:	Retractable - Tricycle	Seats:	7
Date/Type of Last Inspection:	11/01/1994, Annual	Certified Max Gross Wt.:	6300 lbs
Time Since Last Inspection:	60 Hours	Engines:	2 Reciprocating
Airframe Total Time:	3700 Hours	Engine Manufacturer:	CONTINENTAL
ELT:	Installed, not activated	Engine Model/Series:	TSIO-520E
Registered Owner:	EDWARD J. LOVELOCK	Rated Power:	300 hp
Operator:	EDWARD J. LOVELOCK	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	VNY, 799 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	0750 PDT	Direction from Accident Site:	0°
Lowest Cloud Condition:	Scattered / 900 ft agl	Visibility	3 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	Calm /	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	20° C
Precipitation and Obscuration:			
Departure Point:	(VNY)	Type of Flight Plan Filed:	VFR
Destination:	CABO SAN LUCAS, MX (MMSB)	Type of Clearance:	None
Departure Time:	0000	Type of Airspace:	

Airport Information

Airport:	VAN NUYS (VNY)	Runway Surface Type:	Asphalt
Airport Elevation:	799 ft	Runway Surface Condition:	Dry
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	4 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	5 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	JEFF RICH	Report Date:	01/29/1996
Additional Participating Persons:	STEVE GRIMES; VAN NUYS, CA		
Publish Date:			
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 pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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