



National Transportation Safety Board Aviation Accident Final Report

Location:	COALINGA, CA	Accident Number:	LAX00LA112
Date & Time:	03/01/2000, 1600 PST	Registration:	N8170S
Aircraft:	Piper PA-32R-301T	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None

Flight Conducted Under: Part 91: General Aviation - Personal

Analysis

The landing gear collapsed during a precautionary landing following a complete electrical system failure. The airplane experienced a complete electrical failure during cruise. The pilot decided to make a precautionary landing and diverted to an alternate airport. He shut down all electrical items when he became aware of the electrical system failure. As he neared the alternate airport, he slowed the airplane down to the normal gear extension speed, lowered the gear with the automatic switch, and felt the landing gear extend. He stated that because there were no landing gear lights illuminated he could not verify that the landing gear was in the locked position. He then conducted the emergency gear extension checklist, and noted that his airspeed and power were consistent with what he associated with the landing gear being in the down position. Touchdown was normal, but on the landing rollout, the nose and left main landing gear collapsed and the left wing struck a taxi light. Prior to exiting the airplane, the pilot shutoff the master switch. During the recovery of the airplane, it was raised on jacks and the landing gear was extended with no discrepancies noted. During repair work on the airplane, a landing gear extension/retraction test was conducted, with no system anomalies noted. The inspection of the airplane was unable to determine the cause of the electrical failure.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The failure of the landing gear for undetermined reasons to go into the locked position after the pilot conducted a manual and emergency gear extension. A factor in the accident was the undetermined failure of the electrical system.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: CRUISE - NORMAL

Findings

1. ELECTRICAL SYSTEM - FAILURE, TOTAL
 2. REASON FOR OCCURRENCE UNDETERMINED
 3. LANDING GEAR, EMERGENCY EXTENSION ASSEMBLY - MALFUNCTION
 4. (C) REASON FOR OCCURRENCE UNDETERMINED
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Occurrence #2: GEAR COLLAPSED
Phase of Operation: LANDING - ROLL

Findings

5. LANDING GEAR, GEAR INDICATING SYSTEM - INOPERATIVE
 6. GEAR DOWN AND LOCKED - INFORMATION INSUFFICIENT - PILOT IN COMMAND
 7. LANDING GEAR, NOSE GEAR - UNLOCKED
 8. LANDING GEAR, MAIN GEAR - UNLOCKED
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Occurrence #3: ON GROUND/WATER COLLISION WITH OBJECT
Phase of Operation: LANDING - ROLL

Findings

9. OBJECT - RUNWAY LIGHT

Factual Information

On March 1, 2000, at 1600 hours Pacific standard time, a Piper PA-32R-301T, N8170S, lost electrical power and made a precautionary landing at the Harris Ranch airport, Coalinga, California. The airplane, owned and operated under 14 CFR Part 91 by the pilot, sustained substantial damage after the gear collapsed and the left wing impacted a runway light as it veered off runway 32. The private pilot, the sole occupant, was not injured. Visual meteorological conditions existed for the personal flight and no flight plan was filed. The flight had departed from the Santa Maria, California, airport at 1500, and was scheduled to terminate at the Fresno-Yosemite International Airport, Fresno, California, on the day of the accident.

In a telephone interview with an investigator from the Safety Board, the pilot indicated that the airplane had been dropped off in Santa Maria in December 1999 to receive a new interior and paint job. The purpose of the flight was to return the airplane back to its home base in Fresno. The pilot stated that he conducted a thorough preflight. There were no discrepancies noted with the run-up, and all of the engine gages were in the green, including the electrical system. After takeoff and a climb to 10,500 feet, he engaged the autopilot. The pilot reported that the airplane pitched up and he disengaged the autopilot. He made an unsuccessful attempt to re-engage the autopilot, and simultaneously heard crackling over the speaker, which he noted was not selected on the audio panel. He stated that Los Angeles Center reported to him that they had lost his transponder code on radar, and that he had exited their coverage area, but to remain on the current transponder code. The pilot reported that the ammeter was now indicating zero. He attempted to contact Los Angeles Center; however, the radio transmission was fuzzy, like he had lost contact. According to the radio communications transcript provided by Los Angeles Air Route Traffic Control Center, radio and radar contact was lost at 1528.

The pilot reported that he shut all electrical items down and decided to make a precautionary landing at Harris Ranch. Prior to lowering the landing gear, he slowed the airplane down to 125 knots. Then he lowered the gear normally with the automatic switch, and felt the gear go down. He stated that because of the electrical failure, there were no landing gear indicator lights. He conducted the emergency landing gear extension checklist, which included slowing the airplane down to 92 knots, engaging the emergency manual gear extension handle, and fishtailing the airplane to get the landing gear down and in a locked position.

Approximately 10 miles from Harris Ranch, the pilot noted that his airspeed and power were consistent with what he historically associated with the gear being in the down position. After entering the airport environment, he checked the windsock and determined that runway 32 was in use. He stated that the touchdown was normal, but on the landing rollout, the nose gear collapsed. The pilot reported that the propeller was still spinning, and contacted the runway. After the nose section impacted the runway, the left main landing gear collapsed and the airplane started to veer off the left side of the runway where the left wing subsequently struck a runway light. Prior to exiting the airplane, the pilot stated that he shut off the master switch and the fuel.

The airplane was retrieved by Fresno Jet Center. The maintenance technician who performed the work stated that the airplane was raised on jacks to extend the landing gear to remove it from the runway. He said that the right main landing gear was already in the down and locked position. As the airplane was raised, the left main landing gear extended and locked, but the nose landing gear would not extend. He then went inside the cockpit to relieve the system

pressure on the emergency gear extension lever to assist in getting the nose gear to come down and lock in position.

Fresno Jet Center maintenance shop repaired the airplane. During the repairs, the nose landing gear spring mechanism was inspected and found to be within manufacturer's limits. A landing gear extension/retraction functional test was also conducted, with no discrepancies noted.

According to the airplane manufacturer's Pilot Operating Handbook (POH), the landing gear system is a retractable tricycle landing gear that is hydraulically actuated by an electrically powered reversible pump. In the emergency landing gear extension section, it states that if electrical power is lost, the landing gear extension lights will not illuminate, and the pilot has to follow the emergency gear extension procedures to ensure that the landing gear is in the down and locked position.

A Federal Aviation Administration (FAA) inspector from the Fresno, California, Flight Standards District Office examined the airplane. He stated that a cause could not be determined for the electrical failure.

A law enforcement officer, who later responded to the airplane accident call, stated that he was traveling southbound on Interstate 5, about 1554, when he observed an airplane, which he later identified as the accident airplane, flying in the opposite direction. He stated that the landing gear was lowered and the airplane was in level flight.

Pilot Information

Certificate:	Private	Age:	42, Male
Airplane Rating(s):	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--no waivers/lim.	Last FAA Medical Exam:	12/06/1999
Occupational Pilot:	Last Flight Review or Equivalent:		
Flight Time:	692 hours (Total, all aircraft), 400 hours (Total, this make and model), 641 hours (Pilot In Command, all aircraft), 5 hours (Last 90 days, all aircraft), 1 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N8170S
Model/Series:	PA-32R-301T PA-32R-301	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	32R-8029067
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	05/28/1999, Annual	Certified Max Gross Wt.:	3600 lbs
Time Since Last Inspection:	44 Hours	Engines:	1 Reciprocating
Airframe Total Time:	2191 Hours	Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	TIO-540-5IAD
Registered Owner:	NORTHERN CENTRAL DISTRIBUTION	Rated Power:	300 hp
Operator:	NORTHERN CENTRAL DISTRIBUTION	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	FAT, 336 ft msl	Distance from Accident Site:	45 Nautical Miles
Observation Time:	1556 PDT	Direction from Accident Site:	210°
Lowest Cloud Condition:	Scattered / 4500 ft agl	Visibility	10 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	140°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	14° C / 5° C
Precipitation and Obscuration:			
Departure Point:	SANTA MARIA, CA (SMX)	Type of Flight Plan Filed:	None
Destination:	FRESNO, CA (FAT)	Type of Clearance:	None
Departure Time:	1500 PDT	Type of Airspace:	Class E

Airport Information

Airport:	HARRIS RANCH (308)	Runway Surface Type:	Asphalt
Airport Elevation:	470 ft	Runway Surface Condition:	Dry
Runway Used:	32	IFR Approach:	None
Runway Length/Width:	2820 ft / 50 ft	VFR Approach/Landing:	Precautionary Landing; Traffic Pattern

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:	

Administrative Information

Investigator In Charge (IIC):	TEALEYE C CORNEJO	Report Date:	06/25/2003
Additional Participating Persons:	GREG SCHMIDT; FRESNO, 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 pubinquiry@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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