



National Transportation Safety Board

Aviation Accident Data Summary

Location:	Honolulu, HI	Accident Number:	LAX05LA221
Date & Time:	07/01/2005, 1059 HST	Registration:	N3369P
Aircraft:	Piper PA-23-160	Injuries:	2 None
Flight Conducted Under:	Part 91: General Aviation - Instructional		

Analysis

The airplane veered off the runway and collided with a taxiway light during a single engine landing, and the landing gear collapsed. The left engine could not be restarted following a practice shutdown and feather. Because the hydraulic pump is located on the left engine, the certified flight instructor was aware that the landing gear would have to be manually extended. They elected to return to the departure airport while the private pilot undergoing instruction flew an instrument landing system approach. The private pilot positioned the landing gear lever in the down position and pulled out the gear pump. The instructor did not verify the landing gear lever's position and pumped the handle about 10 to 20 times but was not successful in getting a down-and-locked indication in the landing gear lights, nor did the landing gear selector handle return to the neutral position. The instructor continued troubleshooting the airplane; however, the gear down-and-locked lights did not illuminate on any of the gear. The air traffic control tower (ATCT) gave the airplane an instruction to conduct a 360-degree right turn at 500 feet above ground level (agl). Prior to the entry into the turn, the instructor was considering the use of the Emergency Gear Extender; however, upon entry into the turn, control of the airplane demanded his full attention. As they rolled out from the turn, the instructor asked the controller to confirm that the landing gear appeared to be down. They replied affirmatively and the instructor took complete control of the airplane. Just prior to the airplane's entry into the flare, someone blind transmitted over the radio that the nose gear did not appear down. The instructor then applied power and the airplane rolled to the left and then impacted the ground. According to the Piper Apache owner's handbook, the hydraulic pump is located on the left engine. In the event of a power loss on the left engine, the hydraulic pump is rendered unusable. In order to obtain hydraulic pressure in the event of a hydraulic pump failure or left engine failure, the emergency pump handle should be extended and 30 to 40 pumps are required to raise or lower the landing gear. Upon full extension or retraction, the pump handle will position itself back into the neutral position. In the event of a hydraulic system failure caused by a line breakage or a selector valve malfunctioning, the gear can be extended using the Emergency Gear Extender. When this control is pulled, carbon dioxide flows from a cylinder under the floorboards and assists in extending the gear. The Emergency Gear Extender control is located beneath a small cover plate underneath the left pilot's seat. Post accident examination of the airplane and landing gear system showed that the landing gear lever was positioned close to the neutral position, rather than in the down position. The emergency landing gear system was actuated through the hand pump and extended into the down-and-locked position with no operational anomalies noted.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the flight crew's failure to ensure that the landing gear lever was in the full down position prior to utilizing the hand pump, and the certified flight instructor's failure to utilize the blow down emergency landing gear system. The instructor's inadequate supervision of the flight and failure to maintain Vmc during an attempted go-around was also causal.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION

Phase of Operation: CRUISE

Findings

1. HYDRAULIC SYSTEM,PUMP - INOPERATIVE
 2. LANDING GEAR,NORMAL RETRACTION/EXTENSION ASSEMBLY - INOPERATIVE
 3. (C) PROCEDURES/DIRECTIVES - NOT FOLLOWED - PILOT IN COMMAND(CFI)
 4. (C) EMERGENCY PROCEDURE - IMPROPER USE OF - PILOT IN COMMAND(CFI)
 5. (C) SUPERVISION - INADEQUATE - PILOT IN COMMAND(CFI)
-

Occurrence #2: LOSS OF CONTROL - IN FLIGHT

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

6. (C) AIRSPEED(VMC) - NOT MAINTAINED - PILOT IN COMMAND(CFI)
 7. (C) DIRECTIONAL CONTROL - NOT MAINTAINED - PILOT IN COMMAND(CFI)
-

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

8. TERRAIN CONDITION - GROUND

Flight Instructor Information

Certificate:	Airline Transport; Flight Instructor; Commercial	Age:	32
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	Airplane Multi-engine; Airplane Single-engine; Instrument Airplane
Flight Time:	2750 hours (Total, all aircraft), 260 hours (Total, this make and model), 2640 hours (Pilot In Command, all aircraft), 180 hours (Last 90 days, all aircraft), 43 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Student Pilot Information

Certificate:	Private	Age:	24
Airplane Rating(s):	Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	None
Flight Time:	289 hours (Total, all aircraft), 49 hours (Total, this make and model), 195 hours (Pilot In Command, all aircraft), 12 hours (Last 90 days, all aircraft), 4 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	Piper	Registration:	N3369P
Model/Series:	PA-23-160	Engines:	2 Reciprocating
Operator:	Peter Miller	Engine Manufacturer:	Lycoming
Air Carrier Operating Certificate:	None	Engine Model/Series:	O-320
Flight Conducted Under:	Part 91: General Aviation - Instructional		

Meteorological Information and Flight Plan

Observation Facility, Elevation:	HNL, 13 ft msl	Weather Information Source:	Weather Observation Facility
Conditions at Accident Site:	Visual Conditions	Lowest Ceiling:	None
Condition of Light:	Day	Wind Speed/Gusts, Direction:	13 knots, 70°
Temperature:	29° C / 18° C	Visibility	10 Miles
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Honolulu, HI (HNL)	Destination:	(HNL)

Airport Information

Airport:	Honolulu International (HNL)	Runway Surface Type:	Asphalt
Runway Used:	4R	Runway Surface Condition:	Dry
Runway Length/Width:	9000 ft / 150 ft		

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None

Administrative Information

Investigator In Charge (IIC):	Kristi Dunks	Adopted Date:	05/30/2006
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/ .		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report.