



Aviation Investigation Final Report

Location:	Scottsdale, Arizona	Accident Number:	LAX05CA177
Date & Time:	May 17, 2005, 14:10 Local	Registration:	N4162K
Aircraft:	Piper PA-34-220T	Aircraft Damage:	Substantial
Defining Event:		Injuries:	3 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

During the takeoff roll portion of a touch-and-go, the pilot receiving instruction inadvertently operated the landing gear handle instead of the flap handle. As the airplane continued to roll, the left main and the nose gear retracted. The certified flight instructor stated that he "grabbed the handle immediately when he saw the student retract it," but evidently it was too late. During the post accident airplane examination, no mechanical failures or malfunctions were found with the landing gear system. The instructor reported that they experienced no mechanical failures or malfunctions during the flight.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the student pilot's inadvertent retraction of the landing gear, and the flight instructor's inadequate supervision of the flight.

Findings

Occurrence #1: GEAR RETRACTION ON GROUND

Phase of Operation: TAKEOFF - ROLL/RUN

Findings

1. TERRAIN CONDITION - RUNWAY
2. (C) GEAR RETRACTION - INADVERTENT ACTIVATION - DUAL STUDENT
3. (C) SUPERVISION - INADEQUATE - PILOT IN COMMAND(CFI)

Factual Information

On May 17, 2005, about 1410 mountain standard time, a Piper PA-34-220T, N4162K, had an inadvertent gear retraction during the takeoff roll portion of a touch-and-go landing. The accident occurred at the Scottsdale Airport, in Scottsdale Arizona. Sabena Airline Training, Scottsdale, was operating the airplane under the provisions of 14 CFR Part 91. The certified flight instructor (CFI), the private pilot undergoing instruction (PUI), and the private pilot rated passenger were not injured. The airplane sustained substantial damage. Visual meteorological conditions prevailed. No flight plan had been filed for the instructional flight that originated from Phoenix about 1315.

The CFI stated to the National Transportation Safety Board investigator that during the landing portion of a planned touch-and-go, he instructed the PUI to retract the flaps. However, the PUI operated the landing gear handle instead of the flap handle. The CFI stated that he "grabbed the handle immediately when he saw the student retract it." As the airplane continued to roll, the left main gear and the nose gear retracted. The airplane came to rest between the taxiway and runway. The CFI reported that no mechanical failures or malfunctions were experienced during the flight.

The airplane's landing gear warning horn and squat switch were functionally tested under the supervision of a Federal Aviation Administration aviation safety inspector. No anomalies were found.

Flight instructor Information

Certificate:	Commercial; Flight instructor	Age:	47, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):		Toxicology Performed:	No
Medical Certification:	Class 1 With waivers/limitations	Last FAA Medical Exam:	September 1, 2004
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	1601 hours (Total, all aircraft), 13 hours (Total, this make and model), 166 hours (Last 90 days, all aircraft), 25 hours (Last 30 days, all aircraft)		

Student pilot Information

Certificate:	Private	Age:	21, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):		Toxicology Performed:	No
Medical Certification:	Class 1	Last FAA Medical Exam:	March 1, 2005
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	175 hours (Total, all aircraft), 3 hours (Total, this make and model), 60 hours (Last 90 days, all aircraft), 60 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N4162K
Model/Series:	PA-34-220T	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	3449097
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:		Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	2 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	TS10-360RB
Registered Owner:	Sabena Airline Training Center	Rated Power:	220 Horsepower
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	B4VS

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KSDL	Distance from Accident Site:	
Observation Time:	13:53 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	6 knots / 17 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.63 inches Hg	Temperature/Dew Point:	30°C / 2°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Phoenix, AZ (IWA)	Type of Flight Plan Filed:	None
Destination:	Scottsdale , AZ (SDL)	Type of Clearance:	None
Departure Time:	13:15 Local	Type of Airspace:	

Airport Information

Airport:	Scottsdale Airport SDL	Runway Surface Type:	Asphalt
Airport Elevation:		Runway Surface Condition:	Dry
Runway Used:	21	IFR Approach:	None
Runway Length/Width:	8249 ft / 100 ft	VFR Approach/Landing:	Touch and go;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 None	Latitude, Longitude:	33.622776,-111.910552

Administrative Information

Investigator In Charge (IIC):	Pollack, Wayne
Additional Participating Persons:	Jack Major; Federal Aviation Administration; Scottsdale, AZ
Original Publish Date:	September 13, 2005
Last Revision Date:	
Investigation Class:	Class
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=61551

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