



National Transportation Safety Board Aviation Accident Final Report

Location:	Manhattan, KS	Accident Number:	GAA16CA364
Date & Time:	07/01/2016, 1000 CST	Registration:	N5100V
Aircraft:	CESSNA 172RG	Aircraft Damage:	Substantial
Defining Event:	Landing gear not configured	Injuries:	2 None
Flight Conducted Under:	Part 91: General Aviation - Instructional		

Analysis

The pilot reported that he was receiving instruction in an airplane with retractable landing gear. He further reported that during landing, the airplane touched down and began sliding on the concrete runway, and he "knew something was wrong".

The flight instructor reported that he was the pilot in command of the airplane and that on final both pilots were on the controls. He further reported that he realized there was an issue when he heard metal on pavement.

The airplane impacted the runway with its landing gear retracted, causing substantial damage to the fuselage and bulkhead.

The pilot receiving instruction reported that there were no pre impact mechanical failures or malfunctions with the airframe or engine that would have precluded normal operation. There was a post-accident landing gear aural warning horn check/test conducted, with no maintenance issues found.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The flight instructor and pilot receiving instruction's omission to use an appropriate checklist and extend the landing gear prior to landing, which resulted in substantial damage to the aircraft's fuselage and bulkhead.

Findings

Aircraft	Gear extension and retract sys - Not used/operated (Cause)
Personnel issues	Use of checklist - Student pilot (Cause)
	Use of checklist - Instructor/check pilot (Cause)
	Forgotten action/omission - Student pilot (Cause)
	Forgotten action/omission - Instructor/check pilot (Cause)
	Monitoring other person - Instructor/check pilot
	Use of equip/system - Student pilot
	Task monitoring/vigilance - Instructor/check pilot

Factual Information

History of Flight

Landing	Miscellaneous/other Landing gear not configured (Defining event) Abnormal runway contact
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Student Pilot Information

Certificate:	Private	Age:	35, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Without Waivers/Limitations	Last Medical Exam:	02/28/2013
Occupational Pilot:	No	Last Flight Review or Equivalent:	04/04/2016
Flight Time:	(Estimated) 450 hours (Total, all aircraft), 2 hours (Total, this make and model), 450 hours (Pilot In Command, all aircraft), 15 hours (Last 90 days, all aircraft), 5 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Flight Instructor Information

Certificate:	Flight Instructor; Commercial	Age:	32, Male
Airplane Rating(s):	Multi-engine Sea; Single-engine Land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane Multi-engine; Airplane Single-engine	Toxicology Performed:	No
Medical Certification:	Class 1 With Waivers/Limitations	Last Medical Exam:	04/16/2014
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	07/28/2016
Flight Time:	(Estimated) 350 hours (Total, all aircraft), 20 hours (Total, this make and model), 243 hours (Pilot In Command, all aircraft), 90 hours (Last 90 days, all aircraft), 50 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	CESSNA	Registration:	N5100V
Model/Series:	172RG NO SERIES	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	172RG0450
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	05/04/2016, Annual	Certified Max Gross Wt.:	2650 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	9529.3 Hours	Engine Manufacturer:	LYCOMING
ELT:	Installed, not activated	Engine Model/Series:	O-360-F1A6
Registered Owner:	On file	Rated Power:	180 hp
Operator:	On file	Air Carrier Operating Certificate:	None

Meteorological Information and Flight Plan

Observation Facility, Elevation:	KMHK, 1056 ft msl	Observation Time:	1452 UTC
Distance from Accident Site:	1 Nautical Miles	Condition of Light:	Day
Direction from Accident Site:	228°	Conditions at Accident Site:	Visual Conditions
Lowest Cloud Condition:	Clear	Temperature/Dew Point:	24° C / 16° C
Lowest Ceiling:	None	Visibility	10 Miles
Wind Speed/Gusts, Direction:	8 knots, 70°	Visibility (RVR):	
Altimeter Setting:	30.14 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Manhattan, KS (MHK)	Type of Flight Plan Filed:	None
Destination:	Manhattan, KS (MHK)	Type of Clearance:	None
Departure Time:	0955 CST	Type of Airspace:	Class D

Airport Information

Airport:	MANHATTAN RGNL (MHK)	Runway Surface Type:	Concrete
Airport Elevation:	1066 ft	Runway Surface Condition:	Dry
Runway Used:	03	IFR Approach:	None
Runway Length/Width:	7000 ft / 150 ft	VFR Approach/Landing:	Traffic Pattern

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
Total Injuries:	2 None		

Administrative Information

Investigator In Charge (IIC):	Eric A Swenson	Adopted Date:	08/31/2016
Additional Participating Persons:	Rick Terrell; FAA; Wichita, KS		
Publish Date:	08/31/2016		
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.		
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=93573		

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