National Transportation Safety Board
Aviation Accident Final Report

Location:	Mojave, CA	**Accident Number:**	WPR09LA108
Date & Time:	02/04/2009, 0852 PST	**Registration:**	N834TP
Aircraft:	DOUGLAS DC-3/65AR	**Aircraft Damage:**	Substantial
Defining Event:	Loss of control on ground	**Injuries:**	2 None
Flight Conducted Under:	Part 91: General Aviation - Instructional		

Analysis

During the takeoff roll, the airplane began to drift to the right. Despite the certified flight instructor's and student's attempts, they were unable to stop the yaw and drift. As the airplane was about to depart the runway, the pilots did not reduce the throttles or apply brakes as they felt that it would be safer to attempt to get airborne. After departing the runway surface, the airplane collided with a series of berms, which sheared off the left landing gear and left engine. The right landing gear collapsed, and the airplane came to rest in a nose down attitude. Post accident examination revealed that the student pilot had inadvertently set the rudder trim to the full right position when he adjusted the rudder pedals during the prestart checks. The rudder trim was in the full right position for the takeoff, and found in the same position upon post accident inspection.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The student pilot failed to follow the checklist and set the takeoff trim properly prior to takeoff resulting in a loss of directional control. Contributing to the accident were the certified flight instructor's inadequate supervision and delayed remedial action.

Findings

Aircraft	Rudder tab control system - Incorrect use/operation (Cause) Directional control - Not attained/maintained (Cause)
Personnel issues	Use of checklist - Student pilot (Cause) Monitoring other person - Instructor/check pilot (Factor) Delayed action - Instructor/check pilot (Factor) Use of equip/info - Student pilot (Cause)
Environmental issues	Rough terrain - Contributed to outcome

Factual Information

On February 4, 2009, about 0852 Pacific standard time, a Douglas DC-3/65AR, N834TP, collided with terrain during takeoff at Mojave, California. The National Test Pilot School was operating the airplane under the provisions of 14 Code of Federal Regulations (CFR) Part 91. The certified flight instructor (CFI) and the student pilot were not injured; the airplane sustained substantial damage to the fuselage and wings from impact forces. The local instructional flight was departing. Visual meteorological conditions prevailed, and no flight plan had been filed.

The operator reported that the student pilot was performing the takeoff. During the takeoff roll, the airplane began to drift to the right, and the student applied left rudder to correct for the drift. The CFI advanced the right throttle during the ground roll in an attempt to counteract the right yaw. The tail wheel came off the ground about 80 knots, and the airplane swerved to the right. The CFI applied left rudder in an attempt to stop the yaw and drift. As the airplane was about to depart the runway, the pilots did not reduce the throttles or apply brakes as they felt that it would be safer to attempt to get airborne.

The airplane slowed as it departed the runway surface. It collided with a series of berms, which sheared off the left landing gear and left engine. The right landing gear collapsed, and the airplane came to rest in a nose down attitude.

The operator stated that the student pilot inadvertently set the rudder trim to the full right position when he adjusted the rudder pedals during the prestart checks. The rudder trim was in the full right position for the takeoff, and found in the same position upon post accident inspection.

History of Flight

Prior to flight	Preflight or dispatch event
Takeoff	Loss of control on ground (Defining event)
	Runway excursion

Flight Instructor Information

Certificate:	Flight Instructor; Commercial	**Age:**	73, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	**Seat Occupied:**	Right
Other Aircraft Rating(s):	Glider; Helicopter	**Restraint Used:**	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	Airplane Multi-engine; Airplane Single-engine	**Toxicology Performed:**	No
Medical Certification:	Class 2 With Waivers/Limitations	**Last Medical Exam:**	11/25/2008
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	10/13/2008
Flight Time:	18000 hours (Total, all aircraft), 1326 hours (Total, this make and model), 16000 hours (Pilot In Command, all aircraft), 50 hours (Last 90 days, all aircraft), 16 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Student Pilot Information

Certificate:	Foreign	**Age:**	33, Male
Airplane Rating(s):	None	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	Seatbelt, Shoulder harness
Instrument Rating(s):	None	**Second Pilot Present:**	Yes
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 2 Without Waivers/Limitations	**Last Medical Exam:**	09/30/2008
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:	1100 hours (Total, all aircraft), 900 hours (Pilot In Command, all aircraft), 17 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	DOUGLAS	**Registration:**	N834TP
Model/Series:	DC-3/65AR	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	No
Airworthiness Certificate:	Experimental	**Serial Number:**	12590
Landing Gear Type:	Retractable - Tailwheel	**Seats:**	4
Date/Type of Last Inspection:	01/21/2009, Annual	**Certified Max Gross Wt.:**	29000 lbs
Time Since Last Inspection:	2 Hours	**Engines:**	2 Turbo Prop
Airframe Total Time:	17277 Hours	**Engine Manufacturer:**	Pratt&Whitney
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	PT6A-65AR
Registered Owner:	National Test Pilot School	**Rated Power:**	1300 hp
Operator:	National Test Pilot School	**Air Carrier Operating Certificate:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	**Condition of Light:**	Day
Observation Facility, Elevation:	MHV, 2798 ft msl	**Observation Time:**	0850 PST
Distance from Accident Site:		**Direction from Accident Site:**	
Lowest Cloud Condition:	Few / 12000 ft agl	**Temperature/Dew Point:**	12°C / -5°C
Lowest Ceiling:	None	**Visibility**	40 Miles
Wind Speed/Gusts, Direction:	3 knots, Variable	**Visibility (RVR):**	
Altimeter Setting:	30.15 inches Hg	**Visibility (RVV):**	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Mojave, CA (MHV)	**Type of Flight Plan Filed:**	None
Destination:	Mojave, CA (MHV)	**Type of Clearance:**	VFR
Departure Time:	0852 PDT	**Type of Airspace:**	

Airport Information

Airport:	Mojave (MHV)	**Runway Surface Type:**	Asphalt; Concrete
Airport Elevation:	2798 ft	**Runway Surface Condition:**	Dry
Runway Used:	30	**IFR Approach:**	None
Runway Length/Width:	12500 ft / 200 ft	**VFR Approach/Landing:**	None

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	**Latitude, Longitude:**	35.058611, -118.150556 (est)

Administrative Information

Investigator In Charge (IIC):	Howard D Plagens	**Adopted Date:**	05/12/2009
Additional Participating Persons:	Jim Ford; Federal Aviation Administration; Van Nuys, CA		
Publish Date:	05/12/2009		
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.ntsb.gov/pubdms/.		