Aviation Investigation Final Report

Location:	DENTON, Texas	**Accident Number:**	FTW99LA088
Date & Time:	March 1, 1999, 15:15 Local	**Registration:**	N92350
Aircraft:	Piper J3C-65	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 Minor, 1 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The airplane impacted terrain during a forced landing following a total loss of engine power on takeoff. The airline transport pilot receiving instruction was on the controls of the airplane for the takeoff. At an altitude of approximately 100 feet, the engine lost power, and the certified flight instructor took control. The flight instructor turned the airplane left to avoid a steel rail fence at the end of the runway. During the turn, the left wing tip struck the ground, and the airplane turned 180 degrees and came to rest. A mechanic, who examined the airplane, attributed the loss of engine power to a broken throttle control cable clamp. The broken clamp was made of aluminum; however, a steel clamp was specified by the airframe manufacturer.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The total loss of engine power on takeoff resulting from the failure of an incorrect throttle control cable clamp, which was installed by an unknown person. A factor was the lack of suitable terrain for the forced landing.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings
1. (C) MISCELLANEOUS,BOLT/NUT/FASTENER/CLAMP/SPRING - INCORRECT

2. (C) MAINTENANCE,INSTALLATION - IMPROPER - UNKNOWN
3. (C) MISCELLANEOUS,BOLT/NUT/FASTENER/CLAMP/SPRING - FAILURE,TOTAL
4. THROTTLE/POWER LEVER,CABLE - INOPERATIVE

Occurrence #2: FORCED LANDING
Phase of Operation: EMERGENCY LANDING AFTER TAKEOFF

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: EMERGENCY LANDING

Findings
5. (F) TERRAIN CONDITION - NONE SUITABLE
6. MANEUVER TO AVOID OBSTRUCTIONS - PERFORMED - PILOT IN COMMAND

Factual Information

On March 1, 1999, at 1515 central standard time, a Piper J3C-65 airplane, N92350, sustained substantial damage during a forced landing following a loss of engine power on takeoff from Hartlee Field Airport near Denton, Texas. The airplane was registered to and operated by a private individual. The flight instructor sustained minor injuries, and the airline transport pilot receiving instruction was not injured. Visual meteorological conditions prevailed, and a flight plan was not filed for the 14 Code of Federal Regulations Part 91 instructional flight.

The flight instructor reported that the "check out" flight departed Lakeview Airport, Lake Dallas, Texas, about 1440 and proceeded to Hartlee Field. Following a full stop landing, with the pilot receiving instruction on the controls, a takeoff was initiated to the north. According to the flight instructor, "at approximately 100 feet the engine power completely disappeared." The flight instructor took control and turned the airplane approximately 45 degrees left to avoid a steel rail fence at the end of the runway. While the airplane was in the turn, the left wing tip struck the ground. The airplane turned 180 degrees and came to rest heading south approximately 50 feet from the wing touchdown point and 150 feet west of the runway centerline. An FAA inspector examined the airplane and reported that the left wing, main landing gear, propeller, engine, and firewall were damaged.

A mechanic examined the airplane and found "the throttle control cable housing free, due to a broken attaching clamp." The mechanic reported that the broken clamp was made of aluminum; however, a steel clamp, Piper P/N 7536, "should have been used." The mechanic further reported that "the clamp appeared to have been fretting for some time, due to the appearance of the edges, but the main break looked fresh." He did not think the impact broke the clamp, "because when [he] held the cable assembly in its proper place, it was relaxed, with no strain, even though the airframe was bent in that area." The mechanic found no other anomalies during his examination of the airplane.

Pilot Information

Certificate:	Airline transport; Commercial; Flight instructor	**Age:**	47,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Front
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	**Toxicology Performed:**	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	August 10, 1998
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	7848 hours (Total, all aircraft), 500 hours (Total, this make and model), 4500 hours (Pilot In Command, all aircraft), 280 hours (Last 90 days, all aircraft), 100 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N92350
Model/Series:	J3C-65 J3C-65	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	16807
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	December 31, 1998 100 hour	**Certified Max Gross Wt.:**	1170 lbs
Time Since Last Inspection:	57 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	3414 Hrs	**Engine Manufacturer:**	Continental
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	A-65-8
Registered Owner:	ARTHUR J. KIPLING	**Rated Power:**	65 Horsepower
Operator:		**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:		**Distance from Accident Site:**	
Observation Time:		**Direction from Accident Site:**	
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	1 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	90°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:		**Temperature/Dew Point:**	18°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(1F3)	**Type of Flight Plan Filed:**	None
Destination:	LAKE DALLAS , TX (30F)	**Type of Clearance:**	None
Departure Time:	15:15 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	HARTLEE FIELD 1F3	**Runway Surface Type:**	Grass/turf
Airport Elevation:	600 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	35	**IFR Approach:**	
Runway Length/Width:	2100 ft / 100 ft	**VFR Approach/Landing:**	

Wreckage and Impact Information

Crew Injuries:	1 Minor, 1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Minor, 1 None	**Latitude, Longitude:**	33.209823,-97.060668(est)

Administrative Information

Investigator In Charge (IIC):	Snyder, Georgia
Additional Participating Persons:	MARK A WILBORN; FORT WORTH , TX
Original Publish Date:	September 7, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=45817