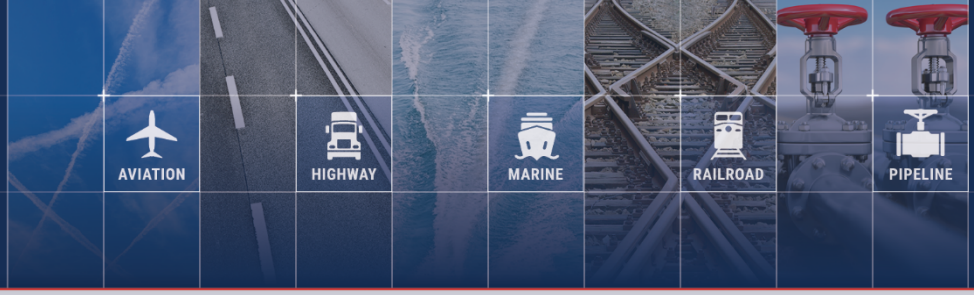

Aviation Investigation Final Report

Location:	HUTCHINSON, Kansas	**Accident Number:**	CHI98LA112
Date & Time:	March 31, 1998, 14:44 Local	**Registration:**	N3020L
Aircraft:	Cessna 310J	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

A flight instructor (CFI) and dual student were practicing an aborted takeoff following a simulated loss of power in the right engine. The student had been briefed regarding the procedure, and he was told that the right engine would be the one with the simulated power loss. The CFI reported that during takeoff at 50 mph, he simulated loss of power in the right engine by reducing the mixture for that engine. The CFI said that the student 'appeared to initiate the correct aborted takeoff procedure by retarding the throttles to idle....' After completing the simulated loss of power and aborted takeoff, the CFI re-advanced the right mixture control. He said the right engine 'caught' (surged with power), and the airplane then veered off the left side of the runway and into soft grass, where the nose gear collapsed. The CFI discovered after the accident that the student had not retarded the right throttle during the aborted takeoff.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the flight instructor's inadequate supervision by failing to ensure that the right throttle had been retarded before re-advancing the right mixture control, which resulted in a loss of directional control, an encounter with soft terrain, and damage to the nose gear. A related factor was that the student improperly performed the aborted takeoff procedure by failing to retard both throttles.

Findings

Occurrence #1: LOSS OF CONTROL - ON GROUND/WATER
Phase of Operation: TAKEOFF - ABORTED

Findings
1. ENGINE SHUTDOWN - SIMULATED - PILOT IN COMMAND(CFI)
2. (F) EMERGENCY PROCEDURE - IMPROPER - DUAL STUDENT
3. (C) SUPERVISION - INADEQUATE - PILOT IN COMMAND(CFI)
4. (C) THROTTLE/POWER CONTROL - NOT VERIFIED - PILOT IN COMMAND(CFI)
5. (C) DIRECTIONAL CONTROL - NOT MAINTAINED
6. GROUND LOOP/SWERVE

Occurrence #2: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
Phase of Operation: TAKEOFF - ABORTED

Findings
7. (F) TERRAIN CONDITION - SOFT

Occurrence #3: NOSE GEAR COLLAPSED
Phase of Operation: TAKEOFF - ABORTED

Findings
8. LANDING GEAR,NOSE GEAR - OVERLOAD

Factual Information

On March 31, 1998, at 1444 central standard time, a Cessna 310J, N3020L, received substantial damage following a loss of directional control during a planned aborted takeoff on runway 31 (7,001'x100') at the Hutchinson Municipal Airport, Hutchinson, Kansas. The instructional flight was being operated under 14 CFR Part 91. Neither the certified flight instructor (CFI) or the airline transport rated pilot (student) were injured. Visual meteorological conditions prevailed and no flight plan was filed. The flight was originating at the time of the accident.

The CFI reported that they had planned to practice an aborted takeoff following a simulated failure of the right engine. He reported that the student was briefed on the procedure and was told which engine would be "failed." The CFI reported that the student initiated the takeoff, and at an airspeed of approximately 50 mph, the CFI pulled back the mixture on the right engine to simulate the engine failure. He continued to report, "[the student] appeared to initiate the correct aborted takeoff procedure by retarding the throttles to idle...." The CFI reported that when he saw the airplane tracking correctly he advanced the mixture for the right engine at which time the right engine "caught" veering the airplane off the left side of the runway. The CFI reported that he was unaware that the student had not reduced the throttle setting for the right engine during the aborted takeoff procedure.

The airplane traveled into a soft grass area where the nose gear collapsed, damaging the firewall, and the airplane slid to a stop.

Pilot Information

Certificate:	Commercial; Flight instructor	**Age:**	37,Male
Airplane Rating(s):	Single-engine land; Multi-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; Instrument airplane	**Toxicology Performed:**	No
Medical Certification:	Class 1 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	December 22, 1998
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	1885 hours (Total, all aircraft), 15 hours (Total, this make and model), 1436 hours (Pilot In Command, all aircraft), 133 hours (Last 90 days, all aircraft), 22 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N3020L
Model/Series:	310J 310J	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	310J-0020
Landing Gear Type:	Retractable - Tricycle	**Seats:**	6
Date/Type of Last Inspection:	Annual	**Certified Max Gross Wt.:**	5100 lbs
Time Since Last Inspection:		**Engines:**	2 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	Continental
ELT:		**Engine Model/Series:**	IO-470
Registered Owner:	CLIFTON D. LANE	**Rated Power:**	240 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:	HUT ,1542 ft msl	**Distance from Accident Site:**	
Observation Time:	14:49 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Unknown	**Visibility**	10 miles
Lowest Ceiling:	Broken / 4200 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	12 knots / 24 knots	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	320°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	7°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(HUT)	**Type of Flight Plan Filed:**	None
Destination:	(HUT)	**Type of Clearance:**	VFR
Departure Time:	14:44 Local	**Type of Airspace:**	Class D

Airport Information

Airport:	HUTCHINSON MUNICIPAL HUT	**Runway Surface Type:**	Asphalt
Airport Elevation:	1542 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	31	**IFR Approach:**	None
Runway Length/Width:	7001 ft / 100 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	2 None	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 None	**Latitude, Longitude:**	38.059139,-97.910774(est)

Administrative Information

Investigator In Charge (IIC):	Sullivan, Pamela
Additional Participating Persons:	DAN BUERKI; WICHITA , KS
Original Publish Date:	October 30, 1998
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=10842