Aviation Investigation Final Report

Location:	Simsbury, Connecticut	**Accident Number:**	NYC01LA170
Date & Time:	July 12, 2001, 07:45 Local	**Registration:**	N4418U
Aircraft:	Taylorcraft F21B	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

According to the CFI, the private pilot was executing touch and go's on runway 03. During the third landing, after touchdown, the airplane's tailwheel began to "chatter." The airplane started to veer to the right and did not respond to left rudder or brake inputs by the CFI, who had taken over the controls. The airplane then departed the right side of the runway and nosed over. Examination of the airplane revealed that the high and low frequency anti-shimmy compression springs on the tailwheel assembly "had slack." The "slack" allowed for about 2 inches of rudder movement before the compression springs became effective. Review of the airplane's maintenance records revealed that it had seven annual inspections performed after the installation of the tailwheel assembly. The most recent annual inspection was conducted about four months prior to the accident, and the airplane had accumulated about 15 hours of operation since. According to FAA regulations, Appendix D of Part 43, Scope And Detail Of Items To Be Included In Annual And 100-Hour Inspections, each person performing an annual or 100-hour inspection shall inspect all units of the landing gear group for poor condition and insecurity of attachment. The winds reported at a nearby airport, about the time of the accident, were from 320 degrees at 10 knots.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

This report was modified on 2/24/2016. Refer to the public docket for this accident for additional details.

a loose tail wheel assembly and the failure of maintenance personnel to adequately follow annual inspection procedures. A factor in the accident was the crosswind.

Findings

Occurrence #1: LOSS OF CONTROL - ON GROUND/WATER
Phase of Operation: LANDING - ROLL

Findings
1. (C) LANDING GEAR,TAILWHEEL ASSEMBLY - LOOSE
2. (F) WEATHER CONDITION - CROSSWIND
3. (C) MAINTENANCE,ANNUAL INSPECTION - INADEQUATE - OTHER MAINTENANCE PERSONNEL

Occurrence #2: NOSE OVER
Phase of Operation: LANDING - ROLL

Factual Information

On July 12, 2001, about 0745 eastern daylight time, a Taylorcraft F21B, N4418U, was substantially damaged while landing at the Simsbury Airport, Simsbury, Connecticut. The certificated flight instructor (CFI) and private pilot were not injured. Visual meteorological conditions prevailed and no flight plan was filed for the local instructional flight conducted under 14 CFR Part 91.

According to the CFI, the private pilot was executing touch and go's on runway 03, a 2,205-foot long, 50-foot wide, asphalt runway. During the third landing, after touchdown, the airplane's tailwheel began to "chatter." The airplane started to veer to the right and did not respond to left rudder or brake inputs by the CFI, who had taken over the controls. The airplane then departed the right side of the runway, where the left main landing gear wheel dug into the ground and the airplane nosed over.

Examination of the airplane by a Federal Aviation Administration inspector revealed that the high and low frequency anti-shimmy compression springs on the tailwheel assembly "had slack." The "slack" allowed for about 2 inches of rudder movement before the compression springs became effective. The inspector also observed that the rudder horn had "play," and could be rotated left or right. The two attach bolts for the rudder horn were in place; however, the lower bolt was loose, and the bolt holes were elongated.

Review of the airplane's maintenance records revealed that it had seven annual inspections performed after the installation of the tailwheel assembly. The most recent annual inspection was conducted on March 4, 2001.

The airplane had accumulated about 15 hours of operation since the annual inspection.

According to FAA regulations, Appendix D of Part 43, Scope And Detail Of Items To Be Included In Annual And 100-Hour Inspections, each person performing an annual or 100-hour inspection shall inspect all units of the landing gear group for poor condition and insecurity of attachment.

The winds reported at a nearby airport, about the time of the accident, were from 320 degrees at 10 knots.

Flight instructor Information

Certificate:	Commercial; Flight instructor	**Age:**	59,Male
Airplane Rating(s):	Single-engine land; Single-engine sea; 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 single-engine	**Toxicology Performed:**	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	August 1, 2000
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	June 6, 2001
Flight Time:	8650 hours (Total, all aircraft), 50 hours (Total, this make and model), 8600 hours (Pilot In Command, all aircraft), 100 hours (Last 90 days, all aircraft), 50 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Pilot Information

Certificate:	Private	**Age:**	34,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 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	February 4, 2000
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	December 15, 2000
Flight Time:	106 hours (Total, all aircraft), 24 hours (Total, this make and model), 19 hours (Pilot In Command, all aircraft), 23 hours (Last 90 days, all aircraft), 12 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Taylorcraft	**Registration:**	N4418U
Model/Series:	F21B	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	1518
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	March 4, 2001 Annual	**Certified Max Gross Wt.:**	1750 lbs
Time Since Last Inspection:	15 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	453 Hrs at time of accident	**Engine Manufacturer:**	Lycoming
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	O-235-L2C
Registered Owner:	Flying Wolf Ltd.	**Rated Power:**	118 Horsepower
Operator:		**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	BDL,173 ft msl	**Distance from Accident Site:**	4 Nautical Miles
Observation Time:	07:51 Local	**Direction from Accident Site:**	60°
Lowest Cloud Condition:	Few / 6000 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	10 knots / None	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	320°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.76 inches Hg	**Temperature/Dew Point:**	20°C / 12°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Simsbury, CT (4B9)	**Type of Flight Plan Filed:**	None
Destination:	(4B9)	**Type of Clearance:**	None
Departure Time:	07:15 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	Simsbury Airport 4B9	**Runway Surface Type:**	Asphalt
Airport Elevation:	195 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	03	**IFR Approach:**	None
Runway Length/Width:	2205 ft / 50 ft	**VFR Approach/Landing:**	Touch and go;Traffic pattern

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:**	41.879554,-72.809524(est)

Administrative Information

Investigator In Charge (IIC):	Demko, Stephen
Additional Participating Persons:	Bertrand J Labbe; FAA; Windsor Locks, CT
Original Publish Date:	June 4, 2002
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=52682

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