Aviation Investigation Final Report

Location:	Fort Worth, Texas	**Accident Number:**	FTW01LA122
Date & Time:	May 20, 2001, 14:15 Local	**Registration:**	N77241
Aircraft:	Cessna 140	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

the pilot reported that the tail-wheel equipped airplane ground looped after encountering a "sudden right crosswind gust" during the landing roll. The left wing contacted the runway, and the left main landing gear collapsed. The pilot reported the wind was from 220-240 degrees at 10-15 knots with gusts to 20 knots. The wind at the nearest weather observation facility (approximately 32 nautical miles northeast of the accident site) was reported from 200 degrees at 12 knots gusting to 18 knots.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the inadvertent ground loop during the landing roll. A contributing factor was the gusty crosswind.

Findings

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

Findings
1. (C) GROUND LOOP/SWERVE - INADVERTENT - PILOT IN COMMAND
2. (F) WEATHER CONDITION - CROSSWIND
3. (F) WEATHER CONDITION - GUSTS

Factual Information

On May 20, 2001, at 1415 central daylight time, a Cessna 140, single-engine tail-wheel equipped airplane, N77241, ground looped during landing on runway 17 at the Bourland Field Airport, near Fort Worth, Texas. The airplane, owned and operated by the pilot under 14 Code of Federal Regulations Part 91, sustained substantial damage. The private pilot and his passenger were not injured. Visual meteorological conditions prevailed for the personal flight, and a flight plan was not filed. The local flight departed Bourland Field approximately 1400.

The pilot reported to the FAA inspector, who responded to the accident site, that a "strong crosswind occurred from the right causing a venturi effect between two hangers adjacent to the runway." The pilot further reported that the "right wing lifted up, the airplane ground looped, and he could not correct for the ground loop."

On the Pilot/Operator Aircraft Accident Report (NTSB Form 6120.1/2), the pilot stated the wind was from 220-240 degrees at 10-15 knots with gusts to 20 knots. During the second landing, the airplane was rolling on the centerline of the runway when a "sudden right crosswind gust from the hangar area on the west side [of the runway] lifted the right wing into a ground loop." The left wing contacted the runway, the left main landing gear collapsed, and the airplane came to rest on the west edge of the runway.

The FAA inspector examined the airplane and found that the firewall and left wing sustained substantial damage. The left main landing gear was collapsed.

The wind at Fort Worth Meacham Airport (approximately 32 nautical miles northeast of the accident site) was reported from 200 degrees at 12 knots gusting to 18 knots.

Pilot Information

Certificate:	Private	**Age:**	55,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	May 9, 2000
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	June 8, 2000
Flight Time:	230 hours (Total, all aircraft), 45 hours (Total, this make and model), 177 hours (Pilot In Command, all aircraft), 5 hours (Last 90 days, all aircraft), 4 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N77241
Model/Series:	140	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	11703
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	January 16, 2001 Annual	**Certified Max Gross Wt.:**	1450 lbs
Time Since Last Inspection:	5 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	3200 Hrs at time of accident	**Engine Manufacturer:**	Continental
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	C85-12F
Registered Owner:	Andrew C. Weatherly	**Rated Power:**	85 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:	FTW,710 ft msl	**Distance from Accident Site:**	32 Nautical Miles
Observation Time:	14:53 Local	**Direction from Accident Site:**	220°
Lowest Cloud Condition:	Scattered / 15000 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	12 knots / 18 knots	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	200°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.61 inches Hg	**Temperature/Dew Point:**	32°C / 19°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Fort Worth, TX (50F)	**Type of Flight Plan Filed:**	None
Destination:	Fort Worth, TX (50F)	**Type of Clearance:**	None
Departure Time:	14:00 Local	**Type of Airspace:**	Class E

Airport Information

Airport:	Bourland Field 50F	**Runway Surface Type:**	Asphalt
Airport Elevation:	870 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	17	**IFR Approach:**	None
Runway Length/Width:	4092 ft / 60 ft	**VFR Approach/Landing:**	Stop and go;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 None	**Latitude, Longitude:**	32.570835,-97.586944

Administrative Information

Investigator In Charge (IIC):	Roach, Joyce
Additional Participating Persons:	Frank Gentile; FAA Flight Standards District Office; Fort Worth, TX
Original Publish Date:	October 9, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=52294

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