



Aviation Investigation Final Report

Location:	San Juan, Puerto Rico	Accident Number:	ERA16LA323
Date & Time:	September 22, 2016, 18:20 Local	Registration:	YV1738
Aircraft:	Learjet 25	Aircraft Damage:	Substantial
Defining Event:	Loss of control on ground	Injuries:	3 None
Flight Conducted Under:	Part 91: General aviation		

Analysis

The airline transport pilot reported that rain was intensifying as the airplane approached the runway and that the runway appeared to be wet. After landing smoothly and while decelerating through 80-90 knots, the airplane hydroplaned and departed the left side of the runway. An 8-knot crosswind from the left prevailed. The left main landing gear collapsed, and the airplane came to rest in the grass about 180° from the runway heading, which resulted in structural damage to the left main gear well. Postaccident examination of the main landing gear tires revealed that three tires had no measurable tread, and the fourth tire had only 1.17 mm of tread. The tire manufacturer stated that tires should be removed if tread wear reached the base of any groove. White skid marks were found on the runway, indicative of a hydroplaning condition. Witnesses reported heavy rain and standing water on the runway at the time of the accident.

Probable Cause and Findings

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

The pilot's improper decision to land the airplane on a wet runway, in heavy rain, with tires worn beyond safe limits, which resulted in a hydroplaning condition and subsequent loss of directional control.

Findings

Aircraft	Tire casing - Not serviced/maintained
Aircraft	Directional control - Attain/maintain not possible
Personnel issues	Decision making/judgment - Pilot
Environmental issues	Rain - Effect on operation
Environmental issues	Wet surface - Effect on operation

Factual Information

History of Flight

Landing-landing roll	Loss of control on ground (Defining event)
Landing-landing roll	Runway excursion
Landing-landing roll	Landing gear collapse

On September 22, 2016, about 1820 Atlantic standard time (AST), a Learjet 25D, Venezuelan registration YV1738, was substantially damaged during a runway excursion while landing at Fernando Luis Ribas Dominicci Airport (TJIG), San Juan, Puerto Rico. The foreign-certificated pilot, co-pilot, and one passenger were not injured. The airplane was operated by WMG Techno-Logistic, C.A. under the provisions of 14 *Code of Federal Regulations* Part 91 as a business flight. Day, visual meteorological conditions prevailed at the time, and an instrument flight rules flight plan was filed. The flight originated from Punta Cana, Dominican Republic (MDPC) about 1750 AST.

The pilot reported that the runway appeared to be wet as they were cleared to land. There was light rain on the windshield, and the rain intensified as they approached the runway. After a smooth landing on runway 9, as the airplane decelerated through 80 to 90 knots, the airplane began to hydroplane, and departed the runway surface to the left, into the grass. As the airplane crossed the intersecting taxiway, the left main landing gear collapsed, the airplane completed a 180-degree turn, and came to rest in the grass. The crew and passenger egressed the airplane and were met by first responders. The pilot later reported that there were no mechanical anomalies or malfunctions that would have prevented normal operation of the airplane.

An inspector with the Federal Aviation Administration responded to the accident site and examined the wreckage. The left main landing gear actuator support beam was structurally damaged. The left wing tip fuel tank was scraped on the lower side. Rudder control continuity was confirmed.

Runway 9 was 5,539 feet long and 100 feet wide. The runway surface was noted as "asphalt, in good condition." The runway was not grooved. FAA inspectors observed tire skid marks from all three landing gear on the runway, leading to the resting position of the wreckage. The skid marks were white in color.

A subsequent examination of the main landing gear tires revealed that three of the four tires were worn to the point where no measurable tread remained. The number 4 (right, outboard) main tire measured 1.17mm tread remaining. The main landing gear tires installed at the time of the accident were approved by the airplane manufacturer.

The Goodyear aircraft tire maintenance manual stated, regarding treadwear, "Inspect treads visually and check remaining tread. Tires should be removed when tread has worn to the base of any groove at any spot, or up to 1/8 of the tire circumference."

The weather at TIG at 1820 included wind from 350 degrees at 8 knots, 2 statute miles visibility in thunderstorms, overcast ceiling at 2,000 feet, and altimeter 29.94 inches of mercury. A U.S. Customs agent reported that there was heavy rain at the time of the accident. The passenger on the airplane reported that there was 2 to 4 inches of water on the taxiway and runway and it was "raining profusely."

Pilot Information

Certificate:	Airline transport; Commercial; Foreign	Age:	33, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	5-point
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	March 2, 2016
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	June 30, 2016
Flight Time:	2200 hours (Total, all aircraft), 1400 hours (Total, this make and model), 1700 hours (Pilot In Command, all aircraft), 125 hours (Last 90 days, all aircraft), 40 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Co-pilot Information

Certificate:	Airline transport; Foreign	Age:	48, Male
Airplane Rating(s):	Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	4-point
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	July 7, 2016
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	March 31, 2016
Flight Time:	6800 hours (Total, all aircraft), 25 hours (Total, this make and model), 6600 hours (Pilot In Command, all aircraft), 90 hours (Last 90 days, all aircraft), 32 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Learjet	Registration:	YV1738
Model/Series:	25 D	Aircraft Category:	Airplane
Year of Manufacture:	1983	Amateur Built:	
Airworthiness Certificate:	Transport	Serial Number:	363
Landing Gear Type:	Retractable - Tricycle	Seats:	10
Date/Type of Last Inspection:	September 6, 2016 Continuous airworthiness	Certified Max Gross Wt.:	15000 lbs
Time Since Last Inspection:		Engines:	2 Turbo jet
Airframe Total Time:	5330 Hrs as of last inspection	Engine Manufacturer:	General Electric
ELT:	Installed, not activated	Engine Model/Series:	CJ-610-8A
Registered Owner:	WMG Techno-Logistic C.A.	Rated Power:	2950 Lbs thrust
Operator:	WMG Techno-Logistic C.A.	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	Condition of Light:	Day
Observation Facility, Elevation:	TJIG, 10 ft msl	Distance from Accident Site:	
Observation Time:	18:20 Local	Direction from Accident Site:	
Lowest Cloud Condition:		Visibility	2 miles
Lowest Ceiling:	Overcast / 2000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	8 knots / None	Turbulence Type Forecast/Actual:	/ None
Wind Direction:	350°	Turbulence Severity Forecast/Actual:	/ N/A
Altimeter Setting:	29.94 inches Hg	Temperature/Dew Point:	25°C / 24°C
Precipitation and Obscuration:	Moderate - Thunderstorm -		
Departure Point:	Punta Cana (MDPC)	Type of Flight Plan Filed:	IFR
Destination:	San Juan, PR (TJIG)	Type of Clearance:	IFR
Departure Time:	17:50 Local	Type of Airspace:	Class C

Airport Information

Airport:	Fernando Dominicci Airport TJIG	Runway Surface Type:	Asphalt
Airport Elevation:	10 ft msl	Runway Surface Condition:	Standing water;Wet
Runway Used:	09	IFR Approach:	Global positioning system;RNAV
Runway Length/Width:	5539 ft / 100 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 None	Latitude, Longitude:	18.4575,-66.096107(est)

Administrative Information

Investigator In Charge (IIC):	Hicks, Ralph
Additional Participating Persons:	Rafael C Gonzalez; FAA/FSDO; San Juan, PR
Original Publish Date:	March 18, 2019
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=94070

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).