

Inspector Statement

Cecil J. Land Aviation Safety Inspector, Operations

On Saturday, December 27, 2014 I was serving as the FSDO accident Duty Officer. At approximately 2004 local, I received a call from the Regional Operations Center (ROC). The call described a Cessna 310N Registration N177JD, piloted by a Mr. George Elmer Joyce, Jr. had suffered a hard landing/collapsed left main gear while landing at Causey Airport 2A5, in Liberty NC. The accident occurred at 1930 local. Neither the pilot, Mr. George Elmer Joyce, or the passenger, Mr. Randall Wayne Ward, were injured. The aircraft departed the runway surface to the left, following the collapse of the left main landing gear.

Mr. Joyce stated that he "had a hard landing, but he didn't believe it was that hard". Mr. Joyce also stated that, he "was used to landing at big airports, with ILS's and glideslopes". He also stated that he "was used to having someone in the right seat". Mr. Joyce produced a current pilot's certificate and a valid second class medical certificate.

Upon arrival at the accident scene at 0930 on Monday, December 29, 2014, I observed the following:

I investigated an aircraft accident that involved a 1968 Cessna 310, N177JD which occurred at 1930 local on Saturday, December 27, 2014 at Causey Airport, 2A5, Liberty, North Carolina (3800 x 40 feet). The aircraft was operated by pilot George Elmer Joyce, Jr. ATP certificate number [REDACTED]. The pilot was current, and presented evidence of day/night currency, as well as a current second class medical certificate, and a 61.58 pilot proficiency check conducted in 2013 in a Cessna Citation.

The aircraft suffered a left main landing gear collapse as a result of a hard landing on Runway 2 after a night landing in visual meteorological conditions on a dry runway. Evidence revealed an impact approximately 250 feet down, in the touchdown zone, and slightly to the left of the centerline of the runway. A 5 degree right crab angle was indicated. Impact evidence consisted of three equidistant tire skid marks approximately 10 feet long. The left main skid mark swerved indicated possible side loading inboard following the impact. The skid marks matched the tire tread pattern of the aircraft.

Approximately 8 feet in the direction of travel, the right propeller impacted the runway under power, which produced 4 blade marks perpendicular to the direction of travel, approximately 12-14 inches long, spaced 34-37 inches apart. The first propeller blade mark was deepest, with each subsequent mark shallower than the preceding mark. This evidence is consistent with the curling of the propeller blades approximately 2 inches from the tip on the right propeller. The aircraft has 2-blade constant speed McCauley propellers.

The aircraft continued down the runway approximately 2200 feet, drifting to the left. The aircraft then departed the runway surface, and the left propeller struck the soil at least twice, which bent both left blades rearward. No tip damage was noted from the soil impact on the left propeller. The aircraft struck a runway light on the left side of the runway, which removed the light cover and bulb, but did not bend the light post. The aircraft continued in a left arcing motion, and came to rest oriented in a compass

direction of 300 degrees, or approximately 80 degrees from perpendicular to the runway centerline, about 25 feet from the left runway threshold.

The aircraft is resting with the left main gear collapsed, the left tip tank resting on the ground, with the right main gear strut fully locked and extended, and the right tank positioned into the air. Both pilot and passenger were able to open the cabin door, and walk away from the aircraft.

Evidence reveals that the fuselage of the aircraft in the area of the cabin door may be deformed, which makes closing of the cabin door difficult, if not impossible. An examination of left nacelle baggage area revealed a perforation in the skin approximately 4 inches square, and extending 3 inches vertically, above the left main gear strut attach point. A deformation in the right nacelle baggage was noted, but no perforation of the skin was observed. Fuel staining from the right main tank was observed streaking down the bottom of the right wing in the direction of the fuselage due to gravity. A faint fuel smell could be detected in the area of the right wing. Wrinkling and deformation of the fuselage skin was noted aft of the wing attach points, and extended aft just prior to the horizontal stabilizer on both sides of the airplane. The rudder attachment points were bent in the direction of the turn, as the nose wheel had over travelled to the left. The rudder and nose wheel are interconnected on this aircraft.

An examination of the cockpit shows both fuel valves closed, the landing gear handle in the down and locked position, throttles at idle, propeller controls full forward, and mixtures full aft in the cutoff position. The right front passenger seat exhibited a slight rocking motion, and oil canning was heard when the seat was pushed left and right. The left front passengers seat did not exhibit any anomalies.

A note from the Airport Facilities Directory states, "RY 02/20 NSTD LIRL; LGTS SMALLER THAN STD & RY LGTS MORE THAN 20 FT FM PAVEMENT EDGE ; LOCATION AND NUMBER OF END LGTS NSTD."

The pilot stated that he was "used to flying in and out of large airports, with glide slope, and visual slope references". Of note, Causey airport does not have any visual glide slope indicators. The pilot also stated that he believed he had a "hard landing" but did not know until after the airplane had touched down, the extent of any problem. Mr. Joyce is a contract pilot, and flies regularly, but in a variety of aircraft.