

**NATIONAL TRANSPORTATION SAFETY BOARD
Office of Aviation Safety
Washington, DC 20594**

SUMMARY OF AIRFRAME EXAMINATION

CEN20LA401

A. ACCIDENT

Location: Kokomo, Indiana
Date: September 20, 2020
Time: 10:57 am central daylight time
Aircraft: Piper PA-32-301 (S/N 32-8006051) N8213X

B. PARTICIPANTS

Courtney Liedler
Air Safety Investigator
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Air Safety Investigator
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C. ACCIDENT SUMMARY

On September 20, 2020, about 1057 central daylight time, a Piper PA-32-301 airplane, N8213X, was destroyed when it was involved in an accident in Kokomo, Indiana. The pilot, and 3 passengers were fatally injured. One passenger was seriously injured. The airplane was operated as a Title 14 Code of Federal Regulations (CFR) Part 91 personal flight.

According to the airplane owner, the pilot was a volunteer that was flying the airplane for a fundraising event for charity at Glenndale Airport (8I3), Kokomo, Indiana. The morning of the accident, he offered to take three other volunteers that had been providing marshalling assistance on a flight around the area. It was the pilot's first flight of the day. The pilot flew the airplane for the event the whole day prior with no issues and was familiar with the approach.

According to a witness, who was taxiing his airplane about 1,000 ft from the approach end of the runway, the airplane appeared low on approach. He noted the flaps were extended and the engine was running. He saw the airplane's nose-gear and the right main landing gear clip the utility pole. The airplane then yawed to the right and "cartwheel over on itself." The witness stated it did not appear the airplane tried to regain altitude to climb over the power lines before impact. The airplane came to a rest inverted in a corn field below the power lines. The airplane immediately caught fire upon impact with the ground.



Figure 1: Broken Utility Pole



Figure 2: Airplane Wreckage

The utility pole was about 79 ft in height and was located about 570 ft north of the runway end. The utility line was demarcated with an orange, ball-like marker. The runway has a 20:1 approach slope to a 292 ft displaced threshold.

D. DETAILS OF AIRFRAME EXAMINATION

The aircraft was recovered by airport residence, aircraft owner, and fire department. The aircraft was transported on September 21, 2020, to a secure hangar on the field located at [REDACTED] Kokomo, IN. 46902. The aircraft owner stated the aircraft had a total of 44 gallons of fuel at the time of the accident flight.

E. SUMMARY OF AIRFRAME, ENGINE & PROPELLER EXAMINATION

WRECKAGE/IMPACT INFORMATION

The aircraft impacted a wooden pole, est. 79 ft tall and a dual pole utility tower, est. 61 ft tall on final approach to runway 18 of the Glendale Airport. The aircraft came to rest inverted on an easterly heading and a post-impact fire ensued. The aircraft was mostly consumed by the fire.

Fuselage

The fuselage was largely consumed by the post-impact fire. The forward cabin door, aft cabin door, aft baggage door, and forward baggage door were thermally damaged and observed in their respective location among the wreckage. The 6 seats and their restraints were destroyed. The seats supporting structures were consumed by fire. The instrument panel including all switches and engine control quadrant were destroyed. The copilot's control wheel was separated from its shaft and was not observed during the examination. The pilot's control wheel remained attached to its shaft and its right horn was separated from the assembly with its left horn

deformed. The supporting structure of the fuel selector and its control lever was thermally destroyed. The fuel selector was impact damaged and was observed in the “off” position. The fuel selector’s gascolator bowl and filter were destroyed. Thermal damage of the fuel selector and electric fuel pump precluded field test. The flap control lever was observed between the 0° & 10° positions; impact damage was noted in this area and the left flap was observed at about the 25° position.

The nose gear was separated from the engine mount and the induction air filter was thermally destroyed.

Left Wing

The left wing remained attached to the fuselage and was impact separated in 3 sections with leading edge damage noted to its center and outboard section. The fuel tank was destroyed, and its cap was attached to its receptacle. The main gear’s oleo tube and wheel were separated from the trunnion. The pitot mast remained attached to the wing and its ports were clear of obstructions. The lift detectors remained attached to the wing, but thermal damage precluded field test. The flap was partially destroyed but remained attached to the wing. The flap was observed in the 25° of flaps position. The aileron remained attached to the wing and was partially consumed. The aileron bellcrank was deformed and its control rod remained attached to the aileron and bellcrank. The aileron control cables remained attached to the bellcrank and were continuous to the T-bar assembly; however, the drive cable was cut by first responders in the centerboard area.

Flight control continuity was established through recovery separations.

Right Wing

The right wing remained attached to the fuselage and was fractured about 38” from the wing root. The wing exhibited leading edge impact damage and was partially consumed by fire. The fuel cap remained attached to its receptacle and the tank was destroyed. The main landing gear was separated from the wing. The flap was thermally destroyed with its control arm at about the 25° of flaps position. Impact and thermal damage were observed to the aileron but it remained attached to the wing. The aileron bellcrank was deformed and its control rod remained attached to the aileron and bellcrank. The aileron control cables remained attached to the bellcrank and were continuous to the T-bar assembly.

Flight control continuity was established.

Empennage

The stabilator remained attached to its mounts and its attach point area was partially consumed by fire. Impact damage was noted to the stabilator. The stabilator control cables remained attached to the balance weight and were continuous to the T-bar assembly. The stabilator trim tab remained attached to the stabilator with its control rod area partially consumed. The trim barrel assembly was thermally separated and exposed about 2.5 threads and

5/8" of jackscrew from the top of the assembly, indicative of a slight "nose down" stabilator trim setting.

The rudder and vertical stabilizer remained attached to their respective attaching points. The rudder balance weight was separated with thermal damage noted. The lower area of the rudder exhibited thermal damage as well. The rudder control cables remained attached to the rudder bellcrank and were continuous to the rudder pedal assembly. Flight control continuity of the rudder and stabilator was established.

ENGINE

The Lycoming IO-540-K1G5 engine, s/n L-20471-48A, remained attached to the airframe and exhibited thermal and impact damages. The exhaust system was displaced aft and partially separated from its attaching cylinders. The mixture cable remained attached to the fuel servo and was observed in the "rich" position. The throttle cable remained attached to the fuel servo and was observed "mid-travel". The propeller control cable remained attached the governor and was noted in the "fine pitch/high RPM" position. Oil was observed within the engine during the examination.

PROPELLER

The 3-bladed Hartzell propeller, s/n DY3175A, was separated from the engine and exhibited impact and thermal damages. The propeller's mounting area remained attached to the engine. The propeller blades were labeled A, B, and C for descriptive purposes. Blade "A" exhibited leading edge damage and chord-wise abrasions. The blade was deformed aft about mid-span. Blade "B" was deformed aft about 8" from the blade's tip with leading edge damage noted tip area. Blade "C" was bent aft about 18" from the hub with S-type bending and chord-wise gouges/abrasions observed.

DISPOSITION OF AIRPLANE WRECKAGE

The airplane wreckage was released to the airplane's owner on October 23, 2020. No parts were retained.