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Subject: CEN22FA131 Airframe Examination Summary

On February 22, 2022, about 2241 eastern standard time, a Piper PA32 airplane, N3952W, was destroyed when it was involved in an accident near Fostoria, Ohio. The pilot and passenger were fatally injured. The airplane was operated as a Title 14 *Code of Federal Regulations (CFR)* Part 91 business flight. The following observations are from the initial on-scene investigation and airframe examination:

The wings were separated from the fuselage and the fuselage was separated into several main sections. The main portion of the cabin was located at the base of a large tree. The entire cabin area was crushed against the base of the tree. Some of the cabin seats were separated from the cabin and located further down the debris path. The forward cabin area, including the main wing spar carry through, was separated and located in the debris field beyond the large tree. The fuel selector valve, flap selector handle, and flap torque tube were still attached to this portion of the forward cabin. The fuel selector valve was impact damaged and broken. The fuel strainer bowl was intact. The bowl was removed for examination and an undetermined quantity of liquid, consistent in color and odor with 100LL avgas, was observed draining from the broken selector valve when the fuel strainer bowl was turned over. The fuel strainer screens appeared free from blockage and no debris was observed in the fuel strainer bowl. The flap selector handle was impact damaged and the detent was observed in the 2nd position which would correspond to a 25° flap setting.

The instrument panel was separated from the fuselage and highly fragmented. The instrument panel fragments along with various instruments and avionics were located along the debris path. An Attitude Indicator, Heading Indicator, and a Turn Coordinator were all separated from their respective mounts in the instrument panel and found in the debris path.

The stabilator cables remained attached to the lower part of the tee-bar and were continuous for about 3 ft where both cables exhibited separations consistent with tensile failure consistent with impact forces. The rudder cables remained attached to their respective attach points on the rudder pedal torque tube assembly. The cables were continuous from the pedal assembly for several feet until they were separated with signatures consistent with tensile failure due to impact forces. A portion of one aileron cable, including part of the forward chain segment, was observed pinched in the lower forward fuselage structure.

The left wing was separated from the fuselage at the wing root and was located on the right side of the debris path. The main landing gear remained attached to the wing. The wing tip fuel tank was separated and located in the debris field. The leading edge of the wing exhibited impact damage and tearing consistent with multiple tree strikes. Approximately 3 ft of the outboard leading edge was separated from the wing and located in the debris field. The inboard fuel tank was breached at the leading edge. The wing was held in a vertical position by the surrounding trees and about 2-3 gallons of a blue liquid, consistent in odor with 100LL avgas, was observed in the lower portion of the fuel tank. The inboard fuel tank finger screen was intact and appeared free from blockage. The lift detector remained installed in the leading edge of the wing and exhibited impact damage. The pitot mast remained intact on the lower surface of the wing. The aileron bellcrank was observed in its normal location. Both the aileron cable and the balance cable remained attached to their respective arms of the bellcrank. The cables were continuous to the wing root where they exhibited separations consistent with tensile failure due to impact forces. One aileron bellcrank stop remained intact and appeared unremarkable. The other bellcrank stop was broken off consistent with the bellcrank arm belling pulled through the wing rib on that side. The aileron and flap remained attached to their respective hinges.

The right wing was separated from the fuselage at the wing root and fragmented with pieces scattered along the debris path. The main landing gear was broken and separated from the wing. The wing tip fuel tank was separated from the wing and destroyed. The wing was torn chordwise about mid-span and separated into two main sections. The aileron and flap were separated from their respective hinges and located within the debris field. The flap was further separated into two fragments. The inboard fuel tank was torn and breached. No fuel was observed in the remnant of the fuel tank. The inboard fuel tank filler cap was intact in the fuel filler opening. The fuel tank finger screens for both the tip tank and inboard tank were observed and appeared free from blockage. The aileron bellcrank was separated from its mount and had been pulled through part of the wing towards the wing root. Portions of both the aileron cable and the balance cable remained attached to the bellcrank and were

continuous for several feet until they exhibited separations consistent with tensile failure due to impact forces. The bellcrank stops were intact and unremarkable.

The fuselage was separated at the aft side of the aft baggage door. The tailcone and empennage were located in the debris field and exhibited impact damage and crushing throughout. The vertical stabilizer remained partially attached to the tailcone and the rudder remained attached to the vertical stabilizer. The rudder cables remained attached to the rudder horn and were continuous to the forward end of the tailcone where they exhibited separations consistent with tensile failure due to impact forces. The stabilator remained attached to the tailcone bulkhead and the stabilator trim tab remained attached by its hinge. The stabilator cables remained attached to the stabilator balance tube and were continuous to the forward end of the tailcone where they exhibited separations consistent with tensile failure due to impact forces. The rudder and stabilator stops were intact and appeared unremarkable. The stabilator trim jackscrew was in a position that corresponded to an aircraft nose up trim setting.

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