



Memorandum for Record

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National Transportation Safety Board
Investigator in Charge

NTSB Accident Number: WPR20LA012
Aircraft Registration & Make/Model: N204BF / Czech Sport Aircraft, Sport Cruiser
Accident Location: Holden, Utah
Accident Date: October 22, 2019
Subject: Ballistic Recovery System Examination

On February 17, 2020, the IIC, along with party members from Cruiser Aircraft Inc. Sebastian, Florida, Ballistic Recovery Systems Aerospace (BRS) Miami, Florida, examined the airplane and the BRS system. The pilot reported that she activated the BRS after the engine experienced a total loss of power on a night, visual flight rules flight. The airplane sustained substantial damage to the left wing upon touchdown.

Examination of the BRS revealed that system was comprised of a rocket motor hosed in an upper-nose compartment forward of the canopy and near the firewall. When ignited, the rocket motor deployed a parachute. The parachute was attached to the airplane by two straps and two steel cables, all secured to the parachute by a metal ring. The two straps attached to the front-left and front-right side of the airplane fuselage, aft of the engine. The two steel cables were secured to the fuselage in an area aft of the canopy, about mid-airframe. The BRS was activated via a red handle mounted at the top of the center console of the Sport Cruiser airplane.

Examination of the deployed BRS revealed the red handle was hanging by a cable about three inches from the center console, consistent with being pulled. The rocket motor and parachute were found in the aft storage area, and the suspension straps and cables were attached to the metal ring. The forward left and right straps remained attached to the suspension mounts in the nose compartment.

The left-rear steel suspension cable remained attached to the metal ring and the fuselage attachment point about mid-fuselage. The left-side cable exhibited a separation near the cockpit canopy left hinge bolt (Figures 1 and 2). The separated cable ends exhibited a frayed or broom

straw appearance. The steel cable did exit the nose compartment but aft of the canopy hinge bolt, the steel cable did not exit the composite material (Figure 3).

Examination of the right-side rear cable revealed that the cable remained attached at the metal ring and the fuselage attachment point about mid-fuselage. The cable exited the nose compartment, travelled under the right-side canopy hinge bolt, and then along the right side of the canopy's lower seam to the fuselage. The cable then tore into the canopy and stopped near the right-side handle. (Figures 4, 5, and 6).

In an email, dated February 17, 2020, from the party member from BRS, he stated that the BRS system performed as expected. The components of the BRS were handed over to BRS for examination.



Figure 1 Photo showing both ends of the fractured left-side steel cable, and the left-side canopy hinge bolt and nut.



Figure 2. Photo showing the fractured left-side.



Figure 3. Photo showing the left-side suspension cable did not exit the forward nose compartment.



Figure 4. Photo showing the two straps, the right-rear cable, and the metal ring.



Figure 5. Photo showing the path of the right-rear cable.

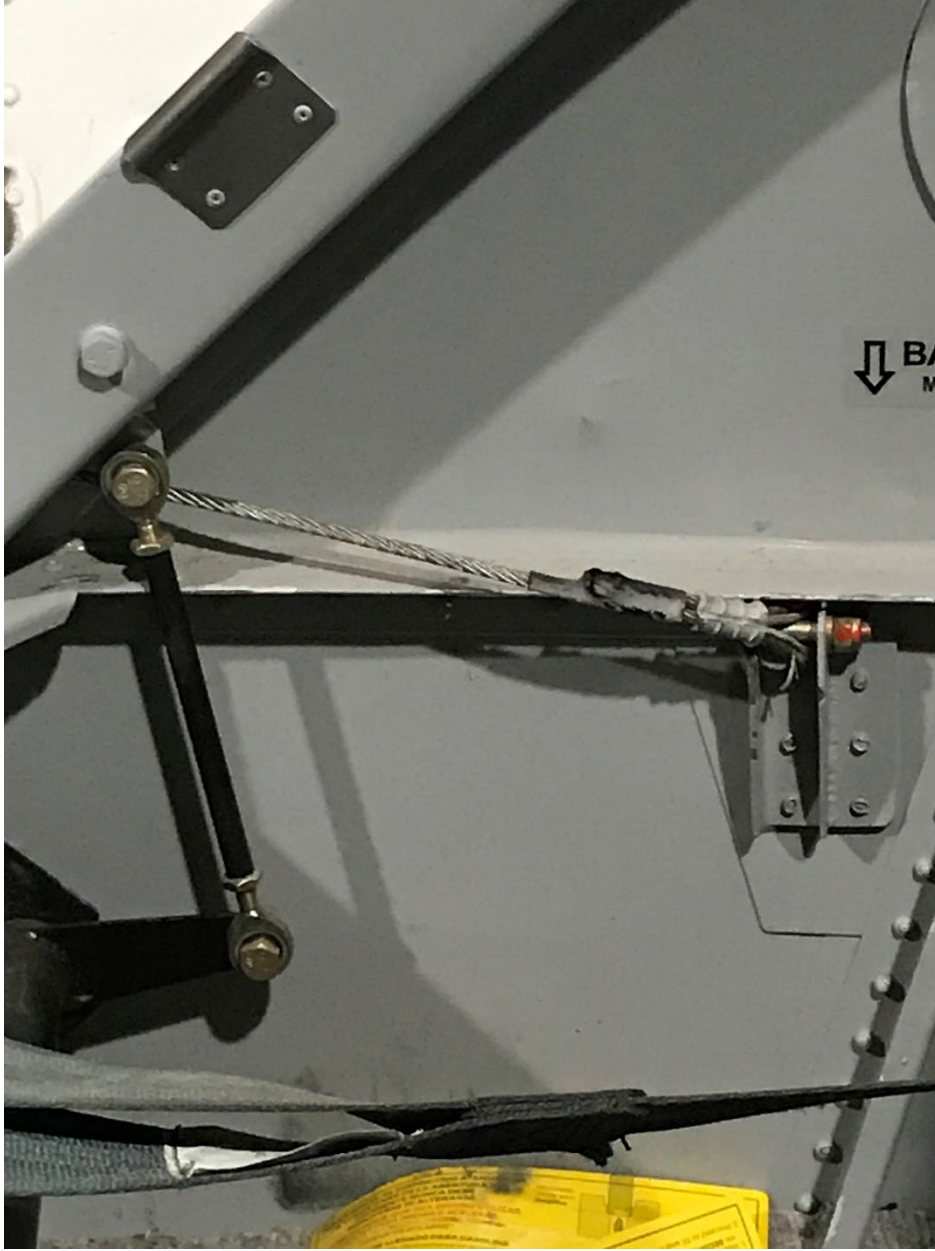


Figure 6. Photo showing the right-rear cable fuselage attachment point. This is typical for the left side.