NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Western Pacific Region

February 1, 2018

AIRFRAME AND ENGINE EXAMINATION

WPR18FA075

This document contains 2 embedded photos.

A. ACCIDENT

Location:	Concord, CA
Date:	January 29, 2018
Aircraft:	Cessna 152, N93316 Serial 15285465
NTSB IIC:	Albert Nixon

B. EXAMINATION PARTICIPANTS:

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C. SUMMARY

Examination of the recovered airframe was conducted on February 1, 2018, at the facilities of Plain Parts, in Pleasant Grove, California. The right cable to the rudder was found separated and the left rudder cable was partially separated. No additional evidence of preimpact mechanical malfunction was noted during the examination of the recovered airframe and engine.

D. DETAILS OF THE INVESTIGATION

1.0 Airframe Examination

Flight control continuity was established to all flight control surfaces, with the exception of the right rudder cable, which was separated. The left rudder cable was observed to be in the process of separating, where it passed through the aft rear bulkhead in the aft tail cone. Three strands (about half of the strands) of the cable were separated. The right rudder cable was observed to be separated where it passed through the aft rear bulkhead. The aileron and elevator continuity were established from the aft portion of the cabin to the cockpit controls.

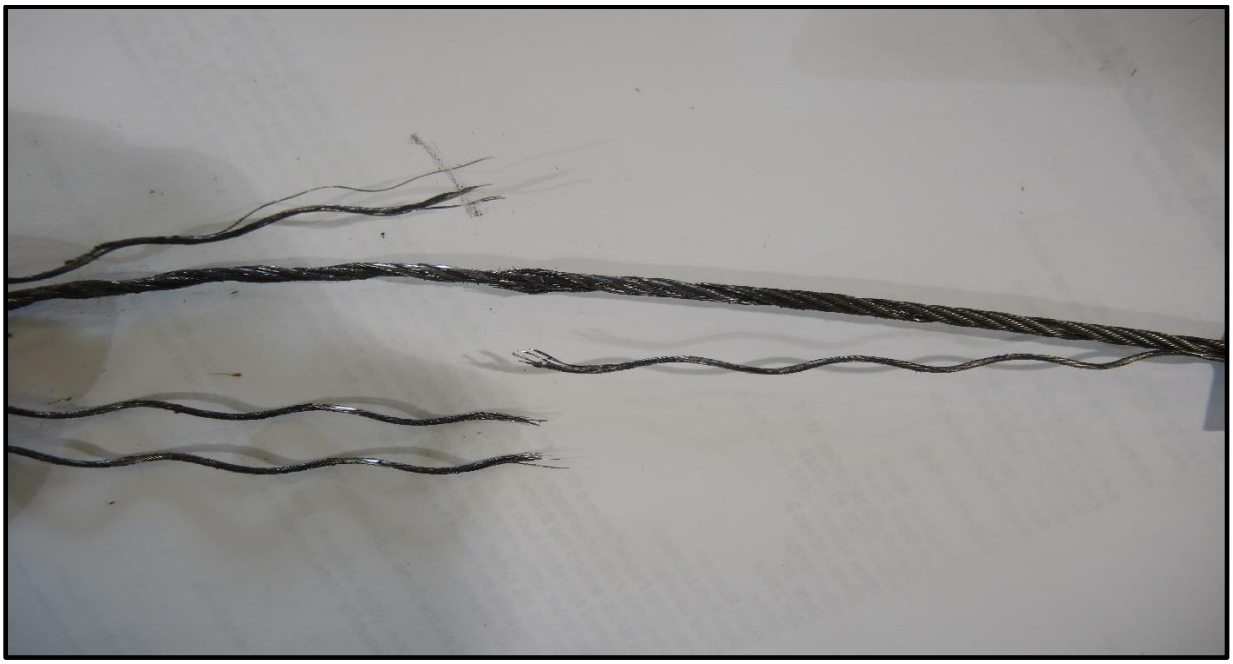

Figure 1: View of left rudder cable with some of the cable strands separated.

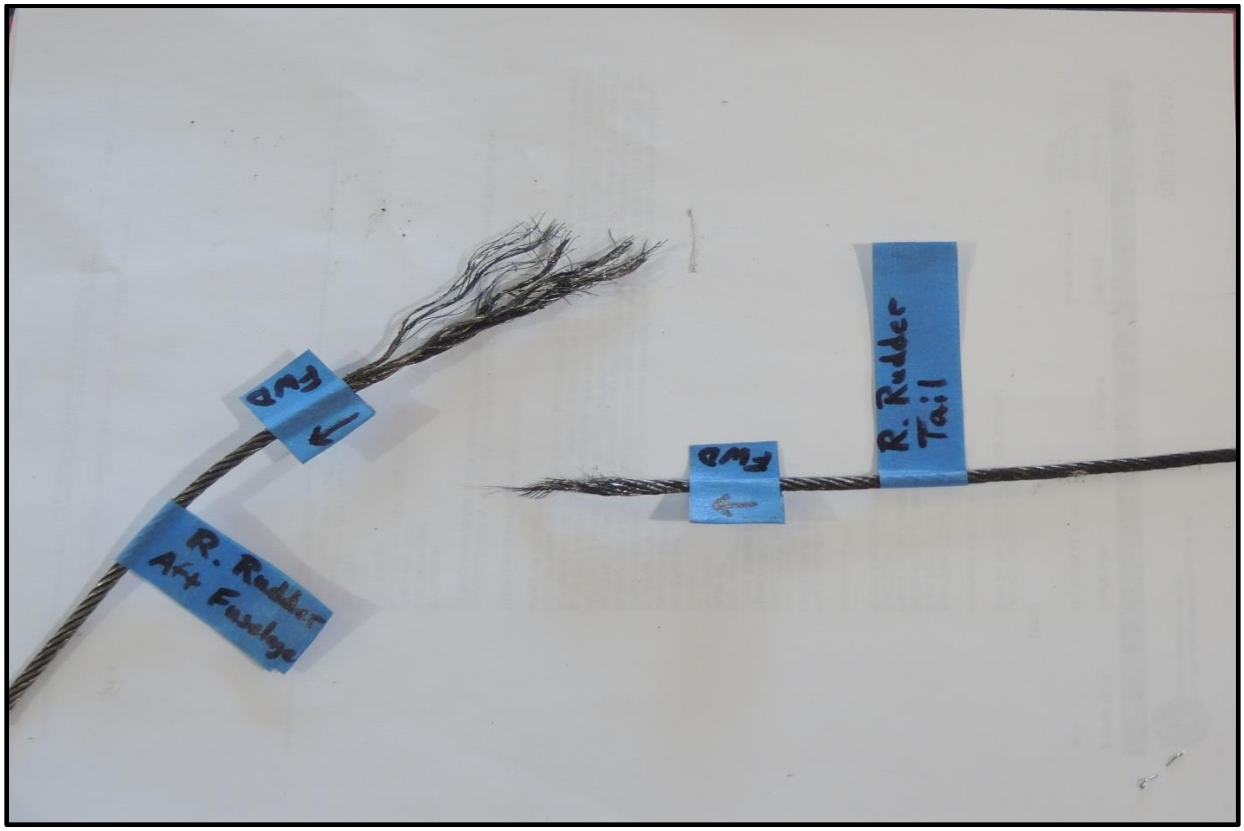

Figure 2: View of the right rudder cable at separation point.

The elevator trim was observed to be about 1.4 inches, which was about the neutral position.

Fuel supply line continuity was established. The fuel tank strainers located near the wing root, were clear of debris. The fuel selector handle position could not be determined due to impact damage. The fuel selector valve was in the open position and verified by blowing air through the line.

A review of the flight instruments revealed that the battery switch was set to the on position, and the ignition switch was set to the left magneto position. The key was in the left position. The airspeed indicator indicated 0. The attitude indicator showed wings level and about 10-20º nose low. The throttle was out about an inch and the mixture control was full rich. The cabin air lever was off. The carburetor heat was off. The altimeter indicated about 5,000 ft with a setting of 30.32 inches of mercury. The engine tach hours indicated 3,984.4 hours and the engine flight hours were 9,089.3 hours. The transponder was set to 1200. The vertical speed indicator displays a positive 1,500 ft.

The wings sustained leading edge compression damage and were buckled and wrinkled. The wingtips also sustained damage. Recovered fragments of the windscreen showed no signs of oil leakage or a bird strike. Throttle and mixture control continuity was established.

2.0 Engine Examination

A field examination of the engine was accomplished at the accident site. However, the following addition items were examined at the facility examination: Continuity of the mixture control was established. The oil filter was removed and cut open. The oil filter segments revealed no debris. The carburetor screen was examined and was clear of contamination.

The propeller was examined and determined to be a McCauley, model 1A103 TCM 6958, hub serial number KC003.

The examination of the engine revealed no evidence of pre-impact mechanical malfunctions or failures that would have precluded normal operation.

Submitted by: Albert Nixon