



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety-Eastern Region

Ashburn, Virginia 20147

December 2, 2016

MIXTURE CONTROL CABLE EXAMINATION FIELD NOTES

A. ACCIDENT:

Location: Hurley, Mississippi
Date: April 2, 2016
Time: 1707 central daylight time
Aircraft: Cessna 175B

B. COMPONENT GROUP:

Eric Alleyne
National Transportation Safety Board
Office of Aviation Safety
Ashburn, Virginia

C. SUMMARY

On April 2, 2016, about 1707 central daylight time, a privately owned and operated Cessna 175B, N8115T, was substantially damaged during a forced landing in a field near Hurley, Mississippi. The commercial pilot, the sole occupant was not injured. Visual meteorological conditions prevailed at the time and no flight plan was filed for the 14 CFR Part 91 personal flight, that originated about 7 minutes earlier from Mobile Regional Airport (MOB), Mobile, Alabama, and was destined for Slidell Airport (ASD), Slidell, Louisiana.

D. DETAILS OF THE INVESTIGATION

Following recovery of the airplane to a salvage facility located in Griffin, Georgia, the mixture control cable was examined and it was noted that the cable was continuous from the cockpit control to the attach point of the carburetor. Further examination of the mixture control cable revealed a plastic sheath covered a portion of the cable between a

baffle and the mixture control lever at the carburetor. Additionally, the mixture control cable and plastic sheath were loose within a clamp near the carburetor, and no rubber grommets within the clamp was noted. The mixture lever in the cockpit was moved from full lean to full rich, but the mixture control lever at the carburetor only moved a fraction of an inch and flexing of the mixture control cable was noted. The oil level and overall condition of the engine was checked and it was determined that a field test run could be performed, although damage to the engine mount and propeller precluded full static run-up or prolonged engine run.

Fuel drained from the wings was supplied directly to the fuel line at the left wing root for an attempted engine run. The mixture control was placed in the full rich position in the cockpit and the engine was then started. With the engine operating, the mixture control in the cockpit was moved toward the lean position, but the engine began to quit. The mixture control in the cockpit was then pushed to full rich but it had no affect and the engine quit.

For a second test run, the plastic sheath and mixture control cable were placed inside the clamp near the mixture control lever of the carburetor, and the clamp was tightened. The mixture control in the cockpit was placed in the full rich position, and the engine was started. The mixture control in the cockpit was leaned to simulate the pilot's actions during the accident flight and the sheath came out of the clamp and the engine quit.

In advance of a third test run, the mixture lever at the carburetor was fixed in the full-rich position. The engine started uneventfully and was allowed to idle. The power was increased to 1,800 rpm and a magneto check was conducted. Both magnetos dropped approximately 50 rpm during the checks, and the engine oil pressure was noted in the green arc. Engine operation at a higher rpm was not performed due to safety concerns. Additionally, the engine was not allowed to operate to obtain normal operating temperatures. No anomalies were noted with the engine during the engine run with the mixture control fixed in the full-rich position.



Figure 1: View of mixture cable, clamp, and sheathing as first viewed



Figure 2: Mixture control sheathing installed in clamp for 1st engine run



Figure 3: Mixture control fixed in full-rich for 3rd engine run



Figure 4: Measurement of plastic sheathing