

NATIONAL TRANSPORTATION SAFETY BOARD

Vehicle Recorder Division
Washington, D.C. 20594

November 24, 2017

Fuel Flow Indicator

Specialist's Factual Report
by Bill Tuccio, Ph.D.

1. EVENT

Location: Cave-in-Rock, Illinois
Date: August 25, 2016
Aircraft: Cessna U206G
Registration: N891LL
Operator: State of Illinois
NTSB Number: CEN16LA335

On August 25, 2016, about 1005 central daylight time, a Cessna U206G airplane, N891LL, was substantially damaged during a forced landing near Cave-In-Rock, Illinois. The pilot received minor injuries and the camera operator received serious injuries. The airplane was registered to and operated by the State of Illinois under the provisions of 14 *Code of Federal Regulations* Part 91 as a public use flight. Day visual meteorological conditions prevailed for the local flight, which departed without a flight plan from Abraham Lincoln Capital Airport (SPI), Springfield, Illinois at 0845.

2. DETAILS OF INVESTIGATION

The National Transportation Safety Board (NTSB) Vehicle Recorder Division received the following device:

Device 1: Shadin Fuel Flow Indicator
Device 1 Serial Number: 1794

2.1. Shadin Fuel Flow Indicator Device Description

The Shadin Fuel Flow Indicator is a digital fuel management system designed to provide fuel management information under real-time flight conditions to the flight crew. The unit is connected to engine fuel flow transducers. The unit is capable of transmitting fuel information to certain GPS receivers for additional calculations and display of fuel management data. The unit can display engine fuel flow, fuel used, fuel remaining, and endurance. The unit does not interface with an aircraft's fuel quantity indicating system. The unit requires the flight crew to enter the initial fuel on board the aircraft. All calculations and data provided by the unit are based on fuel flow. Between power cycles, the unit retains the last fuel used and fuel remaining.

2.1.1. Shadin Fuel Flow Indicator Data Recovery

Upon arrival at the Vehicle Recorder Division, an exterior examination revealed the unit had not sustained any damage and the unit powered on normally.

2.1.2. Shadin Fuel Flow Indicator Data Description

After power up, three photos of the display were taken, as follows.

- **Power up state (figure 1).** No pertinent information.
- **Pounds remaining (figure 2).** 325 pounds displayed.
- **Pounds used (figure 3).** 225 pounds displayed.

Figure 1. Upon power up.

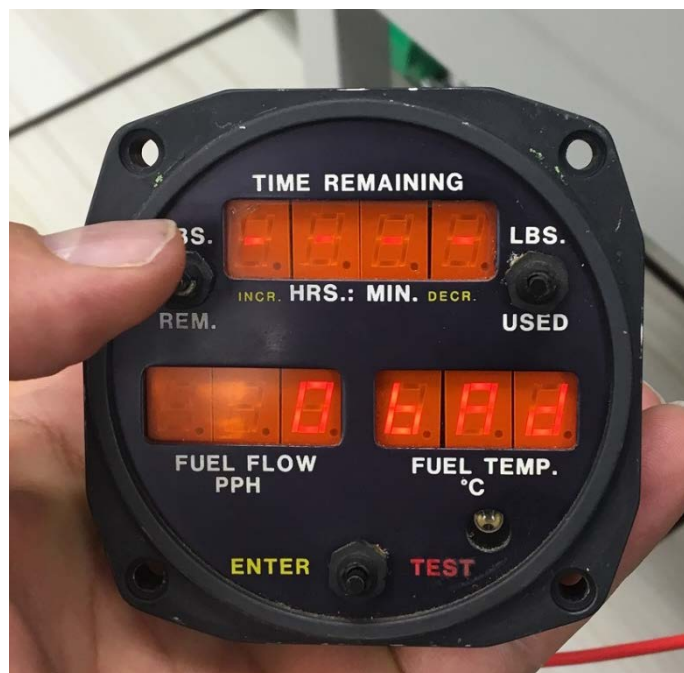


Figure 2. "Lbs. Rem." button pressed.



Figure 3. "Lbs. Used" button pressed.

