



Memorandum For Record

Timothy W. Monville
Sr. Air Safety Investigator
Eastern Region

Date: January 6, 2023
NTSB Accident Number: ERA21LA335

The Airflow Performance, Inc., Controller, Model FM-200, Parts List 5020001, SN 21231972 was removed from the helicopter and shipped to the manufacturer's facility in South Carolina for examination and operational testing with NTSB Virtual Oversight.

Personnel of the facility reported that the Controller was manufactured in August 2012, and since manufacture had not been to their facility for repair or overhaul.

As first received, the metered fuel outlet fitting safety wire was cut¹ (Figure 1). A lead seal marked with "API" was noted on the section of safety wire. The venturi appeared clean. The unit was not equipped with a mixture control.

The Controller was placed on a calibrated test bench for testing (run as received) and airflow tested to production standards and checked every 200 pounds of airflow. The fuel flow values in terms of pounds-per-hour (PPH) recorded during the postaccident testing were compared with the recorded values from 2012 and documented below:

0 Pounds Airflow – Accident Testing flowed 2.8 PPH greater than 2012 Test Results
200 Pounds Airflow – Accident Testing flowed 2.4 PPH greater than 2012 Test Results
400 Pounds Airflow – Accident Testing flowed 4.0 PPH greater than 2012 Test Results
600 Pounds Airflow – Accident Testing flowed 1.0 PPH greater than 2012 Test Results
800 Pounds Airflow – Accident Testing flowed Same as the 2012 Test Results
1,000 Pounds Airflow – Accident Testing flowed 1.0 PPH less than 2012 Test Results
1,200 Pounds Airflow – Accident Testing flowed Same as the 2012 Test Results
1,400 Pounds Airflow – Accident Testing flowed Same as the 2012 Test Results
1,600 Pounds Airflow – Accident Testing flowed 1.0 PPH less than 2012 Test Results
1,800 Pounds Airflow – Accident Testing flowed 1.0 PPH greater than 2012 Test Results

¹ Personal of the facility reported that the positioning of the outlet fitting in the housing is adjustable, and can affect calibration of the unit.

2,000 Pounds Airflow – Accident Testing flowed 1.0 PPH less than 2012 Test Results
Idle - Accident Testing flowed .9 PPH less than 2012 Test Results

In totality, there was no evidence of preimpact failure or malfunction of the controller.

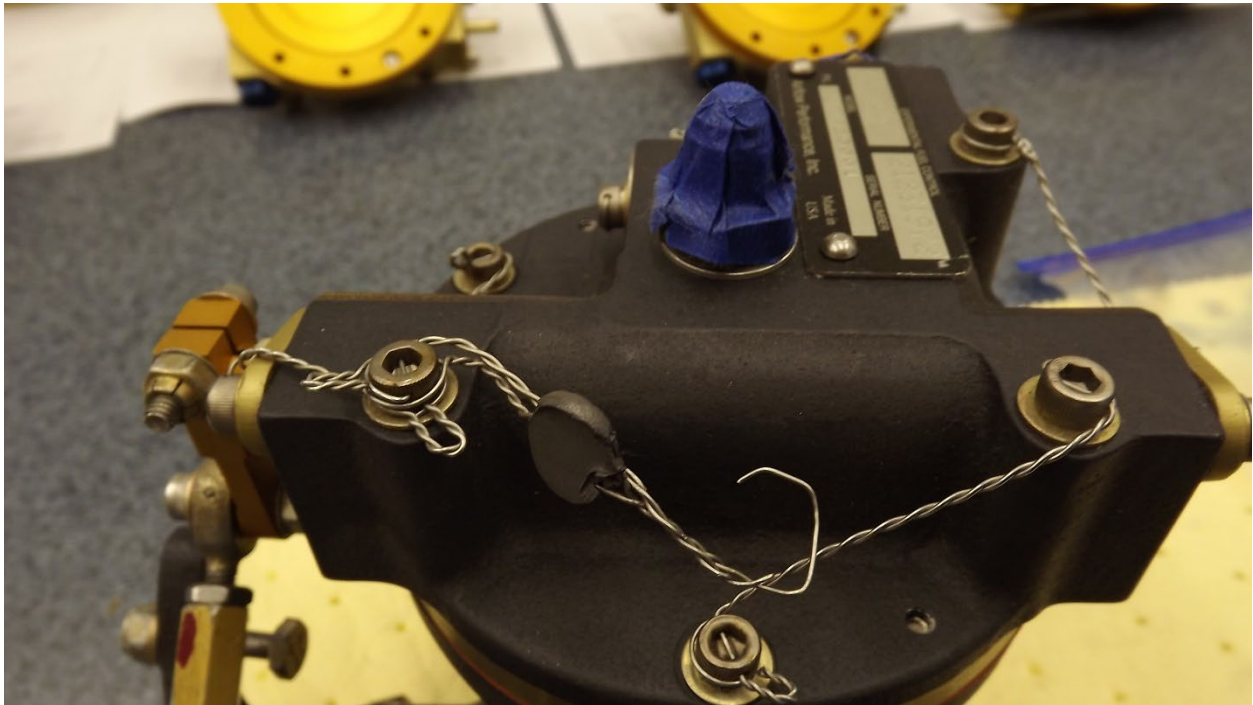


Figure 1: Digital Photograph From Airflow Performance, Inc. View of the Cut Safety Wire For the Metered Fuel Outlet Fitting.