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Jason Ragogna
NTSB
624 Six Flags Drive
Ste. 150
Arlington, TX 76011

Re: N8145M

Dear Mr. Ragogna:

On 08-06-02 the wreckage of N8145M was again examined at the facilities of Eastman Aircraft, Corona, CA. Present beside myself were Brad Howard & Ted Nelson-FAA and Henry Soderlund-Cessna. The purpose of the examination was to determine the configuration of the electrical wiring in the fuel boost pump systems.

The original fuel pressure switches had been removed from both nacelles and an unknown date. No maintenance record entries were found addressing their removal.

The original boost pump switches were still installed, instead of the later model switches called out in Cessna Service Kit SK310-104. Additionally the jumper wire depicted on page 20 of SK310-104 had NOT been installed. This wire is required to bypass the boost pump circuit resistor and allow the boost pumps to be operated in High. However, there was a jumper wire installed found installed between the center taps of both boost pump switches that is not illustrated in the Cessna Wiring Schematics. This wire had a spade terminal on one end and a hook terminal on the other end. The screws at the switches where this wire had been installed were both loose allowing the wire to disconnect at the spade terminal end. This wire would have bypassed the oil pressure switches in the fuel boost pump circuit allowing the boost pump on a non-running engine to be activated by the boost pump switch instead of just the Primer switch. Two other screws on the switches were also found loose.

As wired the boost pumps would have been only able to operate in the low speed mode whether the boost pump switches were positioned in the LO position or the ON position. As wired the only way to operate the boost pump in the high-speed mode would have been to activate the spring loaded Primer switch.

The boost pump circuit wiring in this aircraft did not conform to either its original wiring configuration or to the later configuration illustrated in SK310-104. As such the pilot would have no information in the Pilot Operating Handbook to guide him in the boost pump operation.

Sincerely,



Michael J. Grimes
Air Safety Investigator

Enclosures:

Photos