

No. 98-03

Subject:

Aero Commander 500B

Distribution:

All DOI Airplane Pilots

Discussion:

Recently an inspector pilot conducting a pilot evaluation, in an Aero Commander 500B, turned off both "Shutoff Engine Hydraulic & Fuel" switches during flight. This resulted in the failure of both engines and the aircraft was forced to land on a busy highway.

The post incident investigation revealed the inspector pilot was not aware that certain serial numbered 500Bs are designed with the fuel shutoff switches wired in combination with the hydraulic shutoff switches. The check pilot had been flying 500Bs where similar overhead/guarded switches are "Shutoff Engine Hydraulic" switches. He had routinely been placing these switches off so he could evaluate the examinee's response to an in-flight hydraulics failure.

Discussions with Twin Commander Corporation of Arlington, Washington provided the following information:

Aero Commander 500Bs with serial numbers 893 through 1530 have guarded and safety wired "Shutoff Engine Hydraulic" switches. Aero Commander 500Bs with serial numbers 1531 through 1631 have guarded and safety wired "Shutoff Engine Hydraulic & Fuel" switches.

The Safety Guards covering these switches are required to be safety wired closed with a #26 gauge copper wire.

These switches are commonly referred to as "Emergency Firewall Shutoff" switches and should only be switched off during an actual emergency.

Hydraulic pump damage will occur if the hydraulic fluid is shut off and the pump continues to be driven by the engine.

Recommendation:

1. Know the aircraft systems.
2. Read and understand the switch labeling.
3. A guarded switch is a safety-protected switch, think before you move it.

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