



SAIB: CE-10-01

Date: October 5, 2009

SUBJ: Fuel: Fuel Tank Selector Valve Systems

This is information only. Recommendations aren't mandatory.

Introduction

This Special Airworthiness Information Bulletin (SAIB) is to inform you of an airworthiness concern on Cessna twin engine reciprocating engine powered airplanes. However, this issue may be applicable to other airplanes that use a detented fuel selector valve system.

At this time, this airworthiness concern is not an unsafe condition that would warrant AD action under Title 14 of the Code of Federal Regulations (14 CFR) part 39.

Background

During the fourth flight of the day, a Cessna Model 402C experienced a total loss of engine power on both engines due to several missed opportunities to detect, investigate, and correct an apparent lack of detent positions in the fuel tank selector valve system. This lack of detectable detents led to failure of the fuel tank selector valve to move to the commanded position. This condition was not identified by the pilot in command during preflight and normal procedures or by maintenance personnel during maintenance inspections.

The Cessna Pilots Operating Handbook and FAA Approved Airplane Flight Manual consistently states to “Feel for Detent” throughout the preflight, normal, amplified, and emergency procedures sections of the POH/AFM. Additionally, the various service and maintenance manuals require operational checks, which include a “feel for the detents”, binding and smooth operation, inspections and checks for condition, security and servicing. The maintenance manual also clearly states a Caution which advises:

“IF A DEFINITE DETENT IS NOT PRESENT IN EACH POSITION,
THE SYSTEM IS IMPROPERLY ADJUSTED”

The term “Service” is used consistently throughout the Cessna documentation to convey a multi-faceted approach to maintaining the airplane systems. Servicing may include the need to perform tasks such as inspection, cleaning, and lubrication at certain intervals as defined in the maintenance manual.

Additionally, FAA Advisory Circular 43.13-1B, Chapter 8, Section 2, Paragraph 8-34 offers the following guidance with respect to fuel tank selector valves:

“**c. Selector Handles.** Check the operation of each handle or control to see that it indicates the actual position of the selector valve to the placard location. Movement of the selector handle should be smooth and free of binding. Assure that stops and detents have positive action and smooth operational feel. Worn or missing detents and stops can cause unreliable positioning of the fuel selector valve.”

Recommendations

The FAA recommends that owners, operators, and maintenance personnel thoroughly review, understand, and adhere to the information published in the documentation identified above, which addresses the need to evaluate the performance and identify the service requirements to properly

maintain the fuel tank selector valve system. Failure to do so can have serious consequences as identified above.

For Further Information Contact:

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