



SAIB: CE-18-10

Date: February 9, 2018

SUBJ: Fuel System - Selector Valve Placard

This is information only. Recommendations aren't mandatory.

Introduction

This Special Airworthiness Information Bulletin (SAIB) advises registered owners and operators of **The Boeing Company Models (North American) AT-6, AT-6A, AT-6B, AT-6C, AT-6D, AT-6F, and T-6G** airplanes of an airworthiness concern regarding the possibility of installing an unapproved fuel selector valve and/or placard that may result in shutting off fuel flow to the engine during flight.

This SAIB recommends the verification of the appropriate fuel system placards and associated mechanical provisions designed to prevent inadvertently selecting the fuel selector position that would unknowingly shut off fuel flow.

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

Background

On May 17, 2016, a Model AT-6A airplane departed Falcon Field (Mesa, Arizona), Runway 22L in a formation flight for the purpose of sightseeing. Shortly after departure, witness statements indicated that the airplane appeared to lose power and the engine made popping noises. An emergency landing was performed and resulted in a crash landing onto a road that borders the west side of the airport. The airplane was destroyed by post impact fire and both occupants suffered fatal injuries. During the post-crash investigation, it was apparent that the fuel system did not fully conform with the design features contained in Supplemental Type Certificate (STC) SA00636CH.

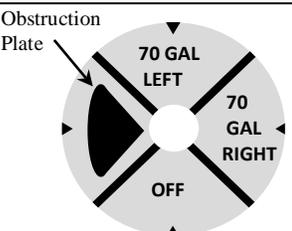
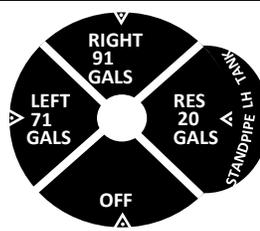
There are three notable findings that are relevant to this SAIB:

1. the fuel selector lever pointer was positioned in an unmarked painted white area on the placard, which shut off fuel;
2. the fuel selector valve and placard did not have the required obstruction screws and selector lever to prevent moving the selector to the unmarked area; and
3. the fuel selector placard was marked incorrectly.

We determined that the AT-6 fuel selector problem is likely an isolated event. The fuel selector was not approved for installation, and there is not a known similar fleet population of aircraft with this unapproved part installed.

Recommendations

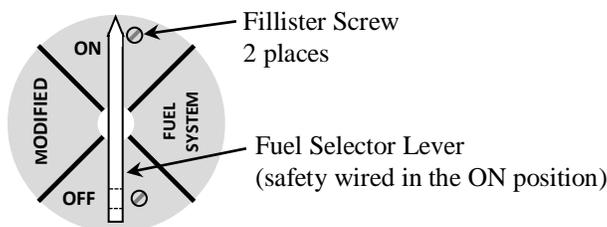
The FAA recommends that you verify that the following fuel selector placards and obstruction design features are installed:

Airplane Model	Fuel selector Placard part number	Obstruction plate part number	Reference illustrated parts catalog	Placard Figure
AT-6A (SNJ-3) AT-6B AT-6C (SNJ-4) AT-6D (SNJ-5)	77-48018	No obstruction plate installed	IPC T.O. No. 1T-6D-4, Fig 35, Item 72	
T-6G	168-48032	168-48033	IPC T.O. No. 1T-6G-4, Fig. 68, Items 32 and 34	
BC-1A AT-6 (SNJ-2)	No part number	No obstruction plate installed	NAA Report No. NA-866 dated 24 July 1940 See note below	
<p>Note – Type Certificate Data Sheet A-2-575, NOTE 2(l): On models BC-1A, AT-6 and SNJ-2 only, inspect fuel tank to determine whether gasoline can flow from one wing tank [compartment] to the other. If so, the following placard should be placed adjacent to the fuel selector valve: "Refer to both fuel gauges to determine remaining fuel."</p>				

STC SA00636CH

For airplanes conforming to STC number SA00636CH, the fuel placard part number is AD7131-3 and the obstruction is the installation of two fillister screws part number AN503-12-8. This STC modified the fuel system by removing the reserve fuel tank design feature in the left fuel tank and redirecting fuel flow from the right tank that is pressurized by ram air to the left tank through an interconnecting fuel pipe. The left fuel tank plumbing is routed and connected to the fuel selector to allow only ON or OFF operation. This architecture alleviates the need to switch fuel tanks during flight. In addition to changing the fuel routing, the fuel selector placard is revised to reflect ON or OFF operation (see figure below).

We recommend that airplanes with this STC be inspected in accordance with the installation instructions. In addition, a quick visual inspection is recommended to ensure that the following attributes of the STC are installed: 1) the fuel selector lever is safety wired to the fillister screw head, 2) the FUEL VENT TO FACE FORWARD placard is adjacent to the right hand fuel vent, 3) the right hand tank fuel vent is facing forward into the airstream, and 4) the left hand fuel vent elbow is capped and safety wired.



For Further Information Contact

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