



U.S. Department
of Transportation

**Federal Aviation
Administration**

Airworthiness Concern Sheet

Date: August 5, 2019

<p>Reply to: Name: Boyce Jones Title: ASE - Propulsion Office: Atlanta ACO Department: FAA Street Address: 1701 Columbia Ave City, State, ZIP: Atlanta, GA, 30337 Telephone: (404)474-5535 Email: Boyce.Jones@faa.gov</p>	<p>Make: Piper Model / Series: PA-28-140/-150/-160/-180 Cherokee, PA-28R-180/-200 Cherokee Arrow Serial Numbers: 28-20000 to 28-26946, 28-01 to 28-5859, 28R-30000 to 28R-31270, 28R-35001 to 28R-35820</p> <p>Reason for Airworthiness Concern: Introduced in 1961, the first generation of fuel selector mechanism installed on PA-28 models was a flat, round plate with a lever that could be manually rotated to one of four positions (each with its own detent): OFF – L – R – OFF. The design does not include any protection against inadvertent disruption of the position of the lever from its intended position nor does it prevent over-rotation which could result in mistakenly selecting the OFF position when not intended. After 1971, Piper released two different design improvement iterations (second generation and third generation) of the fuel selector to minimize the possibility of selector lever positioning errors. The current Piper production version of the fuel selector for the PA-28 is the third generation. The FAA released AD 71-21-08 to mandate the upgrade from generation 2 fuel selectors to the generation 3 fuel selectors; however, there is no AD to mandate the upgrade from the generation 1 round, flat plate fuel selector to the generation 3 fuel selector (Piper released Service Letter 590 on May 25, 1972, to recommend upgrading from the Generation 1 to the Generation 3 fuel selector, and then superseded SL 590 with Service Bulletin 840 on June 19, 1986. SB 840 was revised and SB 840A was issued on November 7, 2013). The FAA released SAIB CE-14-22 on July 10, 2014, to make owners/operators aware of certain PA-28 aircraft of an airworthiness concerns involving the Generation 1 fuel selector. Due to a recent reported concern, the FAA is once again looking into the possibility of an unsafe condition involving the generation 1 fuel selector and whether an AD is warranted.</p>
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Federal Aviation Administration (FAA) Description of Airworthiness Concern

Request for Information

The FAA is requesting the following information from owners and operators of the PA-28 models and serial numbers listed above (We are also looking for information from any PA-28 owner/operator that has the generation 1 round, flat plate fuel selector installed, regardless of whether your specific PA-28 model or serial number is included in the list above):

- 1) Do you currently have the Generation 1 round, flat plate fuel selector (For reference, see Figure 2 in the attachment for image of the Generation 1 fuel selector) installed on your aircraft (For clarity, the fuel selector is located in the cockpit on the lower left sidewall, near Pilot’s left leg – See Figure 1 in the attached image for location)?

If the answer to the previous question was ‘Yes’:

- a. Have you had any issues with the operation of the Generation 1 fuel selector that resulted in fuel management concerns (i.e. mistakenly selected the OFF position instead of the intended tank)?
- b. Do you have any concerns with the operation of the Generation 1 fuel selector, regardless of whether you have had any issues with the fuel selector that resulted in fuel management concerns?

2) Does anyone have any specific concerns related to a possible FAA action to issue an AD mandating the removing of the Generation 1 fuel selector and installation of the Generation 3 fuel selector (For reference, see Figures 3 and 4 in the attachment for images of the Generation 3 fuel selector) to minimize the risk of unintended fuel management errors?

This Airworthiness Concern Sheet (ACS) is intended as a means for FAA Aviation Safety Engineers to coordinate airworthiness concerns with aircraft owners/operators through associations and type clubs. At this time, the FAA has not made a determination on what type of corrective action (if any) should be taken. The resolution of this airworthiness concern could involve Airworthiness Directive (AD) action or a Special Airworthiness Information Bulletin (SAIB), or the FAA could determine that no action is needed at this time. The FAA's final determination will depend in part on the information received in response to this ACS.

The FAA endorses dissemination of this technical information to all manufacturers and requests association and type club comments.

Attachments:	Transmittal:	Response Requested By:
<input type="checkbox"/> Service Difficulty Report <input type="checkbox"/> Accident/Incident Data System <input checked="" type="checkbox"/> Service Letter / Bulletin <input checked="" type="checkbox"/> Special Airworthiness Information Bulletin <input type="checkbox"/> Federal Aviation Administration or National Transportation Safety Board Safety Recommendation <input type="checkbox"/> Airworthiness Directive <input type="checkbox"/> Alternate Means of Compliance <input type="checkbox"/> Risk Analysis <input checked="" type="checkbox"/> Other: Fuel Selector Images for Reference	<input type="checkbox"/> Federal Aviation Administration <input checked="" type="checkbox"/> Airplane Owners and Pilots Association <input checked="" type="checkbox"/> Experimental Aircraft Association <input checked="" type="checkbox"/> Type Club <input type="checkbox"/> Type Certificate Holder <input type="checkbox"/> Other:	<input type="checkbox"/> Emergency (10 days) <input checked="" type="checkbox"/> Alert (30 days) <input type="checkbox"/> Information (90 days)