



**Piper Aircraft, Inc.**  
2926 Piper Drive  
Vero Beach, FL, U.S.A. 32960

# SERVICE NO. 1273A LETTER

Date: October 6, 2021

(S)

## MAINTENANCE ALERT

Service Letter (SL) 1273A supersedes SL 1273 in its entirety. Aircraft that were previously made compliant with SL 1273 are in compliance with SL 1273A.

**SUBJECT:**

**FUEL SELECTOR VALVE MAINTENANCE REQUIREMENTS**

**REASON FOR REVISION:**

SL 1273A revises the Purpose section and the leak check procedures, and corrects the inlet and outlet location references in Figure 2 and Instructions.

**MODELS AFFECTED:**

PA-28-140 Cherokee Cruiser

PA-28-150/-160 Cherokee

PA-28-180 Cherokee

PA-28-236 Dakota

PA-28-151 Warrior

PA-28-161 Cadet

PA-28-161 Warrior II

PA-28-161 Warrior III

PA-28-180 Archer

PA-28-181 Archer II

PA-28-181 Archer III

PA-28R-180 Arrow

PA-28R-200 Arrow

PA-28R-200 Arrow II

PA-28R-201 Arrow III

**SERIAL NUMBERS AFFECTED:**

28-20001 through 28-26946;

28-7125001 through 28-7725290

28-03; 28-1 through 28-4377 and 28-1760A

28-03; 28-671 through 28-5859;

28-7105001 through 28-7205318

28-7911001 through 28-8611008;

2811001 through 2811050

28-7415001 through 28-7715314

2841001 through 2841365

28-7716001 through 28-8216300;

28-8316001 through 28-8616057;

2816001 through 2816109

2816110 through 2816119; 2842001 and up

28-E13; 28-7305001 through 28-7505261

28-7690001 through 28-8690056; 28-8690061;

28-8690062; 2890001 through 2890205

2890206 through 2890231; 2843001 through 2843949;

2881001 and up

28R-30002 through 28R-31270;

28R-7130001 through 28R-7130019

28R-30482; 28R-35001 through 28R-35820;

28R-7135001 through 28R-7135238

28R-7235001 through 28R-7635545

28R-7737002 through 28R-7837317;

2837001 through 2837061; 2844001 and up

ATA/JASC: 2823

(OVER)

PA-28R-201T Turbo Arrow III

28R-7703001 through 28R-7803374;  
2803001 through 2803015

PA-28RT-201 Arrow IV

28R-7918001 through 28R-8218026

**COMPLIANCE TIME:****Initial leak check:**

- For airplanes with a fuel selector valve that has accumulated 2,000 or more hours of time in service (TIS), or seven (7) calendar years, the initial leak check is to occur at the next regularly scheduled maintenance event, but not to exceed the next 100 hours TIS.
- For airplanes with an unknown service history of the fuel selector valve, the initial leak check is to occur at the next regularly scheduled maintenance event, but not to exceed the next 100 hours TIS.

**Recurring leak check:**

A recurring leak check shall take place each 2,000 hours TIS or seven (7) calendar years, whichever comes first.

Installation of a new or repaired fuel selector valve will relieve the leak check requirement until the replacement fuel selector valve accumulates 2,000 hours TIS or seven (7) calendar years, whichever comes first.

**APPROVAL:**

The engineering aspects of this service document have been shown to comply with the applicable Federal Aviation Regulations and are FAA approved.

**PURPOSE:**

In the event of an engine fire, a leaking fuel selector valve may not allow the proper shutoff of the fuel supply to the engine due to internal leakage. In addition, a valve having an external leak may allow air to be ingested into the engine causing a rough running engine and possible loss of power.

This external leak may not be noticeable on an installed valve due to the low positive pressures in the system, but may cause air ingestion during engine operation due to the suction of the engine driven and/or the electric fuel pump.

This service letter provides instructions for the recurring bench check of a specific model of the fuel selector valve for leaks.

**INSTRUCTIONS:**

**NOTE:** This service bulletin provides instructions for the recurring bench check of Fuel Selector Valve, Piper part number (P/N) 491-947 (Allen Aircraft Products P/N 6S122). Some of the affected aircraft may have a different fuel selector valve installed. For those aircraft, refer to the applicable Piper maintenance manual for maintenance requirements.

1. Identify the model of fuel selector valve that is currently installed in the aircraft:
  - a. Gain visual access to the fuel selector valve by removing the fuel selector handle and the fuel selector cover, per Chapter 28 of the applicable Piper Airplane Maintenance Manual (AMM) or Section IX of the applicable Service Manual (SM) or AMM.
  - b. Using a mirror and flashlight as needed, examine the markings on the fuel selector valve.
    - If the fuel selector valve conforms to the illustration in Figure 1, then the recurring bench check described in this service letter is applicable. Proceed to Step 2.
    - If the fuel selector valve does not conform to the illustrations in Figures 1 and 2, then the recurring bench check described in this service letter is not applicable. Reinstall the fuel selector handle and the fuel selector cover. Follow the applicable Piper maintenance manual for fuel selector valve maintenance requirements. Proceed to Step 5.

2. Remove the fuel selector valve from the aircraft, using the instructions in either Ch. 28 of the applicable Piper AMM or Section IX of the applicable SM or AMM.
3. Perform leak checks using Avgas 100LL or Stoddard solvent (MIL-PRF-7024, Type II). Refer to Figure 2.
  - a. With the valve shaft rotated to one of the two closed (off) positions, pressurize the fluid to  $15 \pm 1$  psi at port C.
  - b. Examine the valve for evidence of leaking from ports A and B for a minimum of 30 seconds. Internal leakage from either port is permissible, but shall not exceed 5 cc per minute.
  - c. Repeat Steps a. and b. for the remaining closed position.
  - d. Install suitable caps (AN929 or equivalent) on the fittings in ports A and B, or 1/4 in.-18 NPT plugs (SAE AS4863-02 or equivalent) in valve bores if fittings are removed.
  - e. Rotate the valve shaft to one of the two open (on) positions and apply  $15 \pm 1$  psi at port C.
  - f. Examine the valve for any evidence of external leakage. No external leakage is permissible.
  - g. Repeat Steps e. and f. for the remaining open (on) position.

If these criteria cannot be met, then prior to next flight the fuel selector valve must be repaired or replaced. At the discretion of the owner/operator, order and install either:

- Packing Replacement Kit, Piper P/N 652-781
- Fuel Selector Valve, Piper P/N 491-947 (Allen Aircraft Products P/N 6S122)

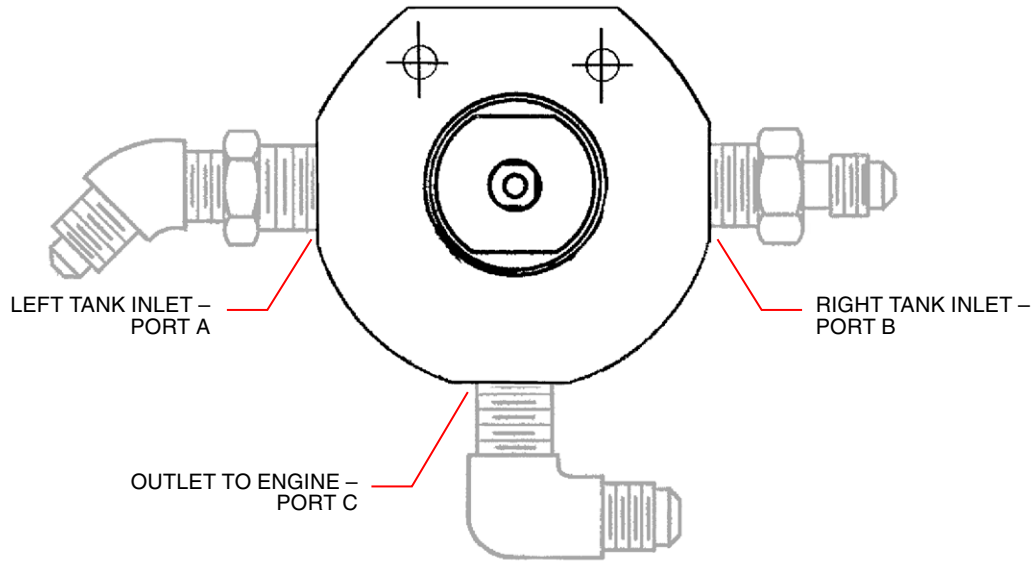
The Packing Replacement Kit, Piper P/N 652-781, provides parts and instructions for the replacement of all internal O-rings, springs and detent balls. Repaired valves must be tested as described above. Upon completion of either option, proceed to Step 4.

If the valve passes the leak test described above, drain any remaining fluid in the valve, then proceed to Step 4.

4. As applicable according to Step 3, reinstall the existing valve or install the new or repaired valve, using the instructions in Ch. 28 of the applicable Piper AMM or Section IX of the applicable SM or AMM. Perform an engine ground run and check for leaks.
5. Make a logbook entry documenting compliance with this service letter, noting whether the installed fuel selector was identified as Piper P/N 491-947 (Allen Aircraft Products P/N 6S122), or some other part.



**Figure 1**  
Fuel Selector Valve, Piper P/N 491-947



**Figure 2**  
Port Locations on Fuel Selector Valve, Piper P/N 491-947

**MATERIAL REQUIRED:**

On condition, one (1) of the following, at the discretion of the owner/operator:

- Packing Replacement Kit, Piper P/N 652-781
- Fuel Selector Valve, Piper P/N 491-947 (Allen Aircraft Products P/N 6S122)

**AVAILABILITY OF PARTS:**

Your Piper Approved Service Center

**EFFECTIVITY DATE:**

This service letter is effective upon receipt.

**SUMMARY:**

Please contact your Piper Approved Service Center to make arrangements for compliance with this service letter in accordance with the compliance time indicated.

**NOTE:** Please notify the factory of any address/ownership corrections. Changes should include aircraft model, serial number, and current owner's name and address.

Corrections and/or changes should be directed to:

PIPER AIRCRAFT, INC.

Attn: Customer Service

2926 Piper Drive

Vero Beach, FL 32960

or:

CustomerService@piper.com

Please include in subject line: "Aircraft ownership update"