Petersen Aviation, Inc.
984 K Road
Minden, Nebraska 68959

FAA APPROVED

AIRPLANE FLIGHT MANUAL SUPPLEMENT

FOR

Piper PA-28 Series Aircraft

See Applicable Model and Serial Number List

Registration Number D-EWPA

Serial Number 28-43597

This Supplement must be attached to the FAA Approved Airplane Flight Manual applicable to that particular airplane when the airplane has been modified in accordance with STC SA2660CE. The information contained herein supplements or supersedes the basic manual only in those areas listed herein. For limitations, procedures and performance information not contained in this supplement, consult the basic Airplane Flight Manual.

FAA APPROVED Grant Youngdahl

for Margaret Kline, Manager
Aircraft Certification Office
Federal Aviation Administration
Wichita, Kansas

FAA Approved: October 17, 1990
Revision D: August 22, 2014

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Log of Revisions				
Revision	**Date**	**Description**	**Page**	***FAA Approved by**
None	October 17, 1990	Original Issue	Pages 1 thru 3	E. L. Bollin
(A)	April 29, 2005	Revised All Pages. Added Log of Revisions.	Pages 1 thru 7	G.M. Baker
(B)	July 25, 2007	Revised pages 3 & 5 to address EASA concerns from STC validation. Repaginated all due to compression down to 6 pages.	Pages 1 thru 6	G.M. Baker
(C)	Aug. 17, 2010	Revised toggle placard	Page 4	G.M. Baker
(D)	August 22, 2014	Removed References to 12 & 24 volt systems. Revised Part Numbers and Fuel Placard.	Pages 1 thru 6	

*Manager
Aircraft Certification Office
Federal Aviation Administration
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1. **Limitations Section:**

Fuel: Unleaded or Leaded Automotive Gasoline
91 minimum antiknock index, and 93UL (RON+MON)/2 per
ASTM D-439 or D-4814, and EN228 (minimum 98 RON).

Also approved for UL91 (D-7547 and UL94 (D-7592)

Intermixing with UL91, 93UL, UL94 & 100LL also approved

DO NOT USE FUEL CONTAINING ALCOHOL

Fuel Management:
When operating on auto gas, including when auto gas is intermixed with aviation gasoline:
a) Right fuel tank must be selected for takeoff and landing.
b) Left fuel tank is limited to cruise flight only, except in emergency situations.

Placards:
1. Part No. V674903-28, Item 12/24-9 on the instrument panel in full view of the pilot:

TAKEOFF AND LANDING ON RIGHT TANK WHEN OPERATING WITH AUTO GAS

2. Part No. V674903-91 Item 12/24-33 near existing Avgas placards at each fuel servicing port:

Fuel: Unleaded or Leaded Automotive Gasoline 91 minimum antiknock index, and 93UL (RON+MON)/2 per ASTM D-439 or D-4814, and EN228 (minimum 98 RON). Also approved for Aviation Grade UL91 (D-7547) and UL94 (D-7592). Intermixing with UL91, 93UL, UL94 & 100LL also approved. DO NOT USE FUEL CONTAINING ALCOHOL

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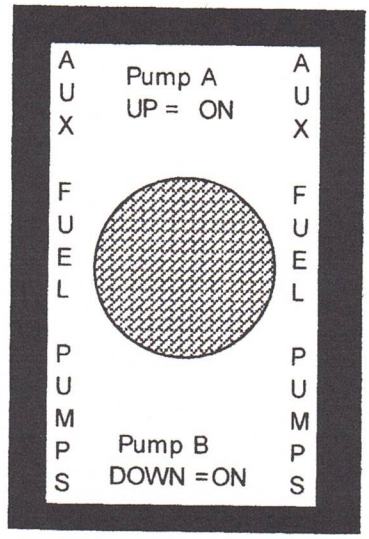
3. Part/Item No.12/24-15 on the instrument panel around the electric fuel pump toggle switch:



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4. Procedures Placard 12/24-58 located on the instrument panel in full view of the pilot:

Refer to the Airplane Flight Manual Supplement for procedures when operating with auto gas.

5.Circuit Breaker Placards

Fuel Pump A	Fuel Pump B	Engine Primer
Item 12/24-10	Item 12/24-7	Item 12/24-59

The three placards specified above are used to mark the circuit breakers on the instrument panel.

Electrically Primed: Use all three placards listed above.

Manually Primed: Use two circuit breakers placards. Item 12/24-59 is NOT used.

2. PROCEDURES SECTION:

Emergency Procedures

Fuel Management

When operating on auto gas, including when auto gas is intermixed with aviation gasoline:

a) Right fuel quantity less than ¼ tank – Land using left fuel tank.

NOTE: Operating on the left tank may make the airplane more susceptible to vapor formation than the right tank.

Fuel System:

Fuel Pump Failure

SA2660CE equips PA-28's with two separate electric fuel pumps. If one pump fails, throw the three way fuel pump switch to engage the second, redundant electric fuel pump. If the other electric fuel pump is also inoperative, check to make sure the Master switch is ON, check circuit breakers.

If the engine is running rough or not at all, lower the nose, reduce throttle setting to 75% or less, Mixture to FULL RICH, Carb Heat ON, and switch fuel tanks. Choose a suitable off airport landing location or if possible continue flight to the nearest airport.

Normal Procedures:

Fuel Management:

When operating on auto gas, including when auto gas is intermixed with aviation gasoline:

a) Before Takeoff
   (1) Fuel Selector – Right Tank

b) Cruise
   (1) Fuel Selector – Use right and left tank positions to maintain lateral fuel balance.
   NOTE: Vapor formation is more likely when operating at ambient temperatures of 85F or above. Additional vapor margin is provided from the right tank due to its larger fuel supply line, and when the fuel quantity in the right tank is maintained at or above the ¼ full indication. Plan flight so as to have ¼ tank or more fuel remaining in the right tank for landing and possible go-around.

c) Before Landing
   (1) Fuel Selector – Right tank.

PROCEDURES SECTION: (CONT'D)

Normal Procedures:

Fuel System:
Auxiliary Fuel Pumps:
There are two pumps, Pump A and Pump B controlled by an electric switch on the pilot's instrument panel. Either Pump A or Pump B must be ON for takeoff, landing, ground taxi and climb operations. The selected fuel pump may be turned OFF (center position) during cruise operations only, provided proper fuel pressure values are maintained (See Limitations Section in basic Airplane Flight Manual). It is recommended that Pump A and Pump B be used alternately to obtain approximately even usage.

Before starting engine:

1) With Master switch ON, check auxiliary fuel pumps, Pump A and Pump B one at a time as follows:
   a. Listen for pump operation
   b. Verify proper fuel pressure is obtained.

2) Turn fuel pumps OFF

Engine Priming:
To prime the engine before starting:

Manual Priming

1) Aircraft equipped with manual engine priming pump. With the Mixture FULL RICH, pull the primer out then push it in 3 to 5 times. Make certain that the primer pump is in the closed and locked position (pushed in and rotated till locked) before activating a fuel pump or starting the engine.

Electrical Priming

2) Aircraft equipped with electric engine priming system:
   a. Turn Master Switch ON
   b. Turn fuel selector switch to the Right tank.
   c. Depress the electric priming switch with one hand.
      (this opens the primer solenoid valve)
   d. While depressing the fuel primer solenoid valve switch, throw the fuel pump toggle switch either up or down with the other hand to activate one Pump.
   e. Run the pump for only a short time (one to three seconds)
   f. Shut the pump off and release electric priming solenoid switch.
   g. Start the engine.
   h. After the engine starts, activate either the Pump A or Pump B switch so that a fuel pump remains on for taxi, takeoff, and climb.

Manual or Electrically Primed: After the engine starts and during warm up, allow the engine to run with the electric fuel pumps off to verify that the engine driven fuel pump is operating properly. Before taxi activate either Pump A or Pump B so that one of the electric fuel pumps remains on for taxi, takeoff, and climb.

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APPROVED
Wichita Aircraft Certification
Office, ACE-115W
Central Region
Date 04/20/05 J D Jones

Service Bulletin

PA-28-160, -161, -180, -181
Bulletin No. 05-3
Revision No. (-)
Date April 12, 2005

Subject:

VERIFYING THAT THE PRIMER CONTROL IS CLOSED AND LOCKED PRIOR TO ELECTRIC FUEL PUMP OPERATION.

Effectivity:

This Service Bulletin applies to all PA-28-160, -161, -180, -181 aircraft on which STC SA2660CE has been installed.

Reason:

It has come to our attention that an unlocked manual primer control may allow fuel to be directed both to the carb and directly to the cylinders via the priming system upon activation of the electric fuel pumps. This could result in an a mixture that is too rich for proper engine operation, or could increase the possibility of fire during engine startup. Worn o-rings in the primer could result in similar situations.

Instructions:

Following normal engine priming make certain that the primer control knob is in the closed and locked position (pushed in and rotated till locked) before activating a fuel pump or starting the engine. Check the integrity of the primer o-rings at each annual or 100 hour inspection.