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

Supplement No. 2

FAA APPROVED

AIRPLANE FLIGHT MANUAL SUPPLEMENT

FOR

Piper PA-28 Series Aircraft

See Applicable Model and Serial Number List

5915153

Registration Number: PH-BRD

Serial Number: 28-43494

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 D M Baker
for

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

FAA Approved: October 17, 1990
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Log of Revisions

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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
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*Manager
Aircraft Certification Office
Federal Aviation Administration
Wichita, Kansas

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1. **Limitations Section:**

Fuel:
The use of leaded and unleaded automotive gasoline, 91 minimum antiknock index (RON+MON)/2 per ASTM Specification D-439, D-4814 or EN 228 (minimum 98 RON) are approved. Intermixing with aviation gasoline is also approved.

DO NOT use 82UL Aviation Gasoline or mixtures with 82UL.
DO NOT use fuel that contains 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

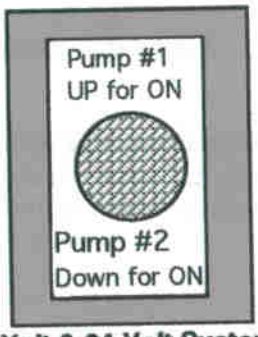
12 & 24 Volt Systems:

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, (RON+MON)/2 per ASTM D-439 or D-4814, and EN228 (minimum 98 RON). Intermixing with 100LL Aviation Gasoline also approved. NOT APPROVED FOR USE OF 82UL AVIATION GASOLINE OR MIXTURES WITH 82UL DO NOT USE 82UL AVIATION GASOLINE OR MIXTURES WITH 82UL DO NOT USE FUEL THAT CONTAINS ALCOHOL

12 & 24 Volt Systems:

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



12 Volt & 24 Volt Systems:

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4. Part/Item No. 24-27 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.

12 Volt & 24 Volt Systems:

5.Circuit Breaker Placards

Item 24-35	Item 24-36	Item 12/24-10	Item 12/24-7
Converter A	Converter B	Fuel Pump A	Fuel Pump B

Engine Primer

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

12 Volt airplanes - Use Item 12/24-10 & 12/24-7 only.

24 Volt Electrically Primed: Use all five placards listed above.

24 Volt Manually Primed: Use four circuit breakers placards. Item 24/12 is NOT used.

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2. PROCEDURES SECTION:

Emergency Procedures **12 & 24 Volt Airplanes**

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

12 & 24 Volt Airplanes - These airplanes are equipped 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.
24 Volt Airplanes: Check circuit breakers.
12 Volt Airplanes: Check circuit breakers.

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

Abnormal Procedures: **24 Volt Airplanes:**

Fuel System

The circuit breakers protect the wiring to the fuel pumps and to the voltage converters. If a fuel pump failure should occur, check all circuit breakers because a "tripped" circuit breaker for a converter will in turn cause its associated pump to be inoperative.

Normal Procedures: **12 & 24 Volt Airplanes**

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: 12 & 24 Volt Airplanes

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 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:

1) Aircraft equipped with manual engine priming pump - following engine priming, 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.

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 the 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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