

Aircraft _____ Serial No. _____
Make/model

Engine(s) _____ Serial No.(s) _____
Make/model

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G100UL[®] Avgas

FAA Approved Airplane Flight Manual Supplement

This Supplement must be attached to the Airplane Flight Manual or Pilot Operating Handbook when General Aviation Modifications, Inc. G100UL fuel is to be used in accordance with the following STC's: **SA01967WI** for airframes and **SE01966WI** for engines.

The information contained herein supplements the information of the Airplane Flight Manual or Pilot Operating Handbook or operating placards only in those areas listed herein. For limitations, procedures, and performance information not contained in this supplement, consult the basic Airplane Flight Manual or Pilot Operating Handbook or appropriate placards.

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LOG OF REVISIONS

Revision	Pages	Date	Description	FAA Approved
IR	All	7-12-2021	Complete Supplement	

SECTION1 – GENERAL

This supplement provides information to be used when operating aircraft and engines with G100UL avgas. Keep this document in the airplane cockpit within reach of the pilot.

Description

G100UL aviation gasoline (avgas) is an unleaded high octane avgas that may be used in place of, or in any combination with, ASTM D910 100LL, or any approved avgas with motor octane number lower than 100. G100UL avgas is not dyed like blue leaded aviation gasoline. G100UL avgas may appear yellow to dark amber in color, depending on the constituents in the fuel.

SECTION 2 – LIMITATIONS

Fuel Limits

APPROVED FUELS

Use Grade G100UL avgas in any combination with fuels approved for use on aircraft/engines that are approved for operation on Grade 100LL and/or aviation fuels that have Motor Octane Numbers lower than 100.

CAUTION: DO NOT MIX G100UL AVGAS WITH MOTOR GASOLINE (MOGAS)
THAT CONTAINS ETHANOL OR METHANOL.

For aircraft that currently approve its use, isopropyl alcohol in amounts not to exceed 1% by volume can be added to G100UL or a mixture of G100UL and 100LL avgas to prevent ice formation in fuel lines and tanks. Be sure that isopropyl alcohol does not exceed the 1% by volume of the total amount of avgas or avgas mixture in the tank.

When mixed with 100LL avgas the G100UL avgas may change the color of the fuel mixture to a color that does not match the color of either fuel.

Fuel additives approved in the base AFM, POH, or placards continue to be approved in dosage amounts as listed in the AFM, POH, or placards.

SECTION 3 – EMERGENCY PROCEDURES

No Change

SECTION 4 – NORMAL PROCEDURES

During preflight inspection of the aircraft, drain fuel sumps and check fuel for signs of water or contaminants in the usual manner. The native color of G100UL avgas tends to be yellow to dark amber. Mixed 50/50 with 100LL, it will typically have a green tint. Other combinations of 100LL and G100UL avgas will result in still different colors. The color has no effect on the performance of the fuel. Water will still gather at the bottom of the fuel sample cup, as with 100LL and other aviation gasolines. Observe normal good practices to avoid contact with the skin or excessive inhalation of gasoline vapors. Use soap and water to promptly wash skin areas contaminated with aviation gasolines as soon as possible after exposure.

Operating procedures, including power settings, fuel flows, operating temperatures, operating limitations, etc. as listed in the aircraft POH, FMS, or placards remain unchanged while operating on G100UL avgas.

G100UL avgas has a volumetric energy density that is approximately 1 - 2% greater than that of typical ASTM D910 100LL fuel. Therefore, operation on 100% G100UL fuel may allow running on very slightly lower fuel flow (measured in gallons/hour) while providing the same power. Thus, operation with G100UL avgas may result in negligible to very slightly greater range at the same airspeed compared to operation on the same volume quantity of 100LL avgas, assuming all other factors that have an effect on range are the same.

SECTION 5 – PERFORMANCE

Performance will be essentially unchanged by the use of G100UL avgas, alone, or in any combination with other fuels approved for your airframe and engine.

SECTION 6 – WEIGHT AND BALANCE

The empty weight may change by a slight amount when G100UL avgas is used. This is due only to the very small change in the weight of the unusable fuel which is considered part of the empty weight of the aircraft. The weight of the unusable fuel will increase by ~4% when G100UL is used in place of 100LL. This slight increase in empty weight is considered negligible and does not require the empty weight or c.g. to be re-calculated. The full fuel payload will be reduced by the slight increase in the weight of the volume of G100UL that replaces 100LL in the tanks.

When using Grade G100UL avgas, use 6.25 lbs/gal for weight and balance calculations. For Grade 100LL, use 6.0 lbs/gal for weight and balance calculations. For mixtures of G100UL avgas

and other fuels, either use 6.25 lbs/gal or calculate the weight of the combined fuel types, as indicated by their respective weights/gallon. Note, approved automotive / MoGas may often weigh as much as 6.3 lbs/gallon.