
Service Newsletter

May 18, 2010

SNL10-5

TITLE

ETHANOL BASED FUEL NOT APPROVED FOR USE IN CESSNA AIRPLANES

TO

Cessna Distributors and Single Engine Service Stations and Owners of affected airplanes

MODELS AFFECTED

All Cessna models powered by piston engines

NOTE: The use of ethanol-based fuels in any Cessna manufactured piston engine powered airplane is not approved by Cessna.

This Service Newsletter supersedes Service Newsletter SNL02-6.

DISCUSSION

Cessna has been evaluating unleaded aviation piston engine fuels as part of an industry-wide effort to develop an alternative or alternatives to leaded 100LL Avgas. Our evaluations have included Ethanol based fuels that have recently been approved for use in some single engine airplanes under provisions of FAA Supplemental Type Certificates (STCs).

To date, Cessna's tests and evaluations have demonstrated that Ethanol based fuels such as AGE-85 cannot be considered as an alternative to 100LL Avgas.

WARNING: THESE TESTS AND EVALUATIONS ALSO SUGGEST THAT OPERATIONAL SAFETY MAY BE COMPROMISED BY THE USE OF ETHANOL BASED FUELS.

The results that follow have been observed in our testing of AGE-85 fuels:

- To match detonation characteristics at high power settings, the utilization of ethanol-based fuels requires fuel flow volume increases of nearly forty percent (40%) as compared to 100LL fuel. This means that the current published airplane performance information is not accurate when using ethanol-based fuels.
- Ethanol-based fuels are not compatible with some fuel system components. We have seen examples of extreme corrosion of ferrous components, the formation of salt deposits, jelly-like deposits on fuel strainer screens, and internal separation of portions of rubber fuel tanks.
- The use of ethanol-based fuels can negatively affect electric fuel pumps by increasing internal wear and causing undesirable spark generation.

Page 1 of 2

To obtain satisfactory results, procedures specified in this publication must be accomplished in accordance with accepted methods and prevailing government regulations. Cessna Aircraft Company cannot be responsible for the quality of work performed in accomplishing the requirements of this publication.

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- AGE-85 is not compatible with some fuel quantity gauging systems and may cause erroneous fuel quantity indications.
- AGE-85 is capable of dissolving large amounts of water at conditions down to minus 77°F, thereby impeding the detection and removal of water from the fuel system.
- AGE-85 may block fuel filters thereby affecting fuel flow.
- AGE-85 experiences heavy evaporation losses.

OWNER NOTIFICATION

On June 1, 2010 a copy of this Service Newsletter will be sent to applicable owners of record.

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