

Standard Change CS-SC202c

USE OF AVIATION GASOLINE (AVGAS) UL 91

1. Purpose

Unleaded Avgas UL 91 (according to ASTM D7547 or Def Stan 91-90) may be used if approved for the particular engine types and the installation at the aircraft level is already approved for operation with conventional Avgas or motor gasoline (Mogas).

Avgas UL 91 may also be used in all engines and aircraft types approved for use with Mogas RON 95 (MON 85) in accordance with Standard EN 228.

Even if approved for the engine, operation with Avgas UL 91 is a modification at the aircraft level, and placards and manuals have to be amended which could be done using this SC.

2. Applicability/Eligibility

Aeroplanes other than complex motor-powered aircraft, and powered sailplanes with spark-ignited piston engines using Avgas or Mogas.

3. Acceptable methods, techniques, and practices

To enable the use of unleaded Avgas UL 91 with this SC, the following conditions are to be met:

- the engine installed on the aircraft is approved for the use of unleaded Avgas UL 91 and the aircraft is already approved for operation with conventional Avgas (according to ASTM D910, Def Stan 91-90, Mil-G-5572, GOST1012-72 or equivalent standards) or Mogas; or
- the engine, as well as the aircraft, is approved for operation with Avgas Grade 80³²; or
- the engine, as well as the aircraft, is approved for operation with Mogas RON95 (MON 85) in accordance with Standard EN 228; and
- the installed engine has not been modified and meets the specifications of the original engine type certificate; and
- placards are installed/amended as needed to allow the use of the approved fuels.

Warning 1:

The use of unleaded Avgas UL 91 in engines that have not been approved for its use may cause extensive damage to the engines or lead to in-flight failure due to the lower motor octane number (MON) of the fuel, compared with Avgas 100LL.

Warning 2:

This SC is not intended for approving the use of automotive fuel.

4. Limitations

None.

³² Operating limitations may specify grade 80 Avgas in various forms, including 'grade 80/87', '80 minimum', '80/87', '80', or '80 octane fuel or lower grades' as per FAA SAIB HQ-16-05R1 or later revisions.

5. Manuals

Amend the AFM with an AFMS that introduces aircraft operation with unleaded Avgas UL 91.

6. Release to service

The pilot-owner may release the aircraft to service after embodiment of this SC, subject to compliance with point M.A.801 or point ML.A.801 of Regulation (EU) No 1321/2014 and in accordance with AMC M.A.801 or AMC1 ML.A.801, as applicable.

[Issue: STAN/2]

[Issue: STAN/4]