



652 Oliver Street
Williamsport, PA 17701 U.S.A.

Telephone +1 (800) 258-3279 U.S. and Canada (Toll Free)
Telephone +1 (570) 323-8181 (Direct)
Facsimile +1 (570) 327-7101
Email Technical.support@lycoming.com

www.lycoming.com

SERVICE INSTRUCTION

DATE: April 8, 2020

Service Instruction No. 1070AB
(Supersedes Service Instruction No. 1070AA)
Engineering Aspects are
FAA Approved

SUBJECT: Specified Fuels for Spark-Ignited Gasoline Aircraft Engine Models

MODELS AFFECTED: Lycoming engine models as detailed in Table 3

TIME OF COMPLIANCE: When refueling aircraft

REASON FOR REVISION: Added listings for IO-390-D to Table 3

NOTICE: Incomplete review of all the information in this document can cause errors. Read the entire Service Instruction to make sure you have a complete understanding of the requirements.

This Service Instruction identifies approved fuels for Lycoming spark-ignited gasoline aircraft engines. Fuels no longer known to be in production and distribution have been removed from this Service Instruction. For historical information, refer to the engine model Type Certificate Data Sheet or previous revisions of this Service Instruction.

CAUTION: AIRFRAME APPROVAL IS NECESSARY. THIS SERVICE INSTRUCTION IDENTIFIES APPROVED FUELS FOR ENGINES BASED ON THE ENGINE OPERATING LIMITATIONS INCLUSIVE OF OUTSIDE AIR TEMPERATURE, CYLINDER HEAD TEMPERATURE AND OIL TEMPERATURE. AIRFRAME OPERATING LIMITATIONS CAN BE DIFFERENT THAN ENGINE OPERATING LIMITATIONS. REFER TO THE PILOT OPERATING HANDBOOK (POH), AIRFRAME TYPE CERTIFICATE (TC), AIRFRAME SUPPLEMENTAL TYPE CERTIFICATE (STC) OR OTHER APPLICABLE REGULATORY GUIDANCE FOR FUELS APPROVED AT THE AIRFRAME LEVEL.

Fuels approved for use in Lycoming engines in Table 3 include the following types:

- Aviation Fuels (Table 1)
- Automotive Fuels (Table 2)

CAUTION: ANY MIXTURE OF UNAPPROVED FUELS AND ADDITIVE MATERIALS THAT MAKES A LOWER THAN SPECIFIED OCTANE RATING, CAN CAUSE ENGINE DAMAGE. USE OF LOWER-THAN-SPECIFIED OCTANE FUEL COULD CAUSE DETONATION AND MECHANICAL DAMAGE TO THE ENGINE. IF INCORRECT FUEL OR ADDITIVES ARE USED, REFER TO THE LATEST REVISION OF SERVICE BULLETIN NO. 398 FOR INSTRUCTIONS TO CORRECT THE FUEL CONTAMINATION.



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