FAA
Aviation Safety

SPECIAL AIRWORTHINESS INFORMATION BULLETIN

SAIB: NE-11-56
SUBJ: Semi-Synthetic Jet Fuel **Date:** September 14, 2011

This is information only. Recommendations aren't mandatory.

Introduction

This Special Airworthiness Information Bulletin (SAIB) advises aircraft operators, Fixed Base Operators (FBOs), FAA repair stations and FSDOs, and Foreign Civil Aviation Authorities, that jet fuel made from hydroprocessed fatty acid esters and fatty acids (HEFA) or Fischer Tropsch (FT) synthetic blending components that meets the requirements of ASTM International Standard D7566 is acceptable for use on aircraft and engines certificated for operation with D1655 Jet A or Jet A-1 jet fuel, provided that it is re-identified as D1655 fuel. When re-identified as D1655 fuel, D7566 jet fuel meets all the specification requirements of D1655 and therefore meets the approved operating limitations for aircraft and engines certificated to operate with D1655 fuel, unless otherwise prohibited by the engine or aircraft type certificate (TC) holder.

Background

The FAA relies on ASTM International to develop fuel specifications that applicants may designate as operating limitations for their approved products. These aviation fuel operating limitations may be listed in the product's Type Certificate Data Sheet (TCDS), Installation Manual, service instructions, or as limitations associated with a supplemental type certificate (STC).

ASTM International issued ASTM Standard Specification D7566, "Standard Specification for Aviation Turbine Fuel Containing Synthesized Hydrocarbons," for drop-in jet fuel from alternative feedstocks in September 2009. This specification defines properties for semi-synthetic jet fuel made from blending conventional jet fuel with synthetic blending components that are specified in individual annexes. These semi-synthetic jet fuels specified in D7566 possess essentially identical composition, properties, and performance to conventional jet fuels. This specification initially included only one annex for synthetic fuel from coal, biomass, and natural gas produced using the FT process. On July 1, 2011, a second annex was added to this specification to permit the use of HEFA synthetic blending components. HEFA is considered a biofuel because it is made from plant oils or animal fats.* Both D7566 and the existing specification for conventional jet fuel, ASTM International Standard D1655, "Standard Specification for Aviation Turbine Fuels" are cross-referenced to allow D7566 fuels to be re-identified as D1655 fuels when they enter the distribution system. When re-identified, D7566 fuels made with HEFA or FT blending components meet existing FAA-approved operating limitations, unless otherwise prohibited by the engine or aircraft TC holder.

Recommendations

The following recommendations apply to HEFA or FT fuels meeting ASTM specification D7566 that are re-identified to ASTM D1655 Jet A or Jet A-1 fuels (unless otherwise prohibited by the engine or aircraft Type Certificate (TC) holder):

1. These fuels are acceptable for use on those aircraft and engines that are approved to operate with Jet A or Jet A-1 fuels meeting D1655.

2. Operating Limitations in Aircraft Flight Manuals, Pilot Operating Instructions, or Type Certificate Data Sheets that specify ASTM D1655 Jet A or Jet A-1 fuel are acceptable for use with these fuels.
3. Current aircraft placards that specify Jet A or Jet A-1 fuels are acceptable for use with these fuels.
4. Operating, maintenance or other service documents for aircraft and engines that are approved to operate ASTM D1655 Jet A or Jet A-1 fuel are acceptable for use when operating with these fuels.

For Further Information Contact

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*HEFA is also referred to as Hydroprocessed Renewable Jet (HRJ) and Bio-SPK (synthesized parrafinic kerosene)