



Commercial Aviation Alternative Fuels Initiative

Supporting solutions for secure and sustainable aviation

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Landmark synthetic jet fuel specification passes critical hurdle

New specification passed by ASTM International Aviation Fuels Subcommittee

What — A new fuel specification, labeled DXXXX until finalized, that will enable use of synthetic fuels in commercial aviation, was formally voted upon and passed yesterday by the ASTM International Aviation Fuels subcommittee having responsibility for jet fuel. The action took place on June 24, 2009, during a meeting of the subcommittee in Norfolk, VA. The following provides meeting outcomes as reported by CAAFI sponsors who lead or are key participants in the subcommittee.

Why — Synthetic fuels must be included in existing and new aviation fuel specifications before these fuels can be used on commercial aircraft and to enable their distribution via the current aviation infrastructure.

Who? ASTM International established the Synthetic Fuels Task Force, chaired by CAAFI Steering Committee member and Certification Team leader Mark Rumizen of the FAA, to develop a synthetic fuel specification. The task force is composed of stakeholders from the aviation fuel supply chain including equipment manufacturers, fuel producers, airlines and the U.S. Air Force. Many of the task force members are CAAFI sponsors and stakeholders.

Meeting Highlights

At its meeting, the ASTM International Aviation Fuels Subcommittee reviewed and discussed return ballots and comments submitted in regard to a new specification for alternative aviation fuels containing synthesized hydrocarbons. The proposed specification describes the fuel properties and criteria necessary to control the manufacture and quality of these fuels for aviation use.

This new specification, which will be referred to as "DXXXX" until final issuance, constructs a framework to enable the use of multiple alternative fuels (including both non-renewable and renewable blends) for aviation, and targets complete interchangeability with conventional fuels produced to specification D1655. This specification is being structured, via annexes, to accommodate different classes of

alternative fuels. The initial issue of the specification will enable use of fuels from the Fischer-Tropsch (FT) process up to a 50 percent blend with conventional Jet A. FT fuels can be generated from a variety of feedstocks, including biomass (biomass to liquid) and natural gas to liquid, in addition to coal to liquid and combinations thereof. It is expected that the FT approval will be followed by approvals for hydrotreated renewable Jet (HRJ) blends and other alternatives as data from technical evaluations is obtained. An ASTM-required research report on the HRJ fuels is expected by year-end. This will support incorporation of HRJ fuels into the new D-XXXX specification by the end of 2010, pending favorable evaluation of the research report.

At the June 24 meeting, after review of comments to the draft specification, the Aviation Fuels Subcommittee voted to approve the specification and to proceed with a ballot to the top-level Petroleum Products and lubricants committee of ASTM International within the next two weeks. If negative votes are not cast in the committee-level ballot round, then it is anticipated that the specification will be issued with its official ASTM numerical designation, by the fall.

Meeting participants were uniformly pleased with the subcommittee's outcome. Summing up the sentiments of candidate buyers for aviation alternative fuels, Nancy Young, Vice President of Environmental Affairs for the Air Transport Association of America, which represents U.S. passenger and cargo airlines, characterized the outcome as "extremely positive," noting that "this is a giant step toward adoption of the first of what promises to be several generic alternative jet fuel blends that will offer commercial aviation a sustainable new fuel dynamic. The airline industry is prepared to be an enthusiastic buyer."

About CAAFI

CAAFI's mission is to enhance energy security and environmental sustainability for aviation through alternative fuels. CAAFI is a forum that focuses the efforts of the commercial aviation supply chain to engage and foster the emerging alternative fuels industry. It enables its diverse participants — representing all the leading stakeholders in the field of aviation — to build relationships, share and collect needed data, and motivate and focus research on aviation alternative fuels. A complete description of CAAFI is available at <http://caafi.org>.

The account above represents the view of CAAFI sponsors and stakeholders participating in the ASTM International meeting; it does not represent the position of ASTM International.