



GE Aerospace

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# IATA Aviation Energy Forum

- SATF Blending & Use Considerations

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# Terminology

**SATF**, synthetic aviation turbine fuel: aviation turbine fuel containing synthesized hydrocarbons

**SBC**, synthetic blending component: synthesized hydrocarbons that meet the requirements of one of the annexes in ASTM D7566 standard specification

**CBC**, conventional blending component: blending streams derived from hydrocarbons that come from conventional sources such as crude oil, natural gas liquid condensates, heavy oil, shale oil, and oil sands

**SAF**, sustainable aviation fuel: aviation turbine fuel containing synthesized hydrocarbons derived from sustainable feedstocks and processes

**OEM**, original equipment manufacturer: engine and airframe manufacturer

# SATF is certified to ASTM D7566

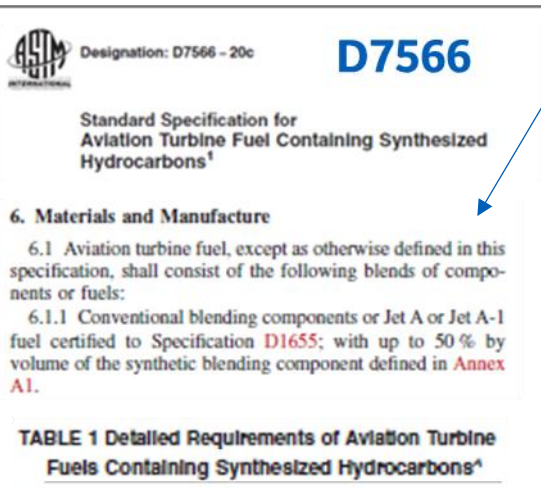
Blending limit for each SBC

Unique criteria in each Annex to control SBC

1.3.1 Aviation turbine fuel manufactured, certified, and released to all the requirements of Table 1 of this specification (D7566), meets the requirements of Specification D1655 and shall be regarded as Specification D1655 turbine fuel. Duplicate testing is not necessary; the same data may be used for both D7566 and D1655 compliance. Once the fuel is released to this specification (D7566) the unique requirements of this specification are no longer applicable; any recertification shall be done in accordance with Table 1 of Specification D1655.

4.2.4 conventional blending component, *n*—blending streams derived from conventional hydrocarbons.

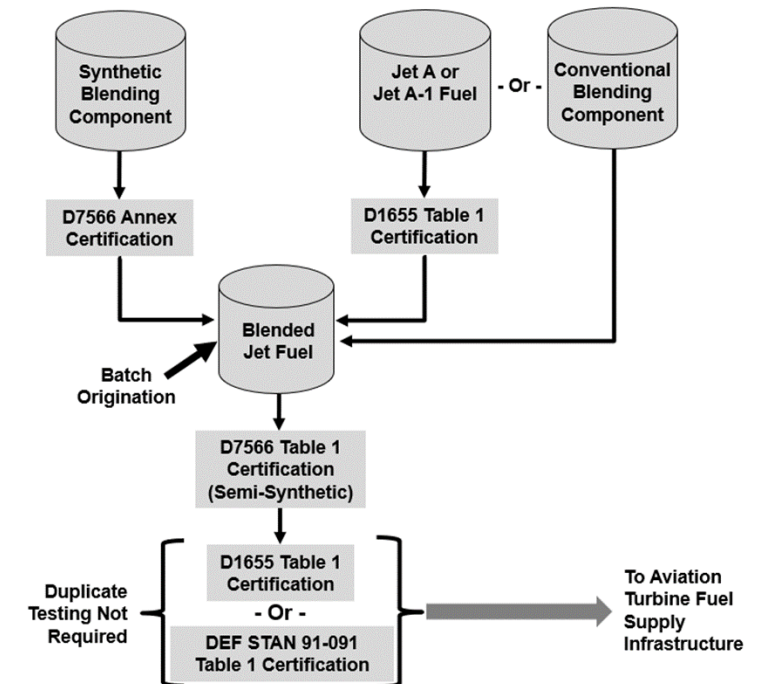
4.2.14 synthetic blending component, *n*—synthesized hydrocarbons that meet the requirements of one of the annexes, Annex A1 – Annex A8.



<b>Annex A1</b> FT-SPK (50%)	<b>Annex A2</b> HEFA-SPK (50%)	<b>Annex A3</b> SIP (10%)	<b>Annex A4</b> FT-SPK/A (50%)
<b>Annex A5</b> ATJ-SPK (50%)	<b>Annex A6</b> CHJ (50%)	<b>Annex A7</b> HC-HEFA (10%)	<b>Annex A8</b> ATJ-SKA (50%)

Add Annexes for each new SBC after favorable D4054 process and balloting

Jet A/A-1 and additional requirements in Table 1 for SATF



- SATF is reidentified/redesignated as Jet A/A-1
- SBC can be blended with any CBC (e.g., TS-1, petro Jet A/A-1, ...)
- Once redesignated per certification to D7566, SATF could be comingled with any other OEM approved fuel in the aircraft

## Additional considerations...

- Make sure the SBC and the SATF are certified to D7566 with generated documentation
- Although spec does not require it, OEMs recommend the CBC to be a certified jet fuel
- SATF brings new production, handling and logistics considerations; adhere to good guidance and be aware of new risks
  - ✓ EI 1533 “Quality assurance requirements for semi-synthetic jet fuel and synthetic blending components (SBC)”
  - ✓ EI 1597 “Procedures for overwing fuelling to ensure delivery of the correct fuel grade to an aircraft”
  - ✓ EASA SIB No.: 2025-01 “Risks Related to Out of Specification Aviation Turbine Fuels”
- OEM documentation is the controlling document; make sure its requirements are met
- OEM might allow other grades to be produced by qualified synthetic production pathways – check their documentation for guidance



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*Thank You!*