

SAF Qualification Process

**UAE SAFI Webinar
August 11, 2020**

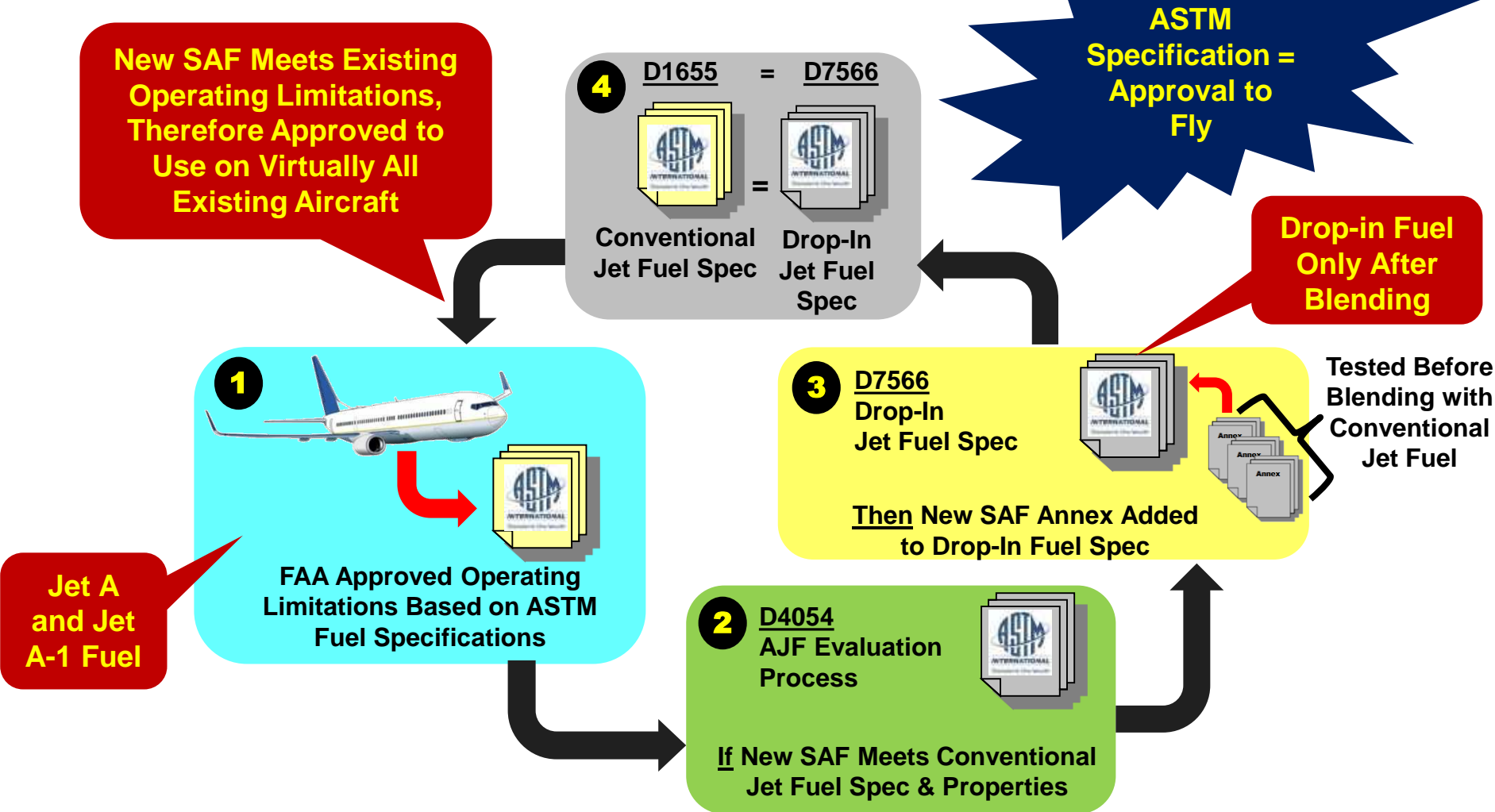
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Administration**

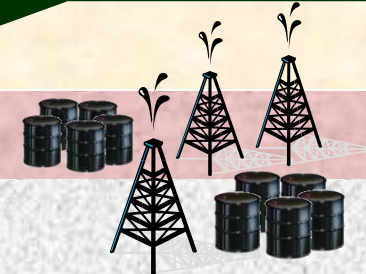
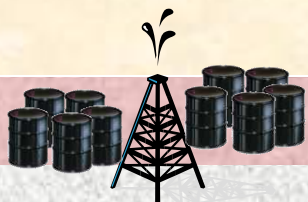


How does a SAF Get Qualified for Use?



Over a Decade of Progress

Commercial Aviation Alternative Fuel Initiative (see www.caafi.org)



May 24, 2006
CAAIFI Established

Alternative Jet Fuel Annex

A1
June 2009
FT-SPK Annex A1

June 2009
ASTM D7566 Issued

Drop-in Fuel Specification

A2
July 2011
HEFA-SPK Annex A2

December 2009
ASTM D4054 Issued

Alternative Jet Fuel Evaluation Process

A3
June 2014
SIP Annex A3

A4
November 2015
FT-SPK/A Annex A4

A5
April 2016
ATJ-SPK Annex A5
Isobutanol Feedstock Only

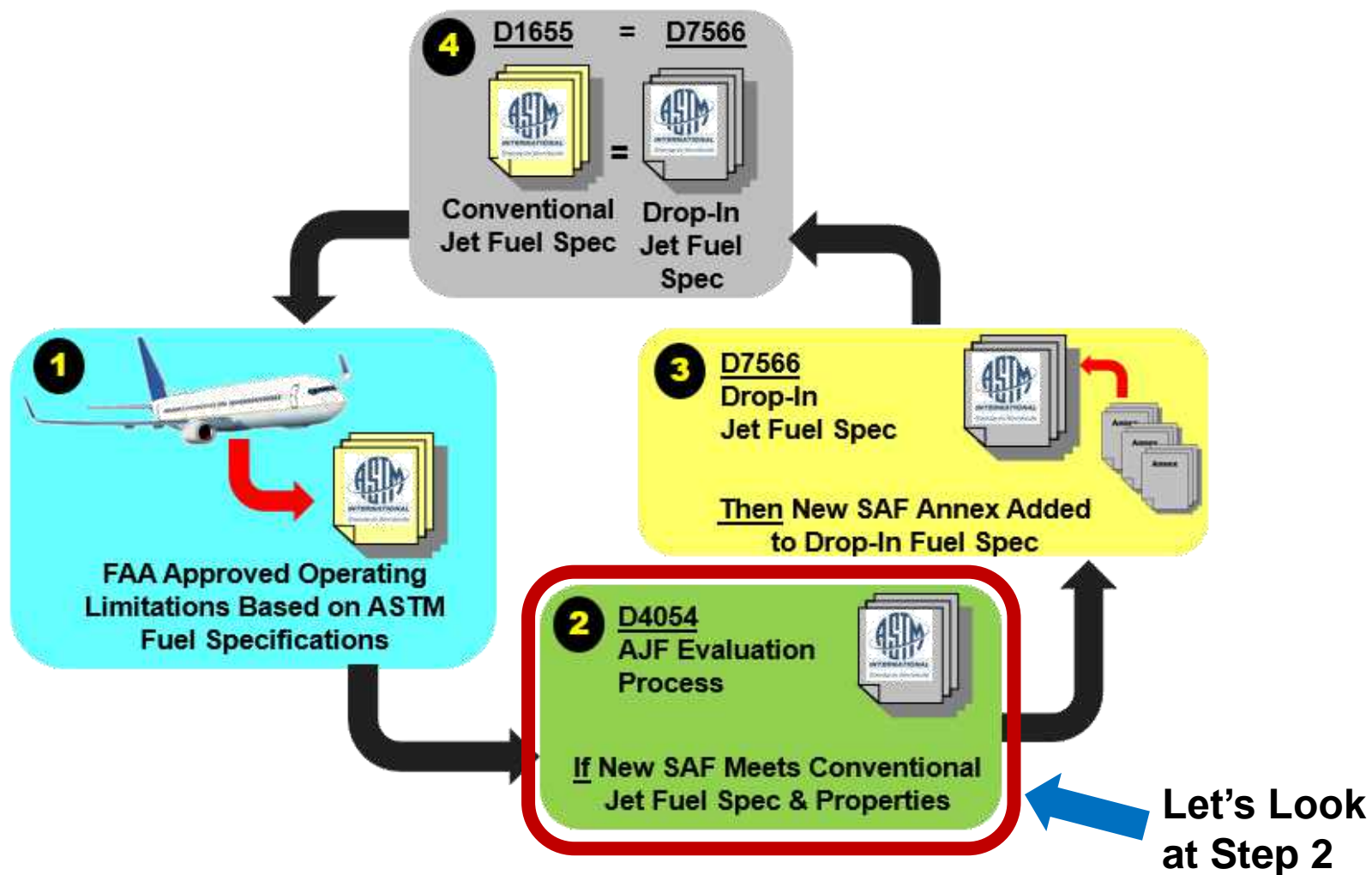
A6
December 2019
CHJ Annex A6

June 2018
Ethanol Feedstock Added

A7
May 2020
HC-HEFA Annex A7

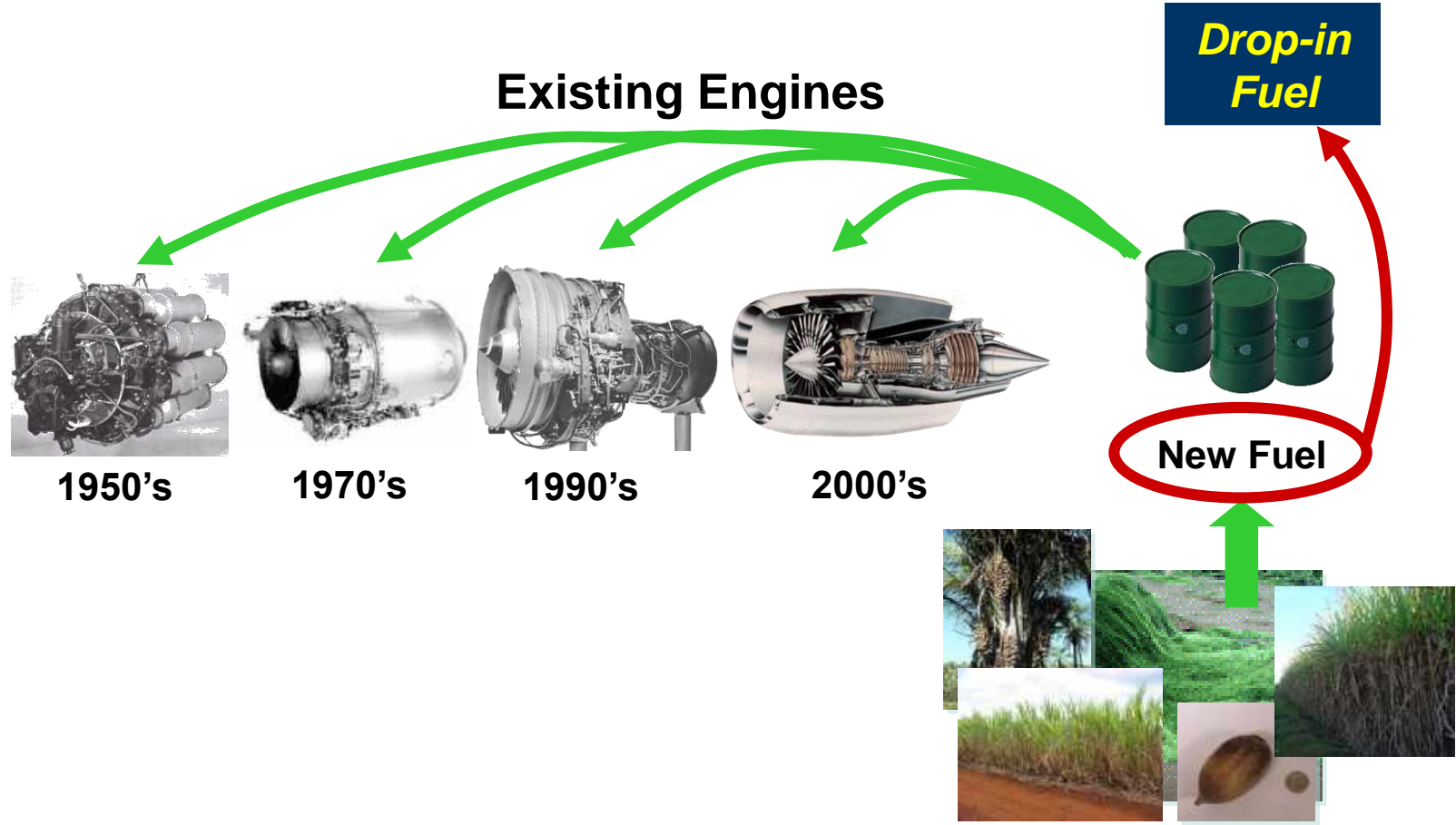


2. ASTM D4054 Evaluation Process



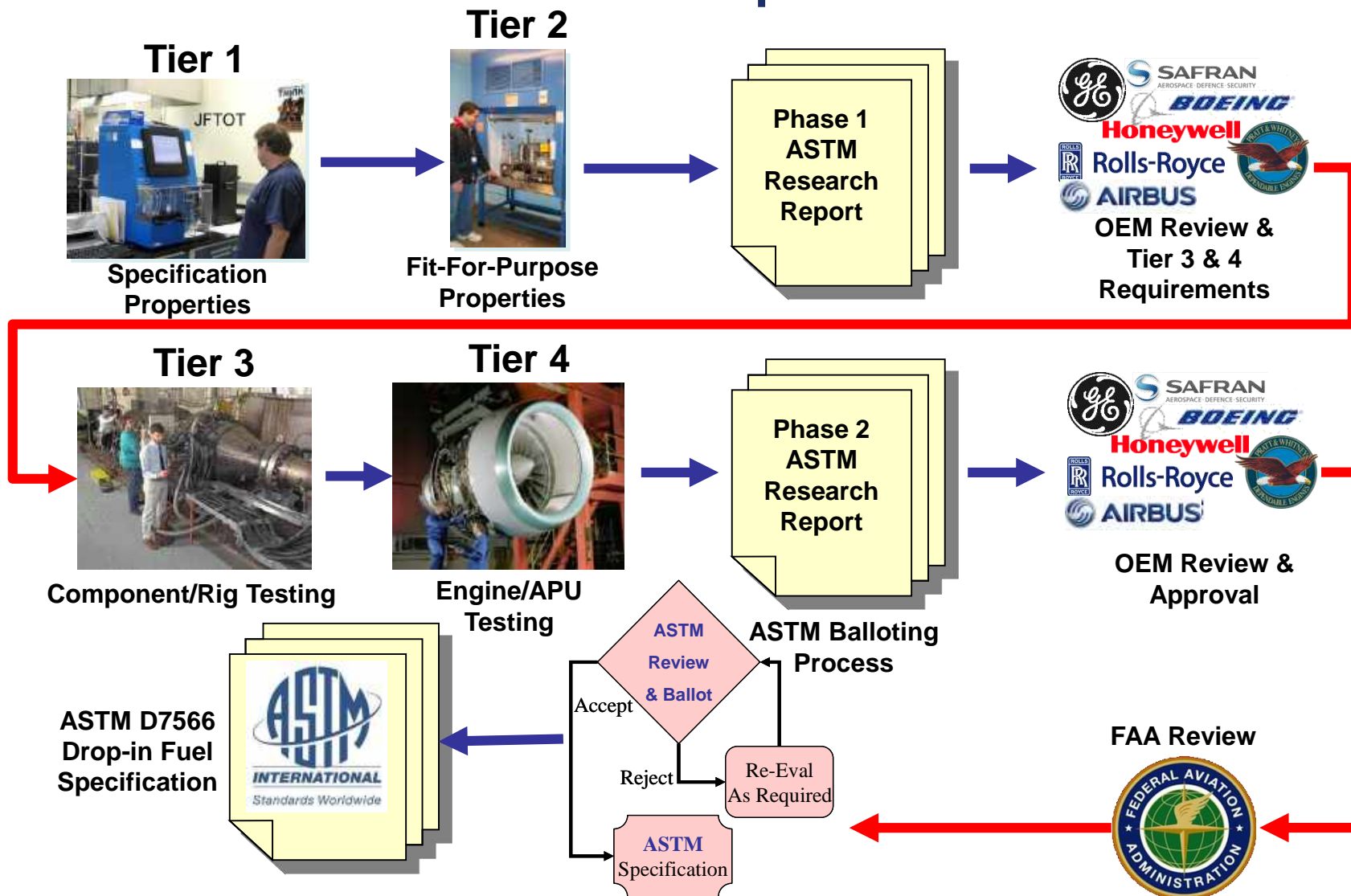
Sustainable Aviation Fuels Must Be Drop-in Fuels

Requirement of Engine/Aircraft Manufacturers (OEMs)



ASTM D4054 Evaluation Process

- Determines if New SAF is Drop-in



ASTM D4054 SAF Qualification Status

Exploratory Discussions

CSIP? Forge?
Brightmark Energy? Juniper?
REVO?

Vertimass

Tier 1

Tier 2

Specification Properties

Fit-For-Purpose Properties

Global BioEnergies

ATJ-SKA
(Swedish Biofuels)

HFP-HEFA
(Green Diesel)

Shell IH²

Virent SK
(Inactive)

Virent SAK

Tier 3

Tier 4



Component/Rig Testing



Engine/APU Testing



Phase 2
ASTM
Research
Report



OEM Review & Approval

FAA Review



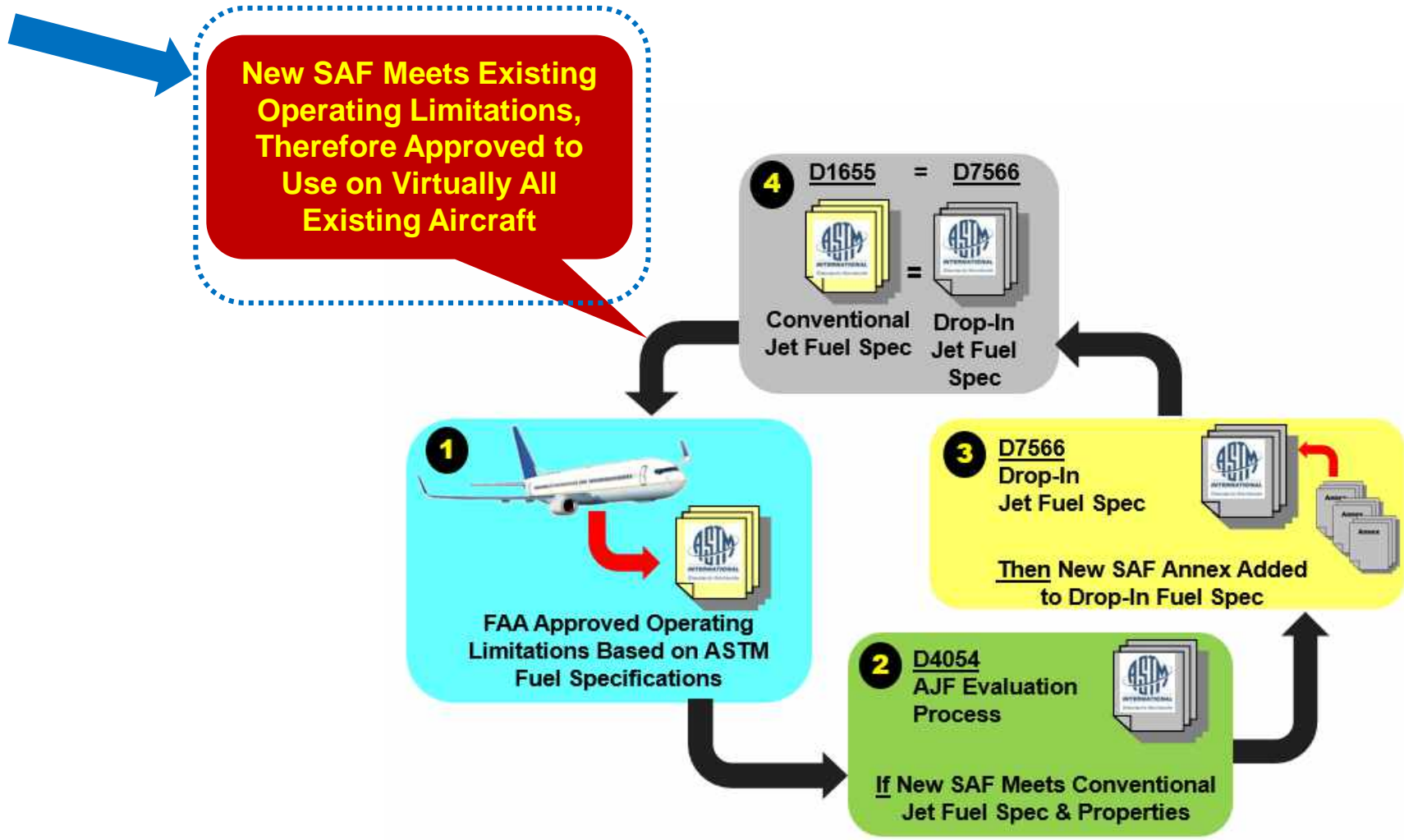
ASTM Balloting Process



ASTM
Specification

- Annex A1 FT-SPK
- Annex A2 HEFA
- Annex A3 SIP
- Annex A4 FT-SKA
- Annex A5 ATJ SPK (isobutanol) & (Ethanol)
- Annex A6 ARA CHJ
- IHI HC-HEFA Annex A7

New SAF Meets the Existing Operating Limitations



FAA Bulletin SAIB NE-11-56

Communicates that D7566 Fuels are Acceptable to Use



FAA
Aviation Safety

SPECIAL AIRWORTHINESS INFORMATION BULLETIN

SUBJ: Engine Fuel and Control - Semi-Synthetic Jet Fuel

SAIB: NE-11-56R4

Date: June 26, 2020

This is information only. Recommendations aren't mandatory.

Introduction

This Revised Special Airworthiness Information Bulletin (SAIB) advises aircraft operators, fixed base operators, certificated repair facilities, Flight Standard District Offices, Certificate Management Offices, and Foreign Civil Aviation Authorities that jet fuel made from the following synthetic blending components that meet the requirements of ASTM International Standard D7566 are acceptable for use on aircraft and engines certificated for operation with D1655 Jet A or Jet A-1 jet fuel if they are re-identified as D1655 fuel:



Thank You



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Questions?

