

# SAE A-22 AND AC20-135 REVISION - OVERVIEW

October 31<sup>st</sup> 2018

Phil Dang / John Ostic, Co-chairs

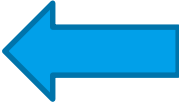



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# SAE A-22 Roadmap Review Items - Nov 2018

- Top 10 Industry team issues
- Current FAA / EASA / TCCA / Industry group efforts and new focus since May 2018 kick-off meeting
- AC20-135 Sections and SAE-22 Fire Test Specification Proposal
- Document Sponsors and Owners
- Schedule of Deliverables

# SAE A-22 Powerplant Fire Test and Flammability Committee formed in March 2018 to support FAA AC20-135 Update

WARRENDALE, Pa. ([PRWEB](#)) June 08, 2018 -- SAE International, the leading global association for aerospace, automotive and commercial-vehicle engineers, has been tasked by the Federal Aviation Administration (FAA) to develop industry aerospace standards to demonstrate compliance with FAA powerplant fire protection requirements. 

SAE International is forming a new technical committee, A-22 Fire Protection and Flammability Testing to develop industry standards for the testing of systems and components to assist with the design and certification of fire protection systems. The initial program of work includes the development of a suite of standards to assist with the update of FAA Advisory Circular AC 20-135 Powerplant Installation and Propulsion System Component Fire Protection Test Methods, Standards and Criteria. Methods to calibrate and setup a new sonic burner as an optional replacement for existing fire test burners will also be created. 

# May 2018 Kickoff hosted by EASA



# SAE A-22 is a Joint Industry and Certification Agencies Team Effort

FAA Washington DC – Scott Johnson, Calvin Ko, et al

FAA Part 33 New England – Philip Haberlen, et al

FAA Part 25 Seattle – Mike Dostert, et al

EASA Part 25 / Part 33 – Remi Deletain, Marc Locquet, et al

Transport Canada – Robert Bowden, et al

Group A – John Ostic (Boeing), Geof Armstrong (Bombardier), et al

- Standard TC Testing Subgroup – Mary Kelly / Tom Mallon (Resonate Testing) et al
- Standard Flame Calibration Subgroup – Bob Ciero (Honeywell) et al

Group B – Daniel Laborie (GE), et al

Group C – Stephane Pugliese (Airbus), et al

Group D – Gregg Wozniak, Palmer Booth (Gulfstream), et al

Composite Panel Testing for NG Burner Eval, Subgroup – Brian Stewart (Spirit Aero) et al

SAE A-22 Co-chairs: Phil Dang (Honeywell); John Ostic (Boeing)

SAE Staff – Maureen Lemankowicz, Laura Feix

# SAE A-22 Committee objectives and Initial Program of Work

The objectives of the committee are to:

- Develop and publish SAE Technical Reports for testing of fire protection systems, components and structure
- Define test requirements for aircraft and propulsion systems
- Develop performance standards for certification testing of aircraft and propulsion systems
- Define the sensitivities and accuracy of equipment used to conduct fire and flammability testing
- Harmonize global testing methodologies

## INITIAL PROGRAM OF WORK

Develop SAE standards or recommended practices to address the FAA Tasking Request to develop industry standards to update AC20-135, *Powerplant Installation and Propulsion System Component Fire Protection Test Methods, Standards and Criteria*. The proposed standards will be used to demonstrate compliance with powerplant fire protection requirements. In addition, methods to calibrate and setup a new sonic burner as an optional replacement for existing fire test burners will be developed.

# SAE A-22 since Kick-off meeting May 2018 - Continue joint development efforts by Industry and Regulatory team (FAA,EASA, TCCA)

## Group A- May 2017

- Burner / Flame Temperature
- Flame Calibration Method
- TCs (Size, Type, Number)

## Group B- May 2017

- Post Test Burning / Backside Ignition
- Test Pass/Fail Criteria

## Group C- May 2017

- Fireproof / Fire resistant Definitions
- Panel Size

## Subgroup: Panel Testing – Nov 2017

- FAA / Spirit Aero baseline composite panel testing for evaluation of equivalent damage with NG burner

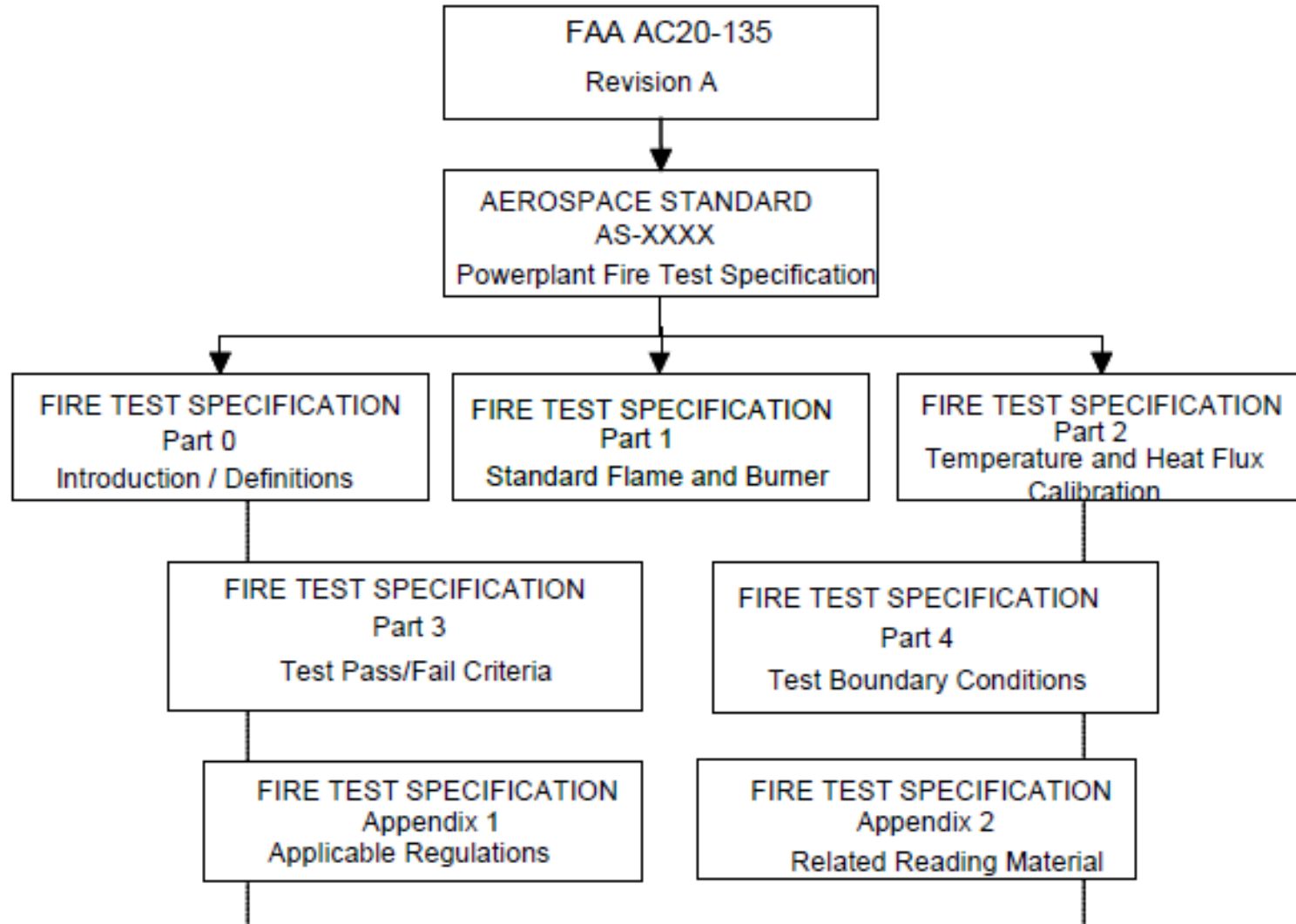
## Subgroup: TC Testing – Nov 2017

- Industry testing in progress of TCs size, type, and aging cycles to evaluate impact on temperature measurements

## Group D – May 2018

- Standard Environmental / Operating Conditions

# From June 2018 SAE A-22 Telecom Go-forward: One Fire Test Standard or AS-XXXX Powerplant Fire Test Specification





# SAE A-22 Fire Test Specification - Roadmap actions for AC20-135 Revision

## November 1<sup>st</sup> – 2<sup>nd</sup> 2018 Update

- ✓ March 2018 - Industry working sub-groups to continue as SAE A-22 committee based on FAA request of SAE
- ✓ May 9<sup>th</sup> & 10<sup>th</sup> 2018 – Industry/FAA/EASA/TCCA Kick-off Meeting hosted by EASA (May 9<sup>th</sup>) and SAE / Hilton (May 10<sup>th</sup>) in Cologne, Germany
- ✓ June 28<sup>th</sup> 2018 - SAE A-22 committee telecom – go-forward with one fire test standard or specification and several sections, in support of AC20-135 revision
- ✓ July – October 2018 – SAE A-22 sub-group working telecoms and TC testing
- ✓ November 1<sup>st</sup> and 2<sup>nd</sup> 2018 - SAE A-22 meeting in Atlantic, City hosted by FAA Tech Center
- **Technical Report - Document Sections Draft Writing: June 2018 to June 2019**
  - Including regulatory agencies' reviews and comments
- **Document(s) for final SAE balloting approval: June 2019 to December 2019**
- **SAE document(s) publication: January - May 2020**
- **FAA Revision, AC20-135 Revision to reflect SAE document(s): May 2020 – December 2020**
  - Legacy burners only
  - Next Generation burner – post December 2020