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Bruce Mahone
Director, Washington Operations
SAE International

www.sae.org
SAE's main purpose is to collect, develop, and disseminate technical information related to mobility technology.
SAE formed in 1905 to promote safety and common practices for the emerging automobile market.

- SAE charter expanded in 1916 to incorporate aeronautics
- 1st SAE Aerospace Standard, 1917
- 7,000 + SAE Aerospace Standards
- Mil-Spec Reform 1997 onwards
- SAE Aerospace Standards Europe office opened in London in 2007
- Integration of Tech America and GEIA Standards Program
The Aerospace Standardization Landscape

7000+ standards
150+ committees, subcommittees, and task groups
8000+ global participants
Civil and Military applications addressed
Global Strategy and Oversight

- Agusta Westland
- Airbus
- All Nippon Airways
- ATA/A4A
- AVIC 1
- BAE SYSTEMS
- The Boeing Company
- Bell Helicopter
- Bombardier Aerospace
- CAPE
- CIRA
- EADS
- European Aviation Safety Agency
- Embraer
- Federal Aviation Administration
- Fed Ex
- GE Company
- Honeywell Aerospace
- Lockheed Martin
- Lufthansa Technik
- NASA
- NAVAIR
- Northrop Grumman
- PATS Aircraft
- Pratt & Whitney
- Rolls-Royce
- United Aircraft Corporation
- U.S. Department of Defense
- Wichita State University
SAE has a proven track record, with more than 7000 standards published to date.

SAE’s standards are recognized internationally on their own merits.

SAE has high-level support from a variety of key aerospace companies, organisations, and government agencies.

SAE has a proven consensus process for the development of aerospace standards.

SAE Technical Committees contain a wealth of industry experience and expertise for a variety of aerospace systems, components, and materials.
SAE AEROSPACE STANDARDS PROGRAM TOPICS

- Nuts/Inserts
- Bolts/studs/screws
- Fluid connectors
- Ignition systems
- Emissions measurement
- Engine condition monitoring
- In-flight propulsion measurement
- Engine controls
- Support equipment and tools
- Helicopter powerplants
- Inlet flow distortion
- Avionics networks
- Aircraft store integration
- Avionic subsystems
- Embedded computing systems
- Architecture description language
- Fiber optics
- Unmanned systems
- Lightning
- Electromagnetic compatibility
- Electrical Power and equipment
- Power management
- Aircraft systems installation
- Protective devices
- Relays
- Electrical connectors
- Terminating Devices
- Wire & cable
- Safety assessment
- Human Factors
- Flight Deck tools and instruments
- Displays
- Human modeling
- Quality system standards
- Fuel operations
- Radio Frequency Identification
- Air cargo handling
- Aircraft ground equipment and systems
- Aircraft servicing
- Aircraft Deicing
- Airport snow and ice removal
- Landing gear systems
- Oxygen equipment
- Aircraft interior/exterior lighting
- Aircraft noise measurement
- Environmental systems
- Aircraft icing
- Safety equipment
- Cabin interiors
- Survival equipment
- Seats
- Maintainability
- Probabilistic Methods
- Reliability
- Structural Health Monitoring and Management
- Air Traffic Management
- Integrated Vehicle Health Management
Regulations and government documents reference SAE standards to certify aircraft before entering the market.

Example FAA TSO
Mandatory compliance

Example FAA AC
Guidance material

Example ICAO Annex
Mandatory compliance

Example EASA ETSO
Mandatory compliance

Example EASA AMC
Guidance material

73 FAA TSOs
75 SAE docs

95 FAA ACs
250+ SAE docs

12 ICAO docs
30 SAE docs

58 EASA ETSOs
61 SAE docs

27 EASA AMCs
62 SAE docs
SAE is an officially recognized civilian SDO partner to NATO

Through a Technical Cooperation Agreement (TCA), NATO supports and adopts SAE industry standards.
About SAE: Purpose

- Materials
- Environmental Standards
- Standard Parts
- Human Factors
- Integrated Vehicle Health Management (IVHM) & Reliability
- Counterfeit Parts Avoidance
- Deicing
- Military Avionics

G-19 & G-21 Counterfeit Avoidance, Detection, Mitigation & Disposition Committee Update
1. OEMS/Users of Electronics: AS5553
2. OEMS/Users of Materiel (other than electronics): AS6174
3. Independent Distributors/Brokers of Electronics: AS6496
4. Authorized Distributors of Electronics: AS6081
5. Test Laboratories of Electronics: AS6171
<table>
<thead>
<tr>
<th>Standard</th>
<th>Title</th>
<th>Status</th>
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<tbody>
<tr>
<td>SAE AS5553A</td>
<td>Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition</td>
<td>Issued January 2013 and available at <a href="http://www.sae.org">www.sae.org</a></td>
</tr>
<tr>
<td>SAE AS6171</td>
<td>Test Methods Standard; Counterfeit Electronic Parts</td>
<td>In draft; Individual test methods balloted. Main document balloting expected in 4Q-2013</td>
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<tr>
<td>SAE AIR6273</td>
<td>Terms and Definitions:</td>
<td>In draft. Expected balloting in Q4-2014.</td>
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<tr>
<td>SAE AS6301 (G19-C)</td>
<td>Fraudulent/Counterfeit Electronic Parts: Avoidance, Detection, Mitigation, and Disposition – Independent Distributors Verification Criteria</td>
<td>In draft.</td>
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<td>SAE ARP6178 (G19-DR)</td>
<td>Counterfeit Electronic Parts; Tool for Risk Assessment of Distributors</td>
<td>Published 2011-12.</td>
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<tr>
<td>SAE AS6496 (G19-AD)</td>
<td>Authorized Distributor Counterfeit Mitigation</td>
<td>In draft. Expected publication Q3-2014.</td>
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QUESTIONS?

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