

SAEInternational™



Counterfeit Avoidance: SAE International Standards- Current and under Development

Autumn 2012

SAE International
www.sae.org



About SAE ...

- Non-profit membership society
- 131,000 mobility engineering members in 97 countries
- 250 professional staff
- Global Offices:
 - World Headquarters – Warrendale PA, USA
 - Automotive Headquarters – Troy MI, USA
 - Aerospace Standards – Washington DC
 - Aerospace Standards Europe – London
 - Shanghai



1916



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US National Bureau of Standards and Industrial Preparedness Committee of the Naval Consulting Board

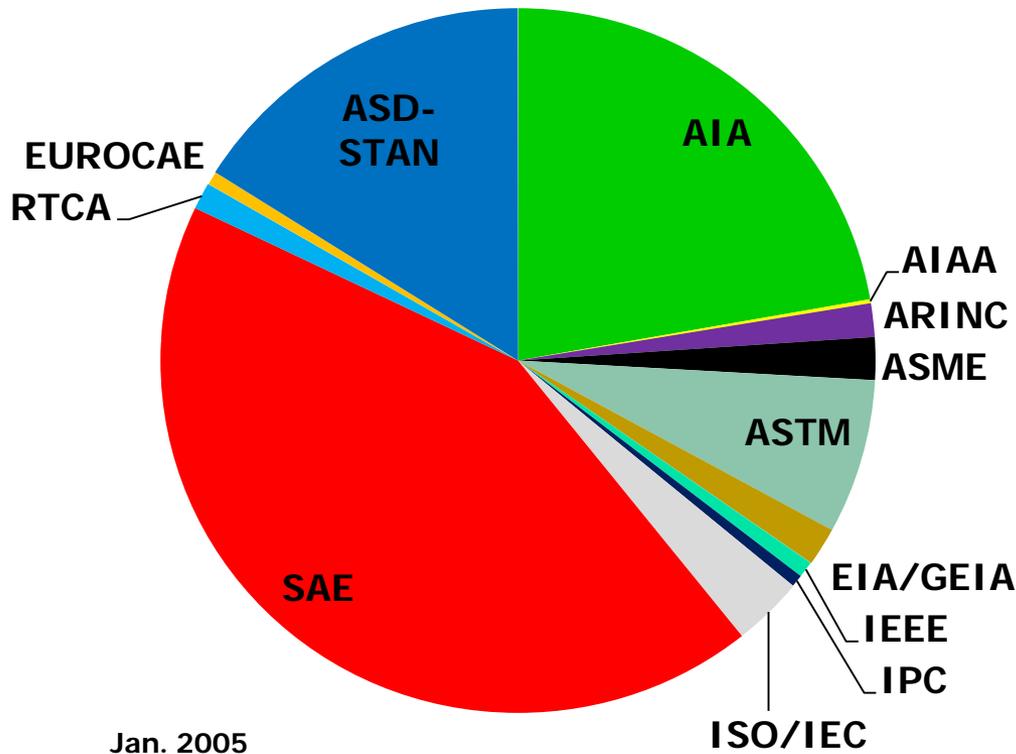
Agreed to address aeronautical standards & technology within SAE

SAE's charter expanded to address aerospace in September 1916. American Society of Aeronautical Engineers merged into SAE

2012



Total Aerospace Standards



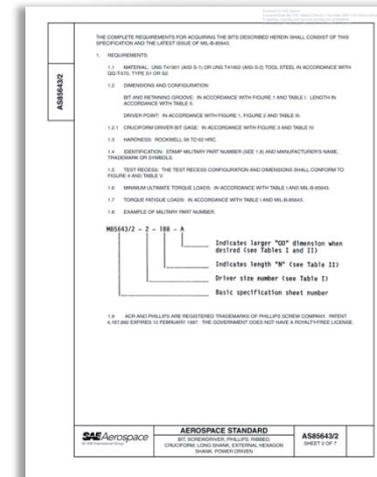
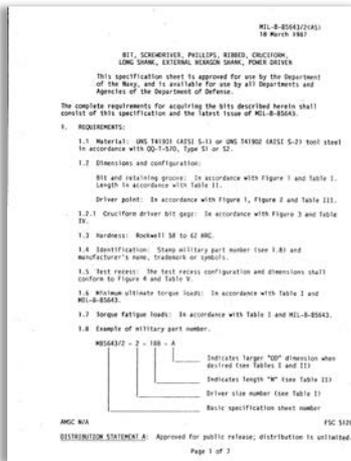
6800+ standards

150+ committees,
subcommittees, and task
groups

8000+ global participants

Civil and Military
applications addressed

Partnering: SAE and DoD



- Over 1500 Mil-Specs have been converted to SAE standards
- The US DoD has adopted more documents SAE from than any other SDO
- <http://www.sae.org/standardsdev/military/>



SAE Aerospace G-19 Counterfeit Electronic Parts Committee

- Chartered in September 2007 to address aspects of preventing, detecting, responding to and counteracting the threat of counterfeit electronic components. Participants include:
 - Government
 - Defense/Aerospace manufacturers
 - Industry Groups
 - Testing Laboratories



SAE G-19 Members

from Government, Defense and Industry Sectors

Government Members ...

- Defense Logistics Agency (DLA)
- Defense Contract Management Agency (DCMA)
- DOE - National Nuclear Security Administration (NNSA)
- Federal Aviation Administration (FAA)
- Intelligence Advanced Research Projects Activity (IARPA)
- Ministry of Defence, UK
- National Aeronautics and Space Administration (NASA)
- USAF/NRO (The Aerospace Corporation)
- USAF Wright Patterson AFB
- US Army - AMCCC Business Operations HQAMC
- US Army Aviation & Missile Command
- US Army Redstone Arsenal
- US Missile Defense Agency (MDA)
- US Navy - Naval Air Warfare Center
- US Navy - Naval Surface Warfare Center (NSWC)Crane
- US Navy - NAVSEA Crane
- US Navy, Submarine Maintenance Engineering, Planning and Procurement (SUBMEPP) Activity
- US Department of Transportation

Note: Members function as individuals intending to represent the best interests of the industry, and not as agents or representatives of any organization with which they may be associated



SAE G-19 Members from Government, Defense and Industry Sectors

Participating Industry Associations ...

- ACLASS Accreditation Services
- Aerospace Industries Association (AIA)
- ANSI-ASQ Accreditation Board (ANAB)
- Component Obsolescence Group (COG)
- The Electronic Components Supply Network
- EIA Standards and Technology Electronic Components
- ERAI, Inc.
- Independent Distributors of Electronics Association (IDEA)
- Performance Review Institute (PRI)
- UK Electronics Alliance (UKEA)



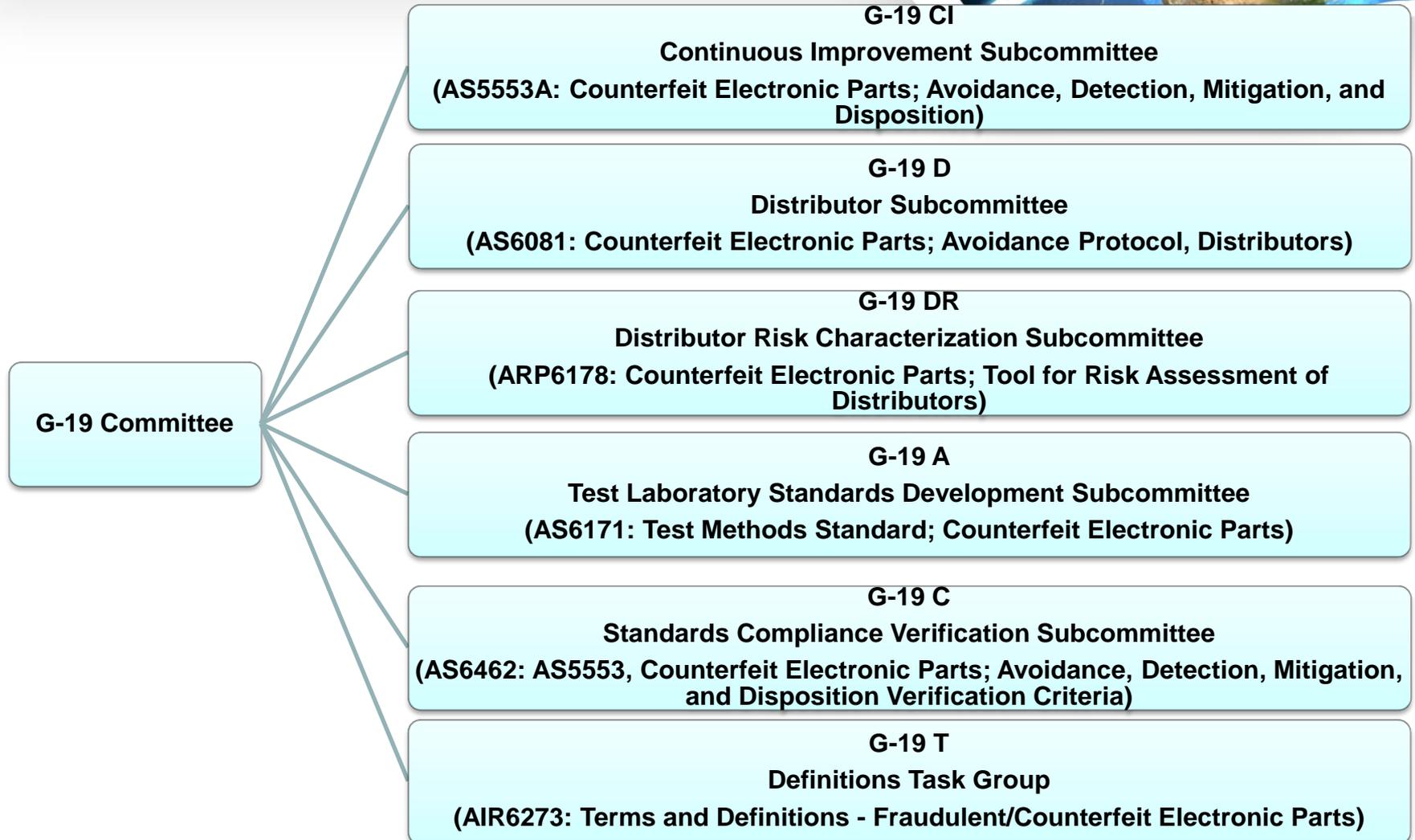
SAE G-19 Members from Government, Defense and Industry Sectors

Industry Members ...

Adaptive Management Solutions
Aero Engine Controls
American Electronic Resource
Analytical Alternatives
Analytical Solutions
Applied DNA Sciences
Arcadia Components
Ares Corp
Arrow Electronics
Astute Electronics
BAE Systems
Ball Aerospace & Technologies
Boeing
Boeing Advanced Systems
Business Quality Process Management
Bechtel Plant Machinery
CALCE University Of Maryland
Celestica Corp. Technology & Engineering
China Aero-Polytechnology Establishment
Crestwood Technology Group
DA-Tech
Derf Electronics
Det NortskeVeritas (DNV)
DPA Components International
Electronic Supply Chain Solutions
Eltek Semiconductors
General Dynamics
General Dynamics UK

GE Aviation
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Greenberg & Bass
Harris
Hi-Reliability Microelectronics
Hi-Rel Laboratories
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Honeywell Technology Solutions
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Jabil Circuits
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L-3 Communications - CSW
Left Coast Technical Solutions
Lockheed Martin Aeronautics
Lockheed Martin Missiles & Fire Control
3M
Micram Electronics
Motronics Circuits International
Mouser Electronics
Nisene Technology Group
Northrop Grumman Electronic Systems
N.F.Smith & Associates
NQA
Northrop Grumman
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Plexus

Premier Semiconductor Services
Process Sciences
Raytheon
Rochester Electronics
Sandia National Laboratories
Schlumberger HPS
Selex Galileo
Silicon Cert Laboratories
SMT Corp
SolTec Electronics
Sonix
Sonoscan
Star Associates International
Trace Laboratories
TTI
Underwriters Laboratories, UL DQS
Westland Helicopters
White Horse Laboratories
World Data Products
World Micro
Wyle Laboratories





Counterfeit Parts Control Plan

SAE AS5553 – Aerospace Standard

“ ... The organization **shall develop and implement a counterfeit electronic parts control plan** that documents its processes used for risk mitigation, disposition, and reporting of counterfeit parts... ”

4.1 Counterfeit Electronic Parts Control Plan

The organization shall develop and implement a counterfeit parts control plan that documents its processes used for risk mitigation, disposition, and reporting of counterfeit parts. The control plan shall include the following sections: 4.1.1 through 4.1.7 below.

4.1.1 Parts Availability

The processes shall maximize availability of authentic, originally designed and/or qualified parts throughout the product's life cycle, including management of parts obsolescence. Information and guidance for ensuring parts availability is provided in Appendix A, Parts Availability.



SAE AS5553 – Aerospace Standard

Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition

- Counterfeit Electronics Parts Control Plan
- Purchasing
 - Assessment of Suppliers
 - Supply Chain Traceability
- Verification of Purchased Product
- In-process Investigation
- Material Control
- Reporting



SAE AS6081 – Aerospace Standard

Counterfeit Electronic Parts;

Avoidance Protocol, Distributors

- Quality Management System
 - Counterfeit Mitigation Policy
- Counterfeit Electronics Parts Control Plan
 - Customer Related Contract Review, Agreement, & Execution
 - Purchasing
 - Purchase Order Requirements
 - Supply Chain Traceability
 - Verification of Purchased Product
 - Material Control
 - Reporting
 - Personnel Training and Certification



ARP6178 -

Counterfeit Electronic Parts; Tool for Risk Assessment of Distributors -

– Survey

- General Company Information
- Pre-Assessment Information
- Industry Membership and Reporting
- Quality System and Processes
- Warranty and Insurance
- Supplier Qualification and Purchasing Process
- Handling and Facilities
- Training and Certification
- Inspection and Test
- Non-Conforming Material Control
- Additional Test and Inspection (In-house or Third-Party)



AS 6171-

Test Methods Standard; Counterfeit Electronic Parts

- Test Methods
 - External visual inspection
 - Radiological inspection,
 - X-ray fluorescence,
 - Remarking and resurfacing,
 - De-lid/ Decapsulation or destructive physical analysis,
 - Electrical tests,
 - Acoustic microscopy,
 - Optical/SEM inspection,
 - FTIR/DSC/TMA testing and miscellaneous testing
- Risk Criteria and sampling plans
- Personnel Certification requirements



Summary of SAE G-19 Aerospace Standards

Standard	Title	Status
SAE AS5553	Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition	Issued and available at www.sae.org ; under revision. Rev A expected by the end of 2012
SAE AS6081	Counterfeit Electronic Parts Avoidance – Distributors	First ballot complete, comments being resolved. Publish 2012
SAE AS6171	Test Methods Standard; Counterfeit Electronic Parts	In draft; balloting expected in 2013
SAE ARP6178	Counterfeit Electronic Parts; Tool for Risk Assessment of Distributors	Published in Dec 2011
SAE AS6462	AS5553 Verification Criteria	Ballot 4Q-2011; publication likely Nov 2012. Negotiations underway for certification programs



Committee G-21

AS6174-Counterfeit Materiel; Assuring Acquisition of Authentic and Conforming

- April 20, 2010 – DoD PSMC (Part Standardization and Management Committee) requested SAE to address counterfeit **NON**-electronic parts
- For all applications
 - Preference for purchase from original manufacturer or licensed/franchised dist.
 - Extra documentation/testing for other distributors/brokers
- Tracks closely with draft OSD and White House policy for avoiding counterfeits with all materiel, including medicine, tourniquets, etc.
- Published May 2012

STANDARDS

Topics

- Browse All
- Bodies and Structures
- Chassis
- Design Engineering and Styling
- Electrical, Electronics and Avionics
- Environment
- Fuels and Energy Sources
- Human Factors and Ergonomics
- Interiors, Cabins and Cockpits
- Maintenance and Aftermarket
- Management and Product Development
- Manufacturing
- Materials
- Noise, Vibration and Harshness
- Parts and Components
- Power and Propulsion
- Quality, Reliability and Durability
- Safety
- Tests and Testing
- Transportation Systems

SAE Home > Standards

Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition

Product Code: AS5553

Date Published: 2009-04-02

Issuing Committee:

G-19ci Continuous Improvement

Scope

This document is intended for use in aviation, performance/reliability electronic equipment use by all contracting organ...

Product Status: In St

File Size: 314K

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AS5553

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Thank you for your time and attention!

Are there any questions?

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