FAA AC 119-2

Operational Use of Radio Frequency Identification Systems Onboard Aircraft

Presented to: IATA 4th Paperless Aircraft Operations Conference 2017
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Date: November 14, 2017
AC 119-2 Scope (1 of 2)

- Aircraft operating certificate holders under Title 14 Code of Federal regulations (14 CFR) parts 91, 121, 125, 129, and 135.
- Persons or entities holding certificates under 14 CFR parts 65, 145, and 147.
- Persons performing maintenance or preventive maintenance under part 43.
AC 119-2 Scope (2 of 2)

- Aircraft operators using radio frequency identification (RFID) technology to perform or report completion or accomplishment of inspections to confirm:
  - configuration control,
  - serviceability status, and
  - security, or tampering of installation, of parts and components
AC 119-2 Assumptions

• AC 119-2 assumes RFID tags are:
  – Compliant with AC 20-162 “Airworthiness Approval of Installed Radio Frequency Identification (RFID) Tags”
  – Compliant with 47 CFR part 15, § 15.245
  – Qualified to SAE Aerospace Standard (AS)5678A or AS6023 for intended operational environment
  – Standardized to meet ATA Spec 2000 data content and format
Applications

• Aircraft configuration control
  – Miscellaneous cabin safety equipment, aircraft cabin interiors and furnishings, appliances

• Presence, identification, and serviceability inspections
  – Life preservers, oxygen generators, repairable exchange components

• Security - “tamper-evident”
  – Life preserver container, restricted access panels
RFID in Aircraft Maintenance (1 of 3)

• Requires revision to operator’s approved aircraft maintenance program to include
  – how and when RFID system is to be used as an alternative means to accomplishing a task
  – who is authorized to perform what tasks

• Requires revision to operator’s approved or accepted aircraft maintenance training program
  – Proficiency and competency training to intended users of the RFID system
RFID in Aircraft Maintenance (2 of 3)

• Should revise maintenance procedures to include
  – task cards, instructions for continued airworthiness (ICA), frequency of task completion
• Should have a procedure to default to manual procedures if an RFID system fails
• Should have an RFID system shut-down procedure if a safety of flight issue arises
RFID in Aircraft Maintenance (3 of 3)

• Should revise RFID system maintenance procedures addressing
  – RFID tag expiration and replacement methods and tracking
  – Replacing RFID tagged components with non-RFID tagged components
  – Deferral of RFID tag installation
Aircraft Operator Considerations (1 of 2)

• Safety management system analysis covering safety risk associated with RFID installations
• Retrofit program to schedule and track RFID system installation and deployment
• Engineering analysis ensuring
  – Location, position, and method of RFID tag installation
  – RFID tag does not interfere with the fit, form, or function of the aircraft component or its assembly
Aircraft Operator Considerations (2 of 2)

• Human factors analysis ensuring
  – Effective and efficient performance

• Operators need to assess the risks and impact of certain data written to RFID systems
  – Revision controlled data including ICA, aircraft maintenance manuals, structural repair manuals, illustrated parts catalogue
  – Proprietary data especially for new or overhauled rotatable components
  – Personally identifiable information including technician names, employee work numbers, or work locations
Improvements?

• AC feedback form provides instructions on how to improve the AC, or
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