

Common Standard Wiring Practices Documents

ATSRAC Task 7 Working Group

presented by
Don Andersen
HWG7 Co-chairman

- ***TASK 7.1: Establish a Harmonization Working Group (HWG)- Closed***

Organization	Members
FAA	Brett Portwood
INDUSTRY (Boeing)	Don Andersen - (Co-chair, US) Tracey Johnson-resigned Dave Padilla Morris Frimer Frank Wright Ramiro (Ram) T. Esparza II Ross Lloyd
INDUSTRY (Airbus)	Anthony (Tony) John Poole (Co-chair Europe) Phillippe Renhas Dominique Mazzarino (reassigned)
INDUSTRY (Embraer)	Percy Constanti
AIRLINE COMMUNITY	Robert (Bob) W. Sitz (Delta) Dennis Lee (Canadian) Scott Christian (United) Chris Nichols (AirTran) Lukas Zuelling (SR Technics) Elias Cotti (NBAA) Robert (Bob) L. Barnett (Airborne Express-retired)

TASK 7.3: Define a Standard Format - Closed

- Process followed
 - Analysis of the existing available ESWPMs focusing on the different formats
 - Use of working document to highlight differences between OAM ESWPMs
 - The production of ESWPM format with the aim to produce a generic master breakdown index
- Appendix 2 of the report received partial consensus in March and full consensus in September.

- ***TASK 7.3: Define a Standard Format - Closed***

1. GENERAL DATA

- SAFETY PRACTICES
- AIRPLANE ENVIRONMENTAL AREAS
- CONSUMABLE MATERIALS
- WIRING MATERIALS
- COMMON TOOLS

2. EWIS MAINTENANCE

- EWIS PROTECTION DURING MAINTENANCE
- EWIS CLEANING
- EWIS INSPECTION
- EWIS TESTING
- EWIS DISASSEMBLY
- EWIS REPAIR AND REPLACEMENT

3. WIRING INSTALLATION

- WIRE SEPARATION / SEGREGATION
- ELECTRICAL BONDS AND GROUNDS
- WIRE HARNESS INSTALLATION

4. WIRING ASSEMBLY

- WIRE AND CABLE TYPES
- WIRE MARKING
- WIRE HARNESS ASSEMBLY
- WIRE INSULATION AND CABLE JACKET
REMOVAL

5. TERMINATIONS

6. ELECTRICAL DEVICES

7. SPECIFIC SYSTEM WIRING

8. AIRLINE CUSTOMIZED DATA

- ***TASK 7.4: Define a Standard Minimum Content- Closed***

- Process followed

- Minimum content recommendations contained within the tasking statement

- Analysis of the existing available ESWPMs focusing on the different contents

- Use of working document to highlight differences between OAMs ESWPMs

- Coordinated development with standard format and master breakdown index

- Achieved initial consensus in March and amended in September

- ***TASK 7.4: Define a Standard Minimum Content- Closed***

1. SAFETY PRACTICES
2. AIRPLANE ENVIRONMENTAL AREAS
3. CONSUMABLE MATERIALS
4. WIRING MATERIALS
5. COMMON TOOLS
6. EWIS PROTECTION DURING MAINTENANCE
7. EWIS CLEANING
8. EWIS INSPECTION
9. EWIS TESTING
10. EWIS DISASSEMBLY
11. EWIS REPAIR AND REPLACEMENT
12. WIRE SEPARATION / SEGREGATION
13. ELECTRICAL BONDS AND GROUNDS
14. WIRE HARNESS INSTALLATION (including heat, contamination and moisture protection)
15. WIRE AND CABLE TYPES
16. WIRE MARKING
17. WIRE HARNESS ASSEMBLY
18. WIRE INSULATION AND CABLE JACKET REMOVAL
19. TERMINATIONS
20. DEVICES (OAM and vendor information)
21. UNIQUE WIRING ASSEMBLY INFORMATION
22. AIRLINE SPECIFIED INFORMATION

Master Breakdown Index - Example

GROUP	MAJOR TOPIC	APPEARS IN THIS DOCUMENT AS SUBJECT
GENERAL DATA	SAFETY PRACTICES	20-10-10
	AIRPLANE ENVIRONMENTAL AREAS	20-20-12
	CONSUMABLE MATERIALS	20-00-11
	WIRING MATERIALS	20-10-13
	COMMON TOOLS	20-00-13
ELECTRICAL WIRE INTERCONNECT SYSTEM (EWIS) MAINTENANCE	EWIS PROTECTION DURING MAINTENANCE	20-10-20
	EWIS CLEANING	20-10-20
	EWIS INSPECTION	20-10-20
	EWIS TESTING	20-10-13
	EWIS DISASSEMBLY	20-10-19
	EWIS REPAIR AND REPLACEMENT	20-20-00

Next Steps

- ➔ ATSRAC approval of HWG6 report
- ➔ FAA development and distribution of draft Advisory Circular providing guidance to TC and STC applicants
- ➔ Delta representative proposes development of a new or inclusion into Air Transportation Association Specification i2200 of the recommended ESWPM format and content provisions
- ➔ Release of an SFAR for review which includes changes to FAR 25.1529, Appendix H Instructions for Continued Airworthiness:
 - ...information essential to the continued airworthiness of the airplane...
 - ...in a form appropriate for the quantity of data...
 - ...format of the manual in a practical arrangement.
- ➔ Voluntary incorporation of format recommendation by TC and STC applicants

Additional Information

→ Updated procedures to include recommendations of the Intrusive Inspection Working Group

- Protection of wiring during maintenance
- Wiring cleaning methods
- Wiring inspection methods

→ Service documents incorporate cautions, warnings and information concerning protection of wiring during unrelated modifications and maintenance