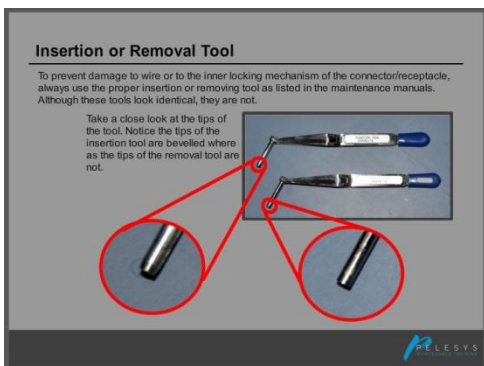


SUMMARY

As the aircraft industry becomes more acutely aware of Electrical Wiring Interconnect Systems (EWIS), this course improves specific aircraft maintenance technician knowledge with a focus on the most common devices, tools, procedures and - most importantly - the standards which are routinely missed in day to day maintenance operations. This module also explains the various types of inspections used to properly examine possible defects in aircraft wiring and its associated components before they deteriorate and become catastrophic problems.



When comparing the EWIS of an aircraft to the central nervous system (CNS) of the human body, it quickly becomes obvious that if either the CNS or EWIS fail, the systems controlled and supported by the electrical transmission networks of either one can become compromised. Such breakdowns can cascade and become prime culprits of system shut downs.

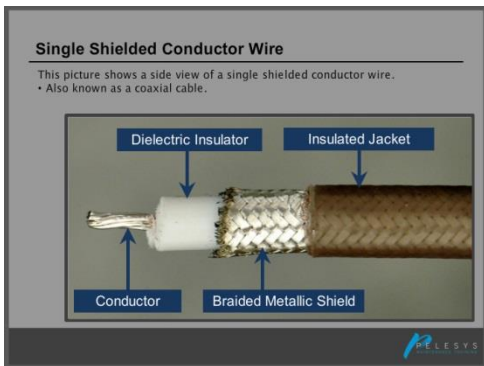
TARGET POPULATION

Target Group 1: Personnel Performing EWIS Maintenance—

Includes personnel working directly at maintaining or modifying EWIS.

Target Group 2: Personnel Performing Maintenance Inspections on EWIS —

Includes personnel who perform EWIS inspections but are not responsible for the direct maintenance or modification of EWIS.



REGULATORY COMPLIANCE

- EASA / FAA / Transport Canada

Versions Available:
Standard

Course Length:
2 hr 00 min

LESSON 01: Pelesys EWIS Introduction

In this lesson we cover:

- Welcome to the Pelesys
- FAA AC-120-94

LESSON 02: EWIS Incidents

In this lesson, we cover:

- EWIS
- TWA Flight 800 Incident
- Lufthansa 747 Cargo Incident

LESSON 03: EWIS Degradation Factors

In this lesson, we cover:

- EWIS Degradation Factors
- General Safety Precautions

LESSON 04: ESDS

In this lesson, we cover:

- Electro Static Sensitive Device (ESDS)
- Improper Configuration

LESSON 05: EWIS Inspections

In this lesson, we cover:

- Different Types of Inspections
- Locations of EWIS Inspection
- EWIS Inspection Focus Area

LESSON 06: EWIS Does Matter

In this lesson, we cover:

- EWIS Does Matter
- Effect of Improper Maintenance
- Improper Routing
- Effect of Improper Routing
- Improper Coiled and Stowed
- Accumulation of Dirt and Lint
- Potential Foreign Object Damage
- Effects of Improper Feed Through
- Engine Wiring

LESSON 07: Wire Identification

In this lesson, we cover:

- Cable Labeling
- Wire Number
- Wire Identification Code Numbering System
- Shielded Cable
- Single Shielded Conductor Wire
- Cross Section of a Single Shielded Conductor Wire

LESSON 08: EWIS Routing

In this lesson, we cover:

- EWIS Above Fluid Lines
- Improper Routing
- T Type Wire Bundle Breakouts
- Complex Type Wire Bundle Breakouts
- Correct Cable Slack

LESSON 09: Clamps

In this lesson, we cover:

- Proper Clamp Orientation
- Improper Clamp Orientation
- Example - Clamp Distortion
- Typical Rubber Clamp
- Clamp Size
- Example - Clamp Pinching

LESSON 10: Termination

In this lesson, we cover:

- Proper Termination of Unused Wiring
- Improper Termination of Unused Wiring
- Spare Connector Contact
- Exposed Termination
- Spare Wire Termination Using Endcap

LESSON 11: Heat Damage

In this lesson, we cover:

- Heat Discoloration
- Overheated Wire at the Splice

LESSON 12: General Cleaning

In this lesson, we cover:

- General Cleaning
- ESPM

LESSON 13: Grounding and Bonding

In this lesson, we cover:

- Bonding
- Primary Bonding
- Secondary Bonding
- Testing Bonds

LESSON 14: Terminal Block

In this lesson, we cover:

- Terminal Strip
- Defective Terminal Block
- Terminal Module
- Grommet Distortion

LESSON 15: Connectors

In this lesson, we cover:

- Connectors
- Connector Security
- Connector Types
- Rectangular Connectors
- Rectangular Connectors Key Way
- Co-Axial Connectors

LESSON 16: Cable Installation and Routing

In this lesson, we cover:

- Cable Installation and Routing
- Lightening Hole
- Coil and Stow
- Contamination-Prone Areas
- Improper Bend Radius
- Proper Bend Radius
- Specialty Bend Radius

LESSON 17: Wire Stripping

In this lesson, we cover:

- Wire Stripping
- Stripping Wire for a Contact

LESSON 18: Connectors

In this lesson, we cover:

- Hand Tools
- Crimping a Contact onto a Wire
- Crimping a Lug onto a Wire

LESSON 19: Crimping

In this lesson, we cover:

- In Line Splicing
- Self-Insulated Splice Connector
- Moisture-Proof Splice Connector
- Heat Activated Splice Connector
- Staggered Splices

LESSON 20: Tools

In this lesson, we cover:

- Insertion or Removal Tool
- Removal Tool
- Measuring Instruments
- Time Domain Reflectometer
- Bonding Tester

LESSON 21: Quiz

In this lesson, we will review your comprehension with knowledge checks