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Example Topics for Maintenance-focused Workshop

1-day Workshop Summary of Content

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Objective:

A typical workshop is geared to aircraft maintenance technicians and managers of maintenance facilities. It provides some insight into aging aircraft and how maintenance can affect the aging process – both positively and negatively. The instructor will discuss some engineering assumptions typically made regarding design, inspection, and maintenance for continued airworthiness. The instructor will discuss several case studies.

Participants will learn engineering basics of damage tolerance evaluations and directed inspection programs. They will learn about the range of effects that influence continued airworthiness from related accident/incident case studies.

Outline of presentation topics:

- General Information regarding aging aircraft for mechanics and inspectors
 - Perspective of aging civil aviation fleet
 - Airframe aging issues
 - Electrical/wiring aging issues
 - Guidance and aides for mechanics and inspectors
 - Human factors for mechanics and inspectors
 - Miscellaneous examples
- What inspectors need to know about directed inspection programs
 - The basics of damage-tolerance based inspections -- how engineers determine where, when, how, and how often to inspect
 - Why engineers' assumptions are sometimes unconservative
 - Limitations of directed inspection programs
 - USAF F-111 case study
 - Aloha B-737 case study
 - Beech 1900 case study
 - Thrush ag plane case study

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(Continued)

- Pay attention to precursors of serious structural problems
 - Dan Air B-707 case study
 - Aloha B-737 case study
 - Grumman Mallard case study
 - Reno Air Races P-51 case study
- Why paying attention to unusual usage is important to safety
 - Relationship between usage and fatigue damage
 - Ag plane, low level survey, firefighting severity case studies
- Repairs and mods – the importance of engineering evaluation and adhering to the design
 - JAL B-747 case study
 - Reno Air Races P-51 case study
- Why paying attention to maintenance details is important
 - China Air fire
- Stop-drilling cracks as a repair method – use caution
 - De Havilland Comet case study
 - Grumman Mallard case study
 - FAA position on flight with known cracks and stop-drilling

Note: Nuss will tailor the material to the client's desires/needs and workshop length. Depending on a workshop's length, not all topics and/or case studies listed above may be covered. Nuss will ensure there is sufficient time to cover the selected topics adequately and allow for workshop attendee discussion.