

# ***MECHANIC LIABILITY: LEGAL CONSEQUENCES OF IMPROPER MAINTENANCE***

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**2007 FAA Aviation  
Maintenance Symposium**

# Speakers

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# Understanding the FARs

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- **Section I** - No mechanic or mechanics, pilot or pilots, or person or persons acting on the direction or suggestion or supervision of a mechanic or mechanics, pilot or pilots may try, or attempt to try or make, or make attempt to try to comprehend or understand any or all, in whole or in part of the herein mentioned Aviation Regulations, except as authorized by the Administrator or an agent appointed by, or inspected by, the Administrator.
- **Section II** - If a mechanic, pilot, or group of associate mechanics or pilots becomes aware of, or realizes, or detects, or discovers, or finds that he or she, or they, are or have been beginning to understand the Aviation Regulations, they must immediately, within three (3) days, notify the Administrator in writing.
- **Section III** - Upon receipt of the above-mentioned notice of impending comprehension, the Administrator shall immediately rewrite the Aviation Regulations in such a manner as to eliminate any further ease or likelihood of comprehension.
- **Section IV** - The Administrator may, at his or her discretion, require the offending mechanic or mechanics, pilot or pilots to attend remedial instruction in reading Aviation Regulations until such time that said mechanic(s) or pilot(s) is (are) too confused to be capable of understanding anything.

# OVERVIEW OF MAINTAINER RESPONSIBILITIES - *PILOTS*

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- **Private Pilots**
  - Preventive maintenance only (Part 43.3(g))
    - E.g., routine servicing of landing gear, R&R of safety wire and cotter keys, nonstructural cosmetic work, fluid & filter servicing, R&R non-hydraulic hose connections, R&R certain Com/Nav equipment (Appendix A)
    - Must still make required *record entries*, and *approve for return to service* (Parts 43.5, 43.7, 43.9)
    - Work must meet generally accepted quality standards (Part 43.13)

# OVERVIEW OF MAINTAINER RESPONSIBILITIES - *MECHANICS*

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- **Persons Authorized - FAR Part 43.3**
  - **Mechanic may perform maintenance, preventative maintenance and alterations as provided for in Part 65**
    - **See Part 65.81, .83, .85 & .87**
    - **See limitations Part 43 Appendix A**



## OVERVIEW OF MAINTAINER RESPONSIBILITIES — *MECHANICS* (cont.)

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- **Return to Service – Parts 43.5 & 43.7**
  - **Must record entry**
    - **See 43.9, .11 & .12**
    - **Major repairs – see Appendix B**
  - **Must be authorized by FAA**
    - **In accordance with Part 65**
- **Performance Rules – Part 43.13**
  - **Shall use “methods, techniques and practices” prescribed by**
    - **manufacturer’s manuals**
    - **acceptable to the Administrator**
    - **accepted industry standards**
  - **Condition post work “at least equal to its original or properly altered condition”**

# OVERVIEW OF MAINTAINER RESPONSIBILITIES — *MECHANICS (cont.)*

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- **Additional Performance Rules for Inspections – Part 43.15**
  - A/C / component must meet applicable airworthiness requirements, and
  - Performed in accordance with applicable inspection program
    - Part 123, 125, 135, of 91.409(e)
  - Annuals and 100 hours
    - Shall use checklist (mfg or own) while performing work
    - Checklist must include items in Appendix D
    - Reciprocating engine run-up requirements
      - Power output;
      - Magnetos;
      - Fuel and Oil Pressure; and
      - Cylinder and oil temperature

# FAA ENFORCEMENT ACTIONS

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# FAA Enforcement Action

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- **Administrative Action**
  - Letter of Correction (maybe w/remedial training)
  - Warning Notice
  - Technically are NOT “violations”
- **Disciplinary Proceedings**
  - Civil Penalty (fine)
    - Max \$1,000 per violation for repair stations (\$10,000 per violation for commercial air carriers)



# FAA Enforcement Action

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- **Certificate Action**
  - **Suspension, or permanent revocation of mechanics license, repair station license**
  - **If very lucky, only punishment = retesting**
- **Special considerations if violation relates to falsification of maintenance records:**
  - **Max fine goes up to \$250,000 per violation;**
  - **Usually punishment is revocation or suspension—no “administrative action”**
  - **Also a federal crime—discussed next**



# Criminal Prosecution

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## ○ Federal Law

- **Intentional falsification of records or concealing falsification of records by an employee of an air carrier: imprisonment up to 5 years (49 USC § 46310)**
- **Intentional altering, destroying or concealing of records in connection with any FAA, NTSB or other federal investigation: imprisonment up to 20 years (18 USC § 1519)**
- **Intentional falsification or concealment of facts or records relating to an aircraft part: imprisonment up to 15 years (18 USC § 38) [20 years if someone gets hurt, life imprisonment if someone is killed!!!]**



# Criminal Prosecution

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## ○ **State Law**

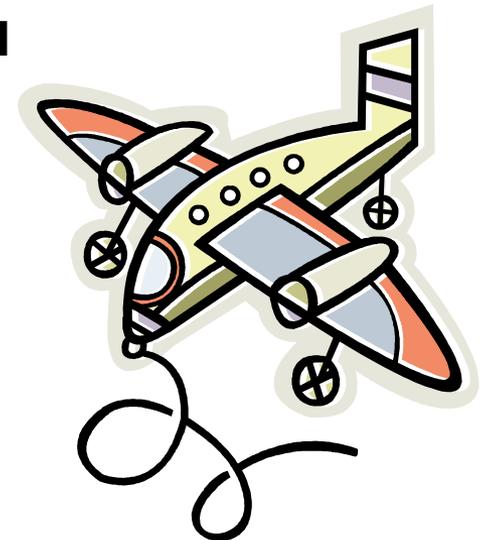
- **That is, 3rd-degree murder, negligent homicide, criminal negligence, involuntary manslaughter—in addition to the “civil” liability**
- **Basic standard: Mechanic intentionally does something that he or she knows is creating an unreasonable risk of someone getting killed**
- **Example: 1996 ValueJet crash in Florida—various people prosecuted by the State of Florida under Florida law, in addition to SabreJet Inc. being pursued by the Feds under federal law**

# Civil Liability

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## ○ Negligence

- **Standard of Care = “reasonably prudent person”**
  - ‘Custom & practice’ in the industry
  - Manufacturers’ maintenance manuals
  - FARs
  - Airworthiness Directives
  - Aeronautical Information Manual
  - Advisory Circulars
  - Industry literature (e.g. “Best Practices” for aging aircraft)



# Examples of Negligence/Malfeasance

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- **Obsolete manuals**
- **Incomplete checklists**
- **Noncompliance with ADs or SBs**
  - **Mandatory SBs**
  - **Non-mandatory SBs**
- **Failure to notice previous mech failed to comply with ADs, etc.**
- **IA signed logbook when AC not airworthy or work not properly performed**

# REAL WORLD APPLICATIONS

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- **Air Midwest, Flight 5481**
  - **Loss of Pitch Control During Takeoff**
  - **Beech 1900D, N233YV**
  - **Charlotte, N.C. – January 8, 2003**



# Probable Cause

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- **The airplane lost pitch control during takeoff.**
  - **Cause - Incorrect rigging of the elevator control system compounded by the airplane's aft center of gravity, which was substantially aft of the certified aft limit.**
  - **Contributing to the cause of the accident was:**
    - **Air Midwest's lack of oversight of the work being performed at the Huntington, West Virginia maintenance station;**
    - **Air Midwest's maintenance procedures and documentation;**
    - **Air Midwest's weight and balance program at the time of the accident;**
    - **Raytheon's quality assurance inspector's failure to detect the incorrect rigging of the elevator system;**
    - **FAA's average weight assumptions in its weight and balance program guidance at the time of the accident;**
    - **FAA's lack of oversight of Air Midwest's maintenance program and its weight and balance program."**

# Conclusion, Questions and Answers

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