



Federal Aviation
Administration

FAA Rotorcraft Rulemaking Activities



Presented to: Ninth EASA Rotorcraft Symposium

By: Larry Kelly – Manager, Rotorcraft Standards Staff, FAA

Date: December 2, 2015

Rotorcraft Rulemaking Activities

- ✓ **Rotorcraft Safety Focus – Reduce Fatalities and Serious Injuries**
- ✓ **Current Rulemaking - Miscellaneous Parts 27 & 29**
- ✓ **Future Rulemaking - Parts 27 & 29 Re-write**



Why the Rotorcraft Directorate Safety Focus?

- **Roskop Presentation from the 8th Symposium.**
 - Slow reduction in # of *total* accidents, but no sustainable reduction in # of *fatal* accidents.
 - Conducted study using 5 years of autopsy data.
 - Crash Resistant Fuel Systems (CRFS) are effective in both preventing Post-Crash Fire (PCF) *and* in preventing fatalities when PCF does occur.
 - Fleet equipage for 1994 CRFS regulation was about 16%.
 - Blunt Force Trauma (BFT) is the leading cause of death in rotorcraft accidents: 80% even when PCF does occur. No significant change in types/ percentages of bodily injuries as compared to a similar 5-year study in 2003.
 - Fleet equipage for 1989 BFT regulations was about 10%.



What's Happened Since the 8th Symposium?

- Continued FAA outreach with the safety data.
- Growing internal FAA support.
- More high-profile fatal accidents involving PCF.
- Significant, in-depth Press coverage.
- More safety recommendations regarding PCF.
- Congressional attention and demand for action.
- Aviation Rulemaking Advisory Committee (ARAC) tasking was published in the [Federal Register November 5, 2015](#).



ARAC Tasking, Rotorcraft Occupant Protection

- **Scope**

- Covers both CRFS and BFT Provisions
- Considers both Newly Manufactured Rotorcraft (NMR) and the Existing Fleet

- **ARAC Tasks**

1. Perform Cost-Benefit Analysis (CBA) regarding existing CRFS and BFT rules applied to NMR.
2. After acceptance of CBA report, FAA will task ARAC *either* to provide recommendations how existing CRFS and BFT rules should be made effective *or* to propose new performance-based regulations for NMR.
3. If performance-based regulations are proposed, perform a CBA.
4. After FAA acceptance of the report for the above, provide recommendations for *either* adopting existing CRFS and BFT rules *or* new performance-based regulations for the existing fleet.



Rotorcraft Rulemaking - Current



- **Near-Term Rulemaking (FY15 & FY16)**
 - Retrospective Regulatory Review (RRR)
 - U.S. Executive Order to focus on rulemaking that is relieving
 - Candidates are those resulting in recurring:
 - Special Conditions (SC)
 - Equivalent Level of Safety (ELOS)
 - Means of Compliance (MOC) Issue Papers (IP)
- **Current Miscellaneous Part 27 & 29 (FY15)**
 - Rulemaking application approval – December 2014
 - Issue Notice of Proposed Rulemaking (NPRM) – Late FY16
 - Update of these miscellaneous Part 27/29 rules will eliminate the need for recurring SCs, ELOS, & MOC IPs



Rotorcraft Rulemaking - Current



- **Current Miscellaneous Part 27/29 (FY15)**
 - 27/29.1305 & 27/29.1549 (OEI Training Mode)
 - 27/29.1305 (Synthesized Power Indicator)
 - 27/29.1309 (Eliminate need for 27.1309 SCs, update failure condition terminology)
 - 27/29.1329 & 27/29.1335 (Autopilot & Flight Director)
 - 27/29.1333 & Appendix B (Interconnection of pilot/co-pilot systems)
 - 27/29.1545 & 27/29.1549 (Powerplant Instrument display of operating ranges)
 - 27/29.1353 (Recognize various battery technologies, e.g. Lithium)
- **NPRM will be available for comment – Late FY16**



Rotorcraft Rulemaking - Current

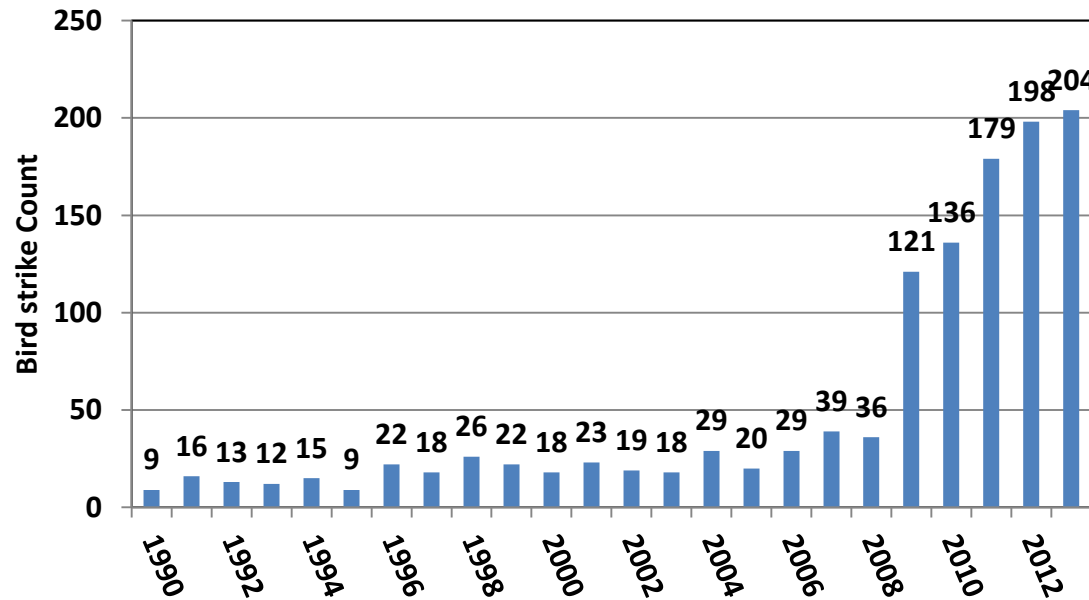
- **Proposed New Rotorcraft Rulemaking (FY16)**
 - Application for Rulemaking approval ~ February 2016
 - Special Rotorcraft Configurations Proposed Rules
 - Search & Rescue (SAR)
 - 30-Min All Engines Operative (AEO)
 - Other affected regulations
 - Anti-collision lights (red/white)
 - Master switch arrangement xx.1307
 - 27/29.773(b) – Flight test/analysis



Rotorcraft Rulemaking – Short Term

- **ARAC for Bird Strike**

- Dramatic increase in number of Rotorcraft Bird Strikes



- No current bird strike rule for Part 27, which is 90% of the fleet.
- ARAC tasking will be proposed, December 2015.



Rotorcraft Rulemaking – Long Term

- No significant updates to Parts 27 & 29 standards in 20+ years
- Technology advancements have outpaced Parts 27 & 29 standards
- Seeking ways to promote technology that can enhance rotorcraft safety
- Preparing our standards for the future rotorcraft



Future Rulemaking – Long Term

- **Part 27/29 Future Re-write (Long Term Planning)**
 - Currently, no FAA formal activity to rewrite Parts 27/29
 - Industry is conducting a study of a potential rewrite of Parts 27/29 and will provide recommendations to the FAA
 - Recommendations to be provided 3rd Quarter of 2017
 - Industry recommendations will be reviewed by FAA and coordinated with other bilateral partners (EASA, TCCA)
 - Any rulemaking recommendations will follow formal rulemaking process, including use of the ARC/ARAC process



