

Parallel Session

Current State of Mitigation: Flight Operations

Crewmember Flight, Duty and Rest Requirements: FAA Regulations, Initiatives, and Challenges

Mr. Gregory Kirkland
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9:25 - 9:50

June 18, 2008



Gregory Kirkland
Biography

Greg Kirkland is currently the Air Transportation Division Assistant Division Manager at Headquarters, Federal Aviation Administration. Greg began his aviation career in the United States Air Force where he flew the C-130 A/E/H and the AC-130 gunship. He was also a maintenance and supply officer, held several staff assignments to include a tour of duty on the Joint Staff, and was a C-130 squadron commander.

After retiring from the Air Force, Greg began his career in civil aviation flying for both Part 135 and Part 121 air carriers. He is type rated in the BA 3100, and the Boeing 737, 757, and 767 aircraft. Greg was a line check airman in the Boeing 737-300/500 at United Airlines and worked both in management and union positions promoting air safety programs.

Crewmember Flight and Duty Limits and Rest Requirements

FAA Regulations, Initiatives and Challenges

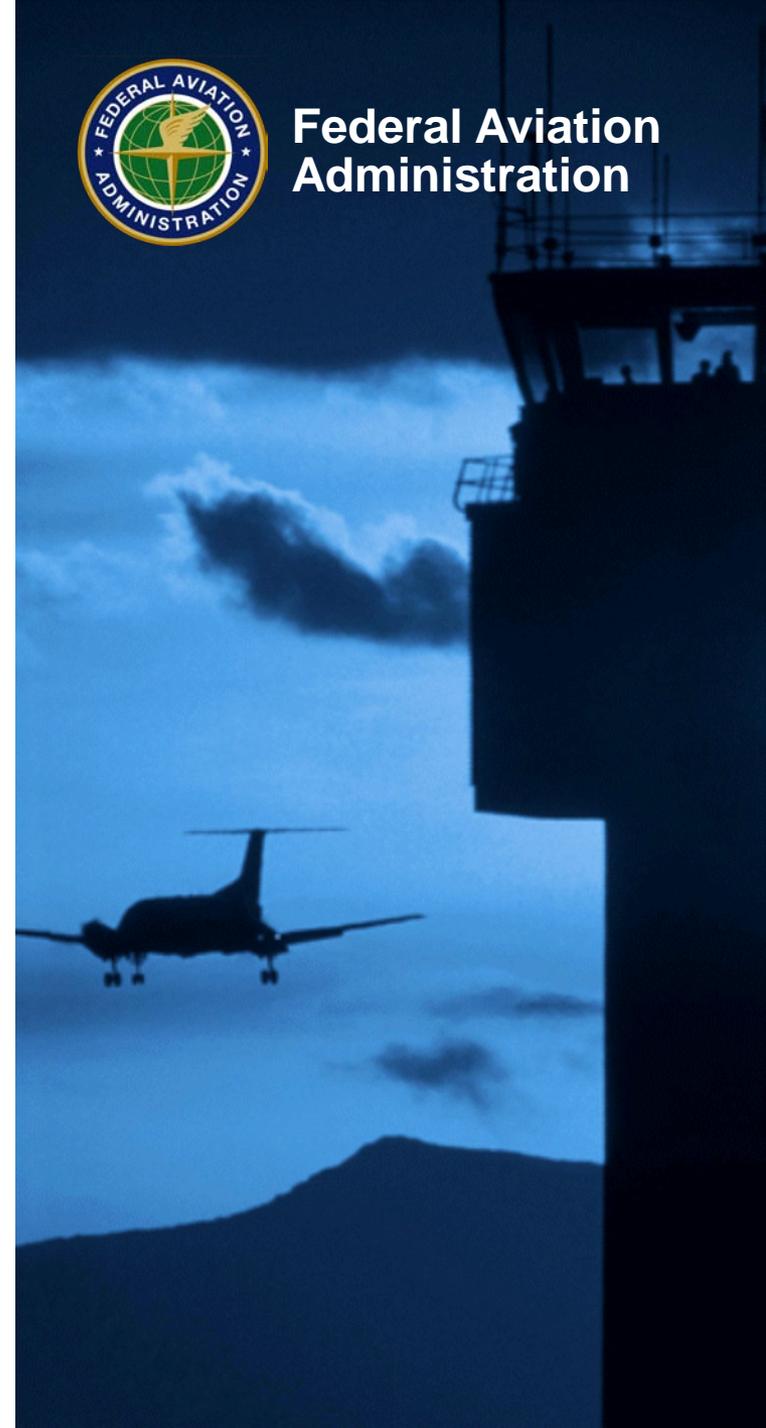
Presented to: Fatigue Symposium

By: Greg Kirkland

Date: June 18, 2008



Federal Aviation
Administration



Introduction

This Fatigue Symposium will cover the broad spectrum of fatigue issues and mitigations.

However, to plan for the future, we need to understand where we are now with current flight, duty and rest requirements.

This presentation will address rulemaking history, significant FAA initiatives undertaken to strengthen and clarify the intent of our regulations, as well as the challenges of regulating appropriate and safe flight and duty limits and rest requirements.

Presented at the FAA Fatigue Management Symposium: Partnerships for Solutions; Vienna, VA: June 17-19, 2008



FAA's Statutory Authority

- FAA has broad statutory authority to issue aviation safety rules. Under 49 U.S.C. Section 44701 (a) (5), the FAA has the authority to promote safe flight of civil aircraft by prescribing regulations that the FAA finds necessary for safety in air commerce and national security.
- However, in the area of hours of service the FAA does not have the discretion to decline to issue rules. Specifically, 49 USC 44701 (a) (4) requires the FAA to set “maximum hours or periods of service of aircrew”
- FAA must also “consider the duty of an air carrier to provide service with the highest possible degree of safety in the public interest”
- Aviation safety and the public interest, would be seriously compromised by operations with fatigued crewmembers.

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Background

- The aviation industry requires 24/7 activity to meet operational demands. All flights require rested crewmembers to safely support around the clock operations.
- International long haul flights with passengers and cargo, domestic short haul, multi-leg flights and domestic transcontinental flights all present unique challenges to meeting this requirement.
- Current flight time limits and rest requirements for part 121 and 135 crewmembers:
 - 14 CFR part 121, subparts P,Q, R and S
(domestic, flag, and supplemental operations)
 - 14 CFR part 135, subpart F
(on-demand and commuter operations)

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Rulemaking

- In 1985, the FAA published a Final Rule that updated the domestic flight and rest requirements for flight crewmembers titled “Flight Time Limitations and Rest Requirements”.
- Prior to the 1985 Final Rule, the rules did not address acute short term fatigue for flight crewmembers in 121 or 135 operations, or long term fatigue in part 135.
- Acute or short-term fatigue was addressed in both part 121(domestic) and part 135 operations by the introduction of a minimum daily rest requirements. Those known rest periods had to be provided before the beginning of a duty day and had to be recently provided (24 Hour Look Back).
- Chronic or long-term fatigue was addressed in part 135 by setting weekly, monthly and annual flight time limits that were comparable to part 121, for both scheduled and unscheduled operations

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Rulemaking

- In 1992, the FAA established a Flight Crewmember Flight/Duty/Rest Requirements working group under its Aviation Rulemaking Advisory Committee-ARAC
- 1994 Final report – After two years, the ARAC had not reached a consensus on several key issues, but did agree on the major areas that the FAA should address in future rulemaking.
- In 1995, the FAA issued an NPRM with a goal of establishing one set of regulations for flight crewmembers for all operations conducted under parts 121 and 135.
 - The FAA received approximately 2,000 comments on the 1995 NPRM, **mostly negative**.

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Rulemaking

(1) Industry- The rule is unnecessary and costly:

- Too expensive (Industry asserted that projected costs were in the billions over 15 years for implementation)
- “The rule would be unsafe as it imposes untested changes in longstanding rules and practices that ensure the current level of safety.”
- “The cause of most accidents is pilot error, not fatigue, and that the current rules have provided a good safety record.”
- “The FAA should focus on encouraging compliance with the existing rules rather than issuing new ones.”

(2) Labor- There are not enough protections for crewmembers.

Issue-The part 121 carriers did not like the proposal of shortening the maximum duty day to 14 hours. Pilots did not like the proposal to expand the 8-hour flight time limit to 10 hours between rest periods.

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Rulemaking

- For Flight Attendants, there were no regulations regarding limits on duty and rest periods until the FAA published a Final Rule in 1994 titled “Flight Attendant Duty Period Limitations and Rest Requirements”
- Established duty limitations and rest requirements in both part 121 and 135 operations, for all types of operations.
- This rule applied to all flight attendants who were assigned to duties in an aircraft for operations that required a flight attendant, including flight attendants in excess of the minimum flight attendant crew requirement
- Also allowed flight attendants to be scheduled under current flight crewmember regulations.

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Challenges

- We must find the right balance of safety, science, cost and operational efficiency regarding amendments to our current rules.
- We must ask ourselves if the rules are reasonably balanced to assure that the adverse effects of fatigue do not jeopardize a flight and, at the same time, cost effective and flexible enough for operational efficiency.
- **Balance-**
Prevent adverse effects of fatigue (look back rest which limits the duty day) vs. Flexibility (Flight time limits may be exceeded during the hard duty day- but only for circumstances beyond the carrier's control)
- We must recognize that this is a very polarizing issue. Work groups and Advisory Committees have not, thus far, reached consensus on part 121 regulations (e.g. the 1998 ARAC submitted 5 different proposals)

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Challenges

Different flight environments have different operational requirements

- Different flight environments have different physiological challenges for crewmembers
- “Back-Side-Of-The-Clock” Operations
- Short Haul, Multiple Leg Operations
- Long Haul, Transcontinental, International and ULR Operations
- Can we develop a standard approach to very different operations...or should different limits be established for more fatiguing environments?

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Challenges

Crewmembers

- No guarantee that crewmembers are “resting” during the rest period before a trip.
- Crewmembers do not always live in the same city where they work (can fly out of 4-5 different bases in a career)
- People can commute from LAX to PHL (crossing three time zones) to work an international trip that crosses additional time zones

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Initiatives

While working to resolve these challenges, the FAA has undertaken many actions to enforce the current pilot rest/duty regulations:

- In **November 2000**, FAA Deputy Chief Counsel James Whitlow issued a letter regarding the look-back rest requirements in 121.471. In **May 2002**, this position was upheld by the U.S Court of Appeals
- Look-back rest requirements are not merely scheduling requirements, but are, in fact, hard requirements that require pilots and air carriers to cease the commencement of a flight, if before takeoff the actual expected block-in time meant that the pilot didn't commence his or her rest period on time.
- If, at the time immediately before takeoff, it is calculated that a pilot will have less than 8 hours of look-back rest in the 24 hours preceding the actual expected block in time for the flight segment, then the flight may not take off.
- “Legal to start, legal to finish” is inaccurate and misleading. It oversimplifies the flexibilities allowed for exceeding flight time limits by ignoring the fact that (1) carriers do not have the unfettered discretion to ignore flight time limits and (2) the look back rest requirements (duty day) are hard.

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Initiatives

- In **May 2001**, the FAA announced that we would begin enforcing the 16-hour duty day codified in 14 CFR 121.471.
 - While the FAA declined in the 1985 final rule to explicitly “institute a limit on duty beyond the inherent limits necessitated by the required rest”, that very language reflected the FAA’s recognition that the required rest requirements inherently limit a flight crewmember’s duty time.
 - Adherence to look back and compensatory rest rules will prevent the danger that a person may not recognize the onset of dangerous fatigue.
- In **July 2002**, after the favorable, unanimous decision by a panel of the DC Circuit Court of Appeals, the FAA followed up on this action with briefings and instruction to FAA Principal Operations Inspectors on enforcement of the rest and duty rules and increased inspections of air carrier records.

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Initiatives

- In **November 2003**, the FAA issued an interpretation which emphasized that transportation that is 'local in nature' means that transportation to the rest facility should not be so time-consuming that a crewmember cannot obtain sufficient rest.
- In **December 2005**, the FAA announced that novel requests for interpretation of flight, duty and rest requirements would be published in the Federal Register before an interpretation was issued.
- FAA continues to make available numerous legal interpretations on flight time, duty time and rest requirements.

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Initiatives

- Advisory Circular 121-31 Flightcrew Sleeping Quarters and Rest Facilities —Addresses onboard sleeping facilities for crewmembers
- Advisory Circular 120-51E Crew Resource Management Training -- Establishes importance of curriculums that address fatigue mitigation and fatigue's effect on performance

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Initiatives

- OpSpec A332 to address Ultra Long Range Operations -- This rule of particular applicability is important for at least 3 reasons.
- (1) It fixes a deficiency in the decades-old Flag rules regarding maximum hours of service. In other words, contrary to the FAA's statutory duty to impose maximum hours of service, the existing Flag rules did not set explicit duty limits for pilots or implicit duty limits by means of look-back rest requirements.
- (2) It fixes the deficiency in the existing flight rules regarding the maximum number of scheduled flight time that an air carrier could assign to a pilot between required rest periods on the ground.
- (3) It sets layover rest requirements for pilots and flight attendants who work on these fatiguing flights.
- It is a new approach which incorporates science into crew duty/rest requirements and assures that alertness and performance are monitored

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Initiatives

- Flight Attendant Fatigue Study (2007) –
FAA Office of Aerospace Medicine Technical Report DOT/FAA/AM-07/21
- Contains a literature review on fatigue as potentially experienced by flight attendants, an evaluation of currently used (actual vs. scheduled) flight attendant duty schedules, and a comparison of these schedules to the current CFRs.
- The report concludes with 6 recommendations concerning issues that require further evaluation, including:
 - (1) Survey of Field Operations.
 - (2) Focused Study of Incident Reports.
 - (3) Field Research on the Effects of Fatigue.
 - (4) Validation of Models for Assessing FA Fatigue.
 - (5) International Carrier Policies and Practices Review.
 - (6) Training.

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Initiatives

- Joint FAA/Industry Aviation Rulemaking Committee established on April 8, 2003 –
 - Provided recommendations to the FAA regarding the safety and applicability standards of parts 125, 135 and associated regulations.
 - Recommendations were developed for revising the commuter and on-demand flight/rest requirements in part 135.
- FAA Fatigue Symposium June 2008 –

--Aviation Fatigue Management: Partnerships for Solutions

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Conclusion

The FAA is committed to promoting safe flight of civil aircraft by prescribing regulations that contain the right balance of safety, science and operational efficiency.

The FAA will continue to move forward to address the challenges of regulating appropriate and safe flight and duty limits and rest requirements.

Thank you for the commitment you have demonstrated by your attendance at this Symposium.

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