

Regional Airline Pilot Profession Post Colgan 3407

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Presentation Outline

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4. 14 CFR Part 117 Rest Regulations
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Background of the Accident

- February 12th, 2009
- Continental Connection Flight 3407 operated by Colgan Air
 - Regional airline - subcontractor to Continental Airlines
 - Aircraft was a Bombardier Q400, outfitted with 74 economy seats
- Flight was scheduled to operate from Newark, NJ (EWR) to Buffalo, NY (BUF)
- Scheduled departure of 1900L - left at 2100L due to adverse weather conditions
 - Snow, low visibility, field conditions (FICONS)
 - Crew pairing was not ideal
 - Captain had multiple checkride failures and the First Officer was not acclimated to the Eastern time zone - she had commuted in from Seattle, WA, the morning of



Background of the Accident (continued)


- The aircraft entered known icing conditions and began accumulating ice
 - Adversely affects the safety of flight
 - Destroys the lift that the wings are able to produce
- Aircraft began stalling as it approached Buffalo due to the buildup of ice
- Both the Captain and First Officer incorrectly responded to the stall
- Aircraft spiraled into the ground in the vicinity of Buffalo's airport
- Resulted in the loss of 52 lives and numerous changes both in legislature and in the scope of the regional airline pilot profession



Bombardier Q400



NTSB 830 Findings

- An aircraft “accident” in nature - 52 lives lost
 - Probable causes of the accident
 - 1. Captain’s incorrect response to the stall warning system
 - 2. Flight crew’s inability to adhere to stable cockpit guidelines
 - 3. Captain’s inability to lead the flight
 - 4. Colgan Air’s lack of training for flight in icing conditions
 - Recommendations (not enforcements)
 - 1. Require leadership training for incoming captains
 - 2. Address pilot fatigue, specifically on the part of commuting pilots
 - 3. Maintain a digital log of pilot records that provides easy access to a FAA inspector
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Pilot Records Database

- Before Colgan 3407, there was no requirement for airlines to record training records, enforcement actions, or letters of discipline
- The Federal Aviation Administration (FAA) determined record of the aforementioned was needed on a uniform platform
 - As a result, the FAA developed the digital Pilot Records Database for air carriers to upload pilot training records and documents
- Builds upon the Pilot Records Improvement Act, but requires airlines report whether pilots pass or fail proficiency checks while employed



14 CFR Part 117 Rest Regulations

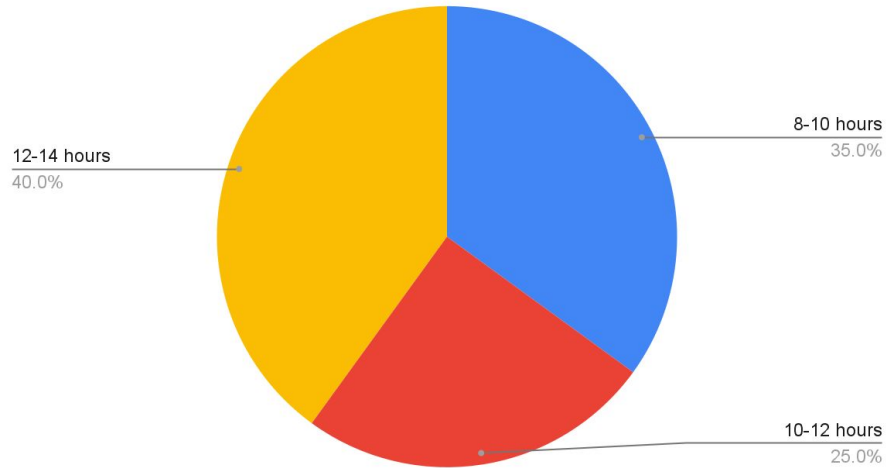
- Completely new section of the Code of Federal Regulations post Colgan 3407
- Covers rest regulations in much greater depth than pre accident
 - Provides increased clarity and scope to pilot rest rules
- This legislation increases the minimum off-duty time to 10 hours from 8
 - Provides a minimum of 8 hours “behind the door” (i.e., restful sleep) per night
- Further requires airlines to track fatigue calls and establish Fatigue Risk Management Plans (FRMP)
- Inhibits airlines from punishing crews for calling in fatigues
 - Some level of backlash is still existent



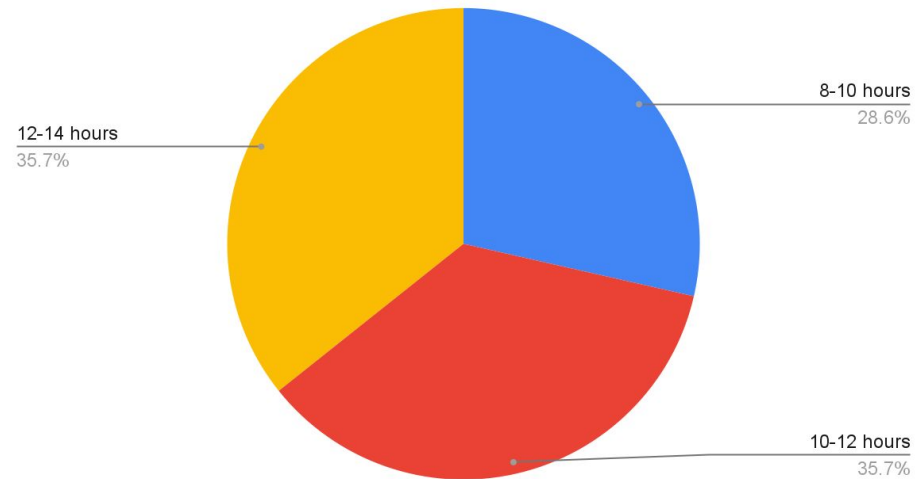
14 CFR Part 117 Rest Regulations (continued)

- I surveyed regional airline pilots both before and after the accident to determine how average overnight times differed


Average Overnight Time Pre Colgan 3407




Average Overnight Time Post Colgan 3407



1,500 Hour Rule

- Before Colgan 3407, First Officers at airlines needed to hold a minimum of a commercial license with multi-engine and instrument airplane ratings
 - The minimum hour requirement to hold this certificate at is 250 hours
 - Post Colgan 3407, congress enacted legislation to require that First Officers meet Air Transport Pilot (ATP) requirements to act as second-in-command of airliners
 - Pilots must generally have 1,500 flight hours for ATP certification
 - Schools like WMU are eligible for reduced ATP certification at 1,000 hours
 - Pilot experience was not a direct cause of the accident, however, congress realized pilot skill level greatly increases from 250 to 1,500 hours
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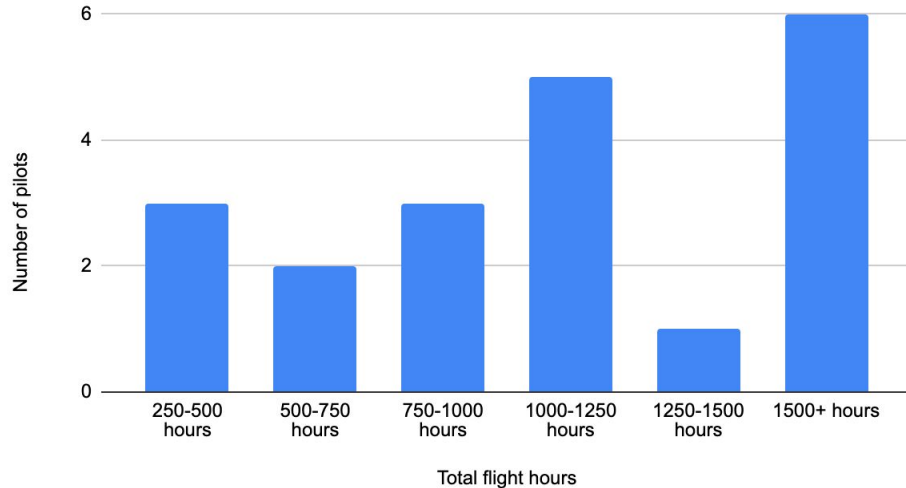
1,500 Hour Rule (continued)

- Requiring that First Officers meet ATP requirements bottlenecks the supply of pilots available to work
 - Pilots generally finish their initial training (Private, instrument, commercial single engine and multiengine, CFI/CFII) around 250 hours
 - Pilots must find work in areas such as aerial survey, power line patrol, or flight instruction to gain experience to meet ATP minimums
 - This has restricted the amount of pilots willing to fly, as pilots are no longer eligible for hiring upon completion of their commercial multiengine certificate
 - Airlines have been forced to eliminate routes and cut cities in recent years as the direct result of a shortage of ATP eligible pilots
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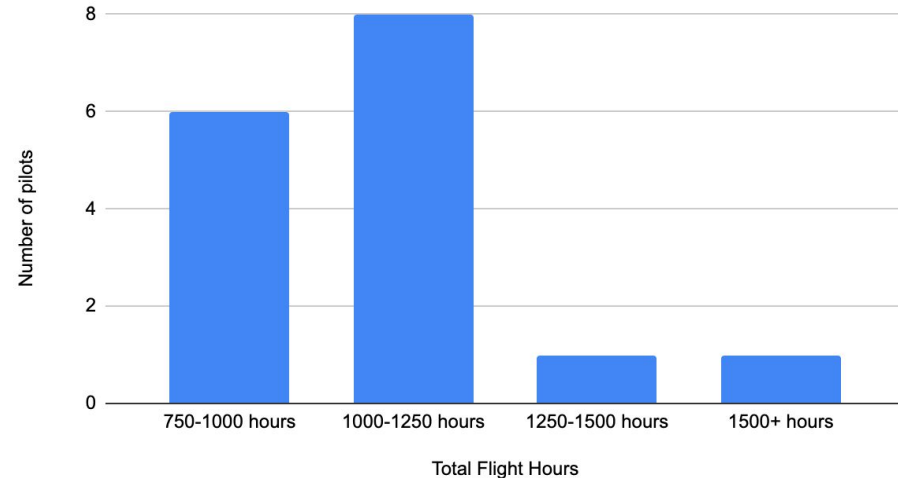
1,500 Hour Rule (continued)

- I surveyed regional airline pilots to see how the amount of flight time they were hired at differed both pre and post Colgan 3407

Flight Hours Hired With Pre Colgan 3407



Flight Hours Hired With Post Colgan 3407




Regional Airline Pilot Shortage

- Given the higher hiring minimums imposed on pilots by Colgan 3407, the regional industry has experienced a shortage of qualified pilots
 - United Express has cut service to 17 regional cities, citing a lack of pilots
- There are numerous barriers to entry the profession, including funding for initial flight training, a substantial time commitment to reach ATP minimums, and the high volatility of the industry itself
- Cadet programs have been introduced by airlines, which will guarantee jobs to beginning pilots upon completion of training
 - Provides a sense of ease to the pilot
 - Provides a pipeline of developing pilots to the airline itself



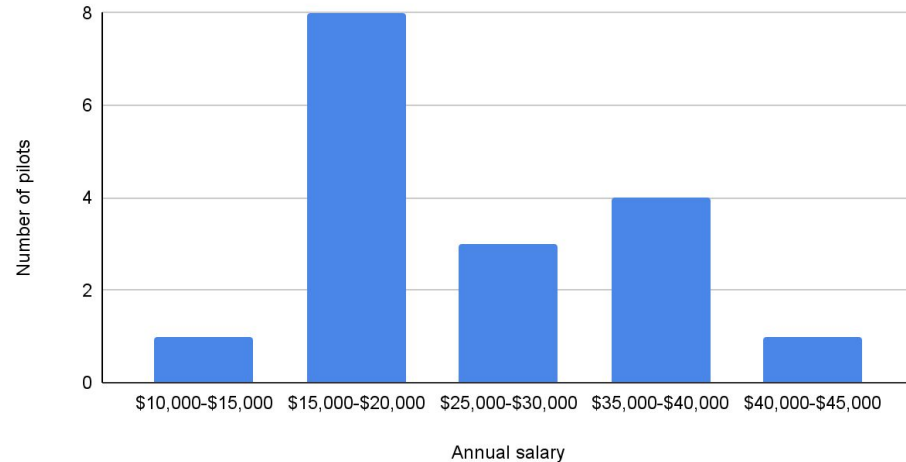
Pay

- Regional airlines operate smaller aircraft and as a result, pay less than larger mainline carriers (such as United, American, and Delta)
 - As a result, they have lower hiring minimums than mainline carriers and are suited for pilots in the initial stages of careers as ATPs
 - First Officer Shaw made \$16,000 her first year at Colgan Air
 - Captain Renslow earned \$55,000 his final year as captain
 - Regional airline pilot pay has increased substantially since Colgan 3407, as airlines are having to pay more to attract a dwindling number of available pilots
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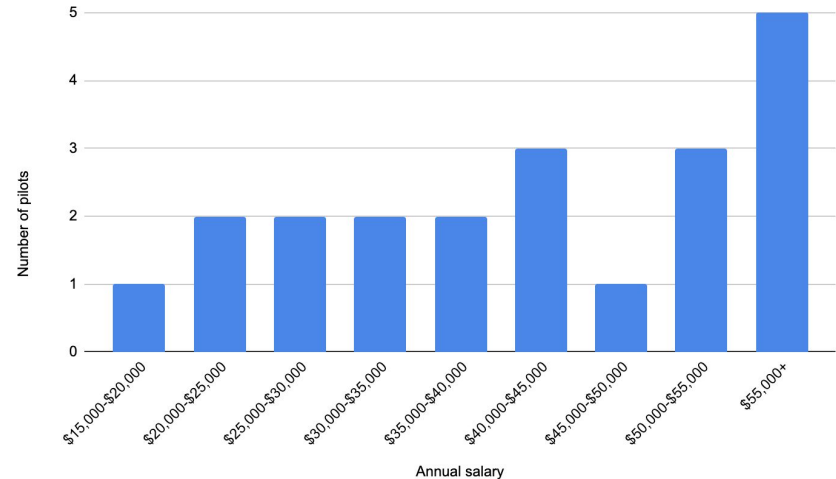
Pay (continued)

- Data was collected from regional airline pilots both pre and post Colgan 3407, focusing on first year salary with the goal of analyzing how pay has changed as a direct result of the accident

Regional First Officer Pay Pre Colgan 3407



First Year Regional First Officer Pay Post Colgan 3407



Regional Airline Pilot Career Progression

- Most regional airline pilots aspire to transition to mainline carriers such as United
 - Better aircraft, increased pay, better destinations, etc.
- I further surveyed pilots with the intention of discovering how career progression changed as a result of Colgan 3407
 - I defined career progression as a guaranteed interview or flow-through program
 - 58% had career progression before the accident, and 40% had career progression after
- Post accident, airlines have been developing flow-through pipeline programs to secure pilots in the early stages of their career
 - United Aviate, Delta Propel



Conclusion

- Numerous contributing factors and threats led to the preventable loss of 52 lives
 - Colgan Flight 3407 revealed numerous flaws within the regional airline model and standard operating procedures executed within the industry
 - Resulted in a substantial increase in pilot experience required for hiring, increased pay, and a shortage of qualified regional airline pilot applicants
 - Brought about improvements and increased clarity in rest regulations
 - Increased barriers to entry to the profession
 - Overall, the changes enacted benefit the regional airline pilot profession as a whole and further enhanced the safety of commercial air travel
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