

FRMS Proposal

3 Pilot Crew Augmented Crew Rest Break Schedule

Delta Air Lines

Capt Jim Mangie

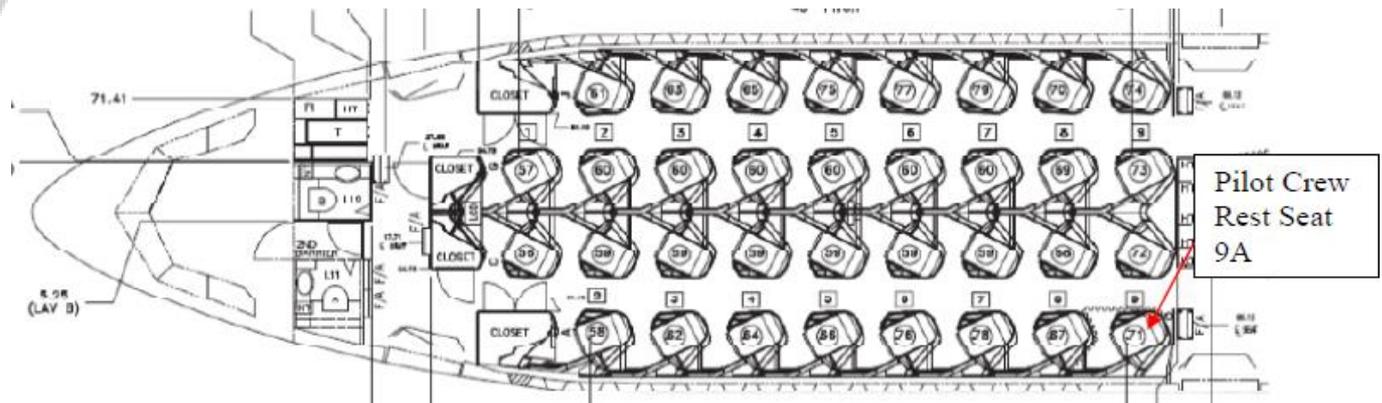
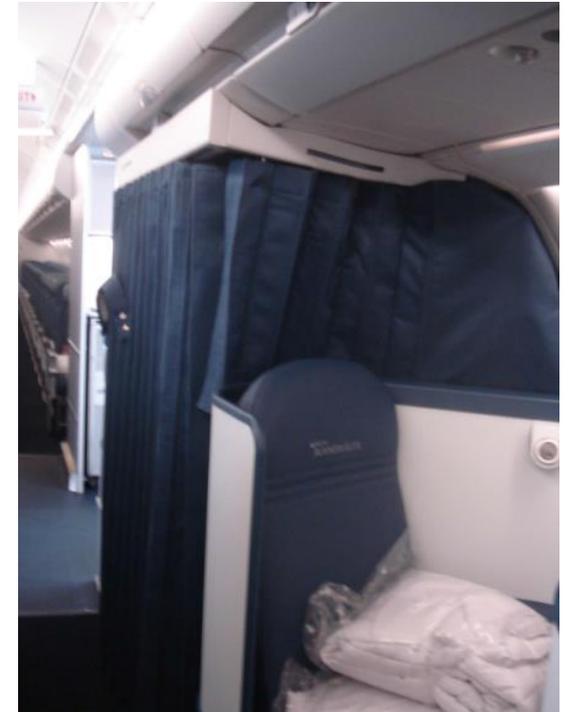


Background

- **On-board rest facilities and an additional pilot are the primary method to mitigate fatigue for long flights.**
- **Crew consists of landing pilot, monitoring pilot, relief pilot.**
- **Time available for rest is divided up between the pilots in a way they deem most appropriate to mitigate fatigue for that flight.**
- **Emphasis on rest is placed on the pilot that is designated to land the airplane at the final destination.**
- **Prior to Part 117, Delta crews would most often offer the landing pilot the second crew rest break and the monitoring pilot would take the third break.**
- **Though this was standard among Delta three pilot augmented crews, the captain retained the flexibility to alter the crew rest schedule to accommodate individual pilots' rest needs.**

Airbus 330-300

Class 2, Seat 9A



4/26/2017

DELTA AIR LINES, INC.

Regulatory Mandate

Part 117.17 currently mandates the following requirements for 3 pilot augmented crews:

- 1. Landing pilot must have a 2 hour break within the last half of the flight duty period**
- 2. Monitoring pilot must have a 90 minute break sometime in the flight duty period**

The intent of the regulation is to:

- Optimize the rest opportunity for the landing pilot**
- Require a minimum break opportunity for the monitoring pilot**
- Limit the time of continuous wakefulness for the landing pilot**

Regulatory Mandate

- **These requirements are well suited for longer operations flown with four pilot crews; however they restrict rest options on three pilot crew operations in a way that can sometimes interfere with the landing pilot taking the optimal rest break on shorter 3 pilot operations.**
- **Most Delta pilots prefer to take the middle break as the landing pilot. This break falls between the two meal services which allows for the best quality of rest.**

Regulatory Mandate

- **To comply with Part 117 on shorter flights, if the landing pilot takes the second break, the monitoring pilot must take the first break. This forces a longer time of continuous wakefulness for the monitoring pilot.**
- **Approving the flexibility discussed above allows the landing pilot to take the optimal middle break or the third break depending on the circumstances for that flight.**
- **Delta acknowledges that the main purpose of the presence of the relief pilot is fatigue mitigation.**
- **Delta also understands that available rest time can be reallocated from the relief pilot to the landing pilot and monitoring pilot.**
- **In order to help mitigate the possible increased fatigue related risk that crewmembers experience, Delta has developed procedures where the relief pilot performs all ancillary and administrative duties from TOD, which allows the PF and PM to better focus on the actual operation of the aircraft. If the relief pilot isn't given the opportunity for a significant rest break, using him for this function is very limited.**

Recommendation

Request an AMOC to Part 117.17(c)(1), the current rules for determining crew rest break duration and placement for three pilot augmented crews be changed to the following:

- 1. For all three pilot flights flown under Table C limits with an approved crew rest facility:**
 - Break times can be calculated to where the landing pilot can take second or third break and be given at least one third of the available rest time but not less than 1+45**
 - Allow the rest period for the landing pilot to begin up to an hour earlier than the last half of the FDP**
 - The monitoring pilot continue to comply with the current Part 117(c)(2) requirements**