

other categories of aviation, such as corporate and on-demand operations, but there are also some unique aspects of fractional ownership operations, such as crew and aircraft positioning and scheduling. Currently, fractional ownership operations have no regulatory flight, duty, and rest requirements. The requirements of this final rule will apply standards comparable to those applied to on-demand operations, and go beyond those standards in specific areas, such as in applying time zone restrictions. While a company is free to establish collective bargaining agreements with its pilots, it is the inherent responsibility of the FAA to establish minimum standards that are appropriate to each type of operation. The FAA has made some changes to the proposed rule, as explained below. Also, the FAA intends to monitor the implementation of these rules and may do future rulemaking, particularly at the time that the agency develops proposed revisions to flight, duty, and rest requirements for part 121 and 135 operations.

*Single Pilot.* NATA and Flexjet believe the proposed regulation would be appropriate for single-pilot operations. In addition, the deviation authority of proposed § 91.1049 allows the FAA to authorize single-pilot operations when the FAA determines that it would be appropriate given the circumstances. The Teamsters believe the proposed rules would not be appropriate for single pilot operations.

*FAA Response:* The deviation authority in § 91.1049 for single-pilot operations is intended to allow operations with certain small aircraft certificated for one pilot. Part 135 has a similar provision for such aircraft. One of the elements in authorizing single-pilot operations will be to prevent pilot fatigue. Therefore, the rules in § 91.1059 applicable to a single pilot impose a daily flight time limit of 8 hours instead of 10 hours, which may be extended only one hour instead of two hours, because of circumstance beyond the control of the operator, such as bad weather. In addition, the deviations may provide other conditions to help prevent pilot fatigue, such as the use of an autopilot or fatigue countermeasures.

*Flight Attendants.* The EJA Master Executive Council Chair, NWJ, and Teamsters state that flight attendants should also be protected by duty and rest requirements. A flight attendant's primary duty is to provide cabin safety. Fatigue impairs their performance just as it does a pilot's. The Teamsters suggest using the part 135 flight attendant rules.

*FAA Response:* The FAA agrees with these comments and has added duty and rest requirements for flight attendants to the final rule. These requirements are based on those applicable to part 135 operations in § 135.273. However, a fractional ownership program manager has the option of following the pilot duty and rest requirements in subpart K, instead of the flight attendant requirements. Some operators prefer to schedule the entire crew under the same rules, instead of complying with different rules for the cockpit and cabin crews. In addition a fractional ownership program manager may use the flight attendant rules of part 121 or part 135, instead of those under subpart K, if authorized. This option may be most useful for program managers that conduct both part 91 and part 135 or 121 operations.

Fractional ownership operations must comply with the rest and duty requirements whenever a flight attendant is used, not just in cases when the flight attendant is a required crewmember under § 91.533 for flights with 19 or more passengers. This is necessary because whenever a qualified crewmember is on board, he or she must be rested and able to perform the duties safely.

*Research.* Four commenters (two individuals, Teamsters, and EJA Master Executive Council Chairman) are surprised that FOARC did not consider research done by NASA and others on the topic of rest and duty. One commenter thinks there is an opportunity to look outside the box to a serious solution to fatigued crews and the safety hazard that comes from this type of professional occupation.

The Teamsters note that § 91.1057 is filled with unenforceable language and in many cases goes against decades of studies conducted by NASA and others regarding duty time and rest requirements. At a time when more and more accidents are being blamed on fatigue and the FAA is finally enforcing various rest requirement regulations, FOARC proposes that the FAA ignore the research and its own definitions found throughout the FAA regulations.

The EJA Master Executive Council Chairman thinks that if the FAA is serious about "one level of safety," it should listen to the experts in the field and make consistent changes to all duty and rest regulations based on science, not politics. There should be no difference in duty and rest regulations whether one is flying under part 91, 135, or 121. The EJA Master Executive Council Chairman and Teamsters note that all humans are subject to fatigue,

regardless of the type of aircraft being flown or for whom they are flying.

IBT notes that substantial literature exists that suggests an average minimum of eight consecutive hours of sleep is required to ensure a rested state. Further, alertness is impaired by fatigue, especially at night and during multi-time zone crossings. Current thought suggests that to achieve eight hours of sleep, a crewmember needs at least ten (10) consecutive hours of rest opportunity. This provides a normal maximum duty period of 14 consecutive hours. Beyond that crews should be augmented. This commenter states that, historically, in air transport operations, eight hours has been the normal maximum flight time for a two-person crew and no rationale has been presented to change this maximum. Also 12 hours should be established as the maximum flight time for a three pilot crew. This too has been traditionally adhered to in air transport operations.

*FAA Response:* The FAA did consider the research that has been conducted on fatigue in the aviation industry. Many of the principles recited by IBT have been incorporated into the subpart K flight, duty, and rest requirements. The subpart K requirements were based on those applicable to on-demand operations in part 135 with additional requirements based on unique aspects of fractional ownership operations. In addition, the research on fatigue countermeasures will be reviewed and incorporated into the guidance for fractional ownership operations, as appropriate.

*Similarity to Parts 121/135.* A commenter believes that the flight and duty limits should be the same requirements as part 121 or 135. NWJ, Teamsters, and an individual recommend that the rest rules for fractional pilots should be the same as those for pilots operating under part 135. A commenter notes that a higher level of safety would be maintained. By voluntarily meeting these high standards, these current fractional programs have had an excellent safety record. However, this commenter has seen an erosion of this voluntary compliance to remain competitive. If the regulatory minimum were 14 CFR 135/121, the high level of safety we enjoy today will be maintained.

*FAA Response:* The FAA believes that the subpart K flight, duty, and rest requirements are comparable to part 121 and part 135 in the level of safety provided, and in addition, address some unique aspects of fractional ownership operations. In the final rule, the FAA has added a provision allowing