



[4910-13]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Parts 117 and 121

[Docket No. FAA-2012-0358]

Clarification of Flight, Duty, and Rest Requirements

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Clarification.

SUMMARY: The FAA published a final rule on January 4, 2012, that amends the existing flight, duty and rest regulations applicable to certificate holders and their flightcrew members. Since then, the FAA has received numerous questions about the new flight, duty, and rest rule. This is a response to those questions.

FOR FURTHER INFORMATION CONTACT:

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SUPPLEMENTARY INFORMATION:

I. Background

On January 4, 2012, the FAA published a final rule entitled, “Flightcrew Member Duty and Rest Requirements” (77 FR 330). In that rule, the FAA created new part 117, which replaces the existing flight, duty, and rest regulations, contained in Subparts Q, R, and S, for part 121 passenger operations. As part of this rulemaking, the FAA also applied the new 14 CFR part

117 to certain 14 CFR part 91 operations, and permitted all-cargo operations operating under 14 CFR part 121 to voluntarily opt into the part 117 flight, duty, and rest regulations.

On April 5, 2012, the FAA published a notice explaining the procedures for submitting clarifying questions concerning these flight, duty, and rest regulations.¹ Since then, the FAA received numerous questions concerning the new regulations. This is a response to those questions.

II. Discussion

A. Applicability

i. Applicability of Previous Flight, Duty, and Rest Interpretations to Part 117

Airlines for America (A4A) asked whether previous interpretations of the part 121 flight, duty, and rest rules are applicable to part 117.

Part 117 creates a new flight, duty, and rest regulatory scheme for part 121 passenger operations. As such, some interpretations of the regulatory scheme that preceded part 117 may have limited or no applicability to the provisions of part 117. The FAA will decide on a case-by-case basis to what extent an existing flight, duty, and rest interpretation applies to part 117.

ii. Voluntary Implementation of Part 117 Before January 4, 2014

A4A asked whether carriers can implement more restrictive portions of part 117 before the effective date of the final rule that created part 117.

The flight, duty, and rest rule that created part 117 will become effective on January 4, 2014.² Until then, passenger operations operating under part 121 must comply with the flight, duty, and rest requirements set out in Subparts Q, R, and S of part 121. If a carrier wishes to voluntarily

¹ 77 FR 20530 (Apr. 5, 2012).

² See 77 FR 28763 (May 16, 2012).

comply with a provision of part 117 before January 4, 2014, the carrier can do so as long as it also remains compliant with the provisions of Subparts Q, R, and S as applicable.

For example, 14 CFR 121.471(b) and (c) specify the amount of rest that a flight crewmember on a domestic operation must receive in a 24-hour period. However, these subsections do not require that the rest period include an 8-hour sleep opportunity. Conversely, § 117.25(e) and (f)³ will require that a rest period have an 8-hour uninterrupted sleep opportunity when part 117 becomes effective. Thus, a certificate holder operating a domestic operation who wishes to voluntarily ensure that its flight crewmembers have an 8-hour sleep opportunity during a rest period can do so because the sleep opportunity will not violate the provisions of § 121.471(b) and (c).

The FAA emphasizes, however, that, before January 4, 2014, a certificate holder can only comply with those provisions of part 117 that do not contradict the requirements of Subparts Q, R, and S. For example, a certificate holder who wishes to engage in augmentation on domestic flights cannot do so before January 4, 2014, because, even though part 117 permits domestic augmentation, Subpart Q, which governs domestic operations, does not allow domestic augmentation. Likewise, a certificate holder operating supplemental passenger flights who wishes to avoid the compensatory rest requirements of Subpart S cannot rely on part 117 to do so before January 2014 because, even though part 117 largely eliminates compensatory rest, part 117 does not become effective until January 2014.

iii. *Part 91 Flights*

Air Line Pilots Association, International (ALPA) and an individual commenter asked what amount of rest is necessary between a part 121 passenger flight and a part 91 ferry flight so that the part 91 flight does not have to function under part 117. ALPA asked whether part 91

³ The regulatory provisions of part 117 can be found at 77 FR 398 (Jan. 4, 2012).

operations that are not conducted under part 117 count toward the cumulative limits of part 117.

Alaska Air asked whether a pilot who is only assigned part 91 flights (and does not have any part 121 assignments) is subject to part 117.

Part 117 applies to all part 91 operations (other than Part 91 Subpart K) that are directed by a part 121 certificate holder “if any segment” is conducted as a part 121 passenger flight.⁴ Part 117 also applies to all flightcrew members who are participating in a part 91 operation (other than Part 91 Subpart K) on behalf of a part 121 certificate holder “if any flight segment” is conducted as a part 121 passenger flight.⁵ As an initial matter, we note that a flightcrew member who flies only on part 91 operations is not subject to part 117.⁶ In addition, because part 117 does not apply to part 91 operations that are not conducted by or on behalf of a part 121 certificate holder, the remainder of this answer discusses part 91 operations that are conducted by or on behalf of a part 121 certificate holder. This answer also assumes that the part 91 operations it discusses are not conducted under Subpart K of part 91.

The definition of flight duty period (FDP) in part 117 specifies that two flight segments are part of the same FDP if a “required intervening rest period” has not been provided between those flight segments.⁷ A “required intervening rest period” is the rest period that is specified in § 117.25. Pursuant to § 117.25(e), that rest period must be 10 consecutive hours of rest with an 8-hour uninterrupted sleep opportunity. However, depending on the specific nature of an individual flightcrew member’s schedule, the other subsections of § 117.25 may require a longer rest period. For example, if a flightcrew member has not been provided 30 consecutive hours of

⁴ 14 CFR 117.1(b).

⁵ 14 CFR 117.1(c)

⁶ See 77 FR at 336 (stating that “pilots flying only part 91 passenger operations . . . are not subject to the provisions of this rule”).

⁷ See 14 CFR 117.3, Flight Duty Period (stating that activities that occur between flight segments are part of the FDP unless a required intervening rest period has been provided).

rest in the preceding 168-hour period, the “required intervening rest period” would be 30 consecutive hours pursuant to § 117.25(b).

Applying this discussion to the questions raised above, if a flightcrew member flies a part 121 passenger flight segment and a part 91 ferry flight segment without being provided an intervening rest period that satisfies § 117.25, those flight segments would be part of the same FDP.⁸ Consequently, just like the part 121 passenger flights, the part 91 ferry flight segment would have to be conducted under the flight, duty, and rest rules of part 117.⁹ However, if a flightcrew member is provided with the rest period specified in § 117.25 between the part 91 ferry flight segment and the part 121 passenger flight segment, those flight segments would not be part of the same FDP. In that case, the part 91 ferry flight segment would not be subject to the flight, duty, and rest provisions of part 117. For purposes of this analysis, it is irrelevant whether the part 91 ferry flight segment takes place before or after the part 121 passenger flight segment — what matters is whether a rest period that satisfies § 117.25 was provided between the two flight segments.

We note, however, that the cumulative limitations set out in § 117.23 include “all flying by flightcrew members on behalf of any certificate holder or 91K Program Manager.”¹⁰ Thus, even if a part 91 flight is not operated pursuant to part 117, that flight still counts for purposes of the cumulative limitations of part 117 if it is flown on behalf of a certificate holder or 91K Program Manager.

B. Definitions

i. *Deadhead transportation*

1. *Length of Deadhead*

⁸ See § 117.3 (definition of flight duty period).

⁹ See § 117.1(b) and (c).

¹⁰ § 117.23(a).

The Southwest Airlines Pilots Association (SWAPA) asked whether a flightcrew member could deadhead beyond the limits of Table B. SWAPA also asked whether there was a limit to the period of time that a flightcrew could be engaged in deadhead transportation at the conclusion of an FDP.

Pursuant to the definition of FDP in § 117.3, deadhead transportation that is followed by a flight segment without an intervening rest period is part of an FDP and is subject to the FDP limits in Tables B and C. All other deadhead transportation is not part of an FDP and is not subject to any limits under part 117. However, if the deadhead transportation exceeds the limits of Table B, § 117.25(g) requires that the flightcrew member engaging in the deadhead transportation be provided with a compensatory rest period before beginning his/her next FDP.

2. Transportation to a Suitable Accommodation

ALPA asked whether there is a limit to how far a drive can be to still be considered transportation to/from a suitable accommodation.

The definition of deadhead transportation in § 117.3 states that “transportation to or from a suitable accommodation” is not deadhead transportation. “Transportation to or from a suitable accommodation” refers to transportation that is conducted for the purposes of a split-duty or mid-duty rest pursuant to § 117.15 and/or § 117.27. While this type of transportation is not deadhead transportation, it is part of an FDP as split-duty and mid-duty rest take place between flight segments. Accordingly, transportation for split-duty and mid-duty rest would be limited by the pertinent FDP limits.

The FAA emphasizes that transportation provided for a rest period required by § 117.25 would not be considered “transportation to or from a suitable accommodation” for deadhead

purposes because there is no requirement in § 117.25 that rest periods must be provided in a suitable accommodation.

ii. *Duty*

1. *Collective Bargaining Agreement Requirement*

A4A asked whether a requirement in the collective bargaining agreement to check a schedule or calendar, or to acknowledge a trip assignment, is considered duty.

Section 117.3 defines duty as “any task that a flightcrew member performs as required by the certificate holder...” Thus, if a certificate holder requires that a flightcrew member check a schedule or calendar, or acknowledge a trip assignment, then the flightcrew member’s compliance with that requirement would be considered duty. The collective bargaining agreement has no impact on this analysis, as this agreement simply provides the legal basis for the certificate holder to require a flightcrew member to perform certain actions.

2. *Limitations on Duty*

SWAPA asked whether there are any limits on duty aside from the FDP limitations.

The flight, duty, and rest notice of proposed rulemaking (NPRM) proposed a set of cumulative duty-period limits. However, in response to comments, the final rule eliminated those limits.¹¹ As such, duty periods that are not part of an FDP are only limited to the extent that they may cause a flightcrew member to be too tired to safely perform his or her assigned duties.

iii *Flight Duty Period (FDP)*

1. *Type of Duty that is Included in an FDP*

SWAPA asked for clarification about the type of duty that is part of an FDP. SWAPA provided the following three types of duty as examples, and it asked which of these examples

¹¹ See 77 FR at 379.

would be part of an FDP: (1) duty prior to an FDP; (2) duty after an FDP; and (3) flight training device duty after an FDP.

The definition of FDP in § 117.3 states that “[a] flight duty period includes the duties performed by the flightcrew member on behalf of the certificate holder that occur before a flight segment or between flight segments without a required intervening rest period.” Thus, duty that occurs prior to an FDP is part of that FDP if there is no required intervening rest period between the duty and the flight segments that make up the FDP. Duty that takes place after an FDP, such as flight training device duty, is not part of an FDP, as it does not occur before a flight segment or between flight segments.

2. Meaning of “further aircraft movement”

Horizon Air (Horizon) and Regional Airline Association (RAA) asked whether the phrase “further aircraft movement” in the FDP definition meant movement for the purpose of flight. These commenters provided the following example. An aircraft is parked following the last flight and passengers deplane. The pilot then repositions the aircraft on the ground to a hangar. The commenters asked whether, in this situation, the FDP ends when the aircraft is first parked and deplaned. Another commenter, Alaska Air, asked whether time spent repositioning a plane from customs to a domestic gate would be part of an FDP.

The definition of FDP in § 117.3 states that an FDP ends “when the aircraft is parked after the last flight and there is no intention for further aircraft movement by the same flightcrew member.” The phrase “further aircraft movement” in the FDP definition does not say that the movement must be for the purpose of flight. Rather, any aircraft movement by the flightcrew member is part of that flightcrew member’s FDP. Thus, moving the aircraft between different

gates or moving the aircraft to a hangar would be considered “aircraft movement” and it would be part of a flightcrew member’s FDP.

iv. Physiological Night’s Rest

Allied Pilots Association (APA) asked whether the 8-hour sleep opportunity required by § 117.25 must take place between the hours of 0100 and 0700.

Subsections (e) and (f) of § 117.25 require that immediately prior to beginning an FDP, a flightcrew member must be provided with a 10-hour rest period that includes an 8-hour uninterrupted sleep opportunity. These subsections do not require that the 8-hour sleep opportunity take place during a specific time of day – they simply require that an 8-hour sleep opportunity be provided at some point during the 10-hour rest period.

v. Rest Facility

A4A asked about the publication date of Advisory Circular (AC) 121-31 Flightcrew Sleeping Quarters and Rest Facilities. A4A also asked: (1) what the approval process will be like for rest facilities; and (2) what constitutes “near flat” for purposes of the Class 2 rest facility definition.

The AC that provides guidance for rest facilities has been renamed as AC 117-1, and was published on September 19, 2012. This AC discusses what “near flat” means for purposes of qualifying a rest facility as Class 2. As far as the approval process for rest facilities, the FAA will approve rest facilities through an Operation Specification (OpSpec) that will specify the class(es) of rest facility that are inside a certificate holder’s aircraft.

vi. Suitable Accommodation

APA asked whether a layover facility could be a suitable accommodation. APA also asked whether a room that has multiple reclining chairs with multiple individuals resting could be a suitable accommodation.

A layover facility could be a suitable accommodation if it meets the definition of suitable accommodation set out in § 117.3. A room that has multiple reclining chairs with multiple individuals resting could also be a suitable accommodation if it meets the suitable accommodation requirements of § 117.3. The FAA emphasizes that the definition of suitable accommodation in § 117.3 does not require that access to a suitable accommodation be limited so that only one person can use it at any given time.

C. Fitness for Duty

i. *Means of Certification*

A4A and Alaska Air asked whether flightcrew members could use electronic means, such as Aircraft Communications Addressing and Reporting System (ACARS) and cell phone applications, to certify their fitness for duty.

Subsection 117.5(d) states that “[a]s part of the dispatch or flight release, as applicable, each flightcrew member must affirmatively state he or she is fit for duty prior to commencing flight.” This subsection does not preclude a flightcrew member from making his/her fitness for duty statement through electronic means. However, the preamble to the final rule explains that the fitness for duty statement “must be signed by each flightcrew member.”¹² Accordingly, if a flightcrew member chooses to submit his/her fitness for duty statement through electronic means, that flightcrew member would have to electronically sign the statement and the electronic signature would have to comply with the pertinent electronic signature requirements.

ii. *Certifying as to Specific Flight Segments*

¹² 77 FR at 350.

Horizon and RAA were concerned with the following scenario. A pilot reports fit for an FDP that includes 6 flight segments. After the fourth flight segment, the pilot notifies the company that he will be too fatigued to fly the sixth flight segment, but will be fit to fly the fifth flight segment. Horizon and RAA asked whether § 117.5(c) allowed the company to permit the pilot to fly the fifth flight segment.

Section 117.5 places a joint responsibility for fitness for duty on the certificate holder and the flightcrew member. The flightcrew member must: (1) report for an FDP “rested and prepared to perform his/her duties;” (2) sign a statement before beginning a flight segment affirmatively stating that he or she is fit for duty; and (3) immediately notify the certificate holder if he/she is too fatigued to perform the assigned duties. For its part, the certificate holder must: (1) “provide the flightcrew member with a meaningful rest opportunity that will allow the flightcrew member to get the proper amount of sleep;”¹³ (2) immediately terminate a flightcrew member’s FDP if the flightcrew member does not affirmatively state before beginning a flight segment that he/she is fit to safely perform the assigned duties; and (3) immediately terminate a flightcrew member’s FDP if the flightcrew member informs the certificate holder that he/she is too tired to safely perform the assigned duties.

In the example provided by Horizon and RAA, a flightcrew member certifies, pursuant to § 117.5(d), that he is fit to fly the fifth flight segment but will not be fit to fly the sixth flight segment. Because § 117.5 does not require a certificate holder to second-guess a fitness-for-duty certification made by a flightcrew member, the company would not violate § 117.5(c) if it permits the flightcrew member to take off on the fifth flight segment. However, the FAA emphasizes that the flightcrew member in this example would be in violation of § 117.5 if he certifies that he is fit for duty when he is actually too tired to safely perform the assigned duties.

¹³ 77 FR at 349.

The FAA also cautions certificate holders that, as the preamble to the final rule explains, “there are objective signs that could be used to identify crewmember fatigue.”¹⁴ “The FAA has simply chosen not to impose a mandatory regulatory requirement because the signs used to identify fatigue cannot be synthesized into a general objective standard.”¹⁵ Thus, § 117.5 should not be read as prohibiting a certificate holder from voluntarily terminating the FDP of a fatigued flightcrew member who does not self-report his/her fatigue. Indeed, the FAA strongly encourages certificate holders to voluntarily terminate the FDPs of flightcrew members who are showing signs of fatigue.

D. Fatigue Risk Management System (FRMS)

i. *Scope of an FRMS*

ALPA also asked: (1) whether a certificate holder could use an FRMS to avoid a large portion of part 117 (e.g. all of Table A); (2) whether FRMS authorization is applied on a route-specific basis; (3) whether route-specific data could be used to justify an FRMS on another route; and (4) whether each certificate holder’s FRMS request must be supported by data that is specific to that certificate holder.

Section 117.7 permits a certificate holder to exceed the provisions of part 117 pursuant to a Fatigue Risk Management System (FRMS) “that provides for an equivalent level of safety against fatigue-related accidents or incidents.” The preamble to the final rule clarifies that “a certificate holder may use an FRMS for any of the elements of the flight and duty requirements provided under this rule.”¹⁶ Thus, a certificate holder can submit a wide range of FRMS requests ranging from narrow requests concerning a specific route to broad requests that seek to establish alternatives to large portions of part 117. However, because an FRMS request has to be

¹⁴ 77 FR at 349.

¹⁵ *Id.*

¹⁶ 77 FR at 354.

supported by evidence showing an equivalent level of safety if the FRMS is approved, a broad FRMS will likely be more difficult to obtain than a narrow FRMS.

The specific data that could be used to support an FRMS request would depend on the nature of the request and the nature of the certificate holder's operations. While certificate holders are not prohibited from using each other's data for an FRMS request, the FAA plans to evaluate each certificate holder's FRMS request on an individual basis. Because of the differences between certificate holders' specific operations, the FAA expects that each FRMS request will be tailored to the requesting certificate holder's operations, and the FAA will not allow multiple certificate holders to operate under the same FRMS.

ii. *Implementing an FRMS Before January 4, 2014*

ALPA asked whether a certificate holder could implement an FRMS before January 4, 2014.

The final rule that created the FRMS alternative for the flight, duty, and rest requirements in parts 117 and 121 will not become effective until January 4, 2014.¹⁷ While certificate holders can immediately begin gathering data that will be used to support an FRMS request, the FAA cannot actually approve an FRMS until the pertinent regulations become effective, which will be January 4, 2014.

E. Fatigue Education and Awareness Training Program

i. *Whether the Program Has to Be Approved or Accepted*

Alaska Air pointed out that § 117.9(a) requires that a fatigue education and awareness training program must be approved by the FAA Administrator while § 117.9(c) requires that updates to the program must be accepted by the FAA Administrator. Alaska Air asked whether

¹⁷ See 77 FR 28763 (May 16, 2012).

the fatigue education and awareness training program has to be approved or accepted by the Administrator.

Subsection 117.9(a) states that the initial fatigue education and awareness training program must be approved by the FAA and § 117.9(c)(1) states that updates to this program only need to be accepted by the FAA. The FAA considers a minor change to the program to be an update that does not need to go through the approval process. That is why § 117.9(c) only requires FAA acceptance for these types of changes. Conversely, the initial fatigue education and awareness training program and all non-minor changes to that program must receive FAA approval per § 117.9(a). The FAA emphasizes that a major change to the fatigue education and awareness training program would be considered a new program, and this change would have to be approved by the FAA before it is implemented.

ii. *Whether Training Needs to Begin Before January 4, 2014*

A4A asked whether fatigue education and awareness training pursuant to § 117.9 must begin before January 4, 2014.

The final rule that created part 117 will not become effective until January 4, 2014.¹⁸ Accordingly, certificate holders are not required to comply with the fatigue education and training requirements of § 117.9 until January 4, 2014. The FAA notes, however, that a part 121 certificate holder is currently responsible for fulfilling its obligations under its Fatigue Risk Management Plan.

iii. *Completion Date for Initial Training*

Alaska Air asked about the deadline by which initial fatigue education and awareness training needs to be completed. Alaska Air also asked whether training under § 117.9 is mandated every 12 months or every calendar year.

¹⁸ See 77 FR 28763 (May 16, 2012).

Subsection 117.9(a) requires that the fatigue education and awareness training program must provide “annual education and awareness training.” The FAA interprets the word “annual” as referring to a 12-calendar-month period. Because the training must be provided on an annual basis, the initial fatigue education and awareness training must be completed within 12 calendar months after the certificate holder’s program has been approved by the Administrator.

iv. Credit for Previously-Completed Training

Alaska Air also asked whether credit would be provided for previously-completed training.

The preamble to the final rule specifies that covered personnel do not need to repeat fatigue education and awareness training “if that training meets the requirements of [§ 117.9].”¹⁹

F. Flight Time Limitations

The FAA received a number of questions concerning FDP and flight time extensions. This section answers questions concerning the flight-time extension. Discussion of FDP extensions is set out in another section.

i. Taking Off Knowing that the Flight Will Exceed Flight Time Limits

A4A and ALPA asked whether a crew can depart if they show up to the airport and the weather conditions indicate that the flight will exceed flight time limits. SWAPA asked whether an aircraft must return to the gate if, after taxi out but prior to takeoff a flightcrew member is forecast to exceed flight time limits.

Section 117.11 sets out the flight time limitations for augmented and unaugmented flights. Subsection 117.11(b) allows a flightcrew member to exceed these limitations to the extent necessary to safely land the aircraft at the next destination or alternate airport “[i]f unforeseen operational circumstances arise after takeoff that are beyond the certificate holder’s

¹⁹ See 77 FR at 352.

control.” The preamble to the final rule explains that this exception was added to prevent diversions because “[i]f unexpected circumstances significantly increase the length of the flight while the aircraft is in the air, the only way for a flightcrew member to comply with the flight-time limits imposed by this rule would be to conduct an emergency landing.”²⁰ However, the preamble emphasizes that “this extension only applies to unexpected circumstances that arise after takeoff,” and “[i]f a flightcrew member becomes aware, before takeoff, that he or she will exceed the applicable flight-time limit, that flightcrew member may not take off, and must return to the gate.”²¹

Thus, if a flightcrew member finds out before takeoff that the flight segment that he/she is about to fly will cause him/her to exceed the flight time limits, that flightcrew member may not take off. It does not matter if the flightcrew member acquires this knowledge after taxi out because, as the preamble to the final rule explains, until the flightcrew member actually takes off from the airport, that flightcrew member is still able to return to the gate without a diversion. Accordingly, if a flightcrew member finds out after taxi out but before takeoff that the flight segment that he or she is about to fly will cause him/her to exceed the pertinent flight-time limit, that flightcrew member must return to the gate.

SWAPA provided an example of a 4-leg FDP with a 9-hour flight-time limit in which the crew realizes, after Leg 2, that their total flight time will be 9 hours and 5 minutes if they complete the remaining two legs. SWAPA then asked whether the flightcrew can depart on Leg 3 of this FDP. In response, the FAA notes that if completing Leg 3 of the scheduled FDP will not cause the flightcrew to exceed the 9-hour flight-time limit, then the flightcrew can take off on Leg 3.

²⁰ 77 FR at 363.

²¹ *Id.*

SWAPA and ALPA also provided another example. In this example, a flightcrew member exceeds the limits of Table A and lands at an alternate airport due to unforeseen operational circumstances that arose after takeoff and were beyond the certificate holder's control. SWAPA and ALPA asked whether the flightcrew member could, after landing, proceed to a follow-on leg from the alternate airport to the original destination.

As discussed above, a flightcrew member cannot take off on a flight segment if he knows that taking off on that flight segment will cause him to exceed the pertinent flight-time limit. In SWAPA and ALPA's example, a flightcrew member exceeds his flight-time limit while flying to an alternate airport. Thus, the flightcrew member will have already exceeded the pertinent flight-time limit upon landing at the alternate airport. Accordingly, once the flightcrew member lands at the alternate airport, that flightcrew member cannot commence any flight segments under part 117 until he/she receives a legal rest period.

ii. *Flight Time During a Taxiing Delay*

APA provided three scenarios in which an aircraft, prior to takeoff, waits for an hour at a holding spot on a ramp and then takes off. In two of the scenarios, the aircraft: (1) taxis to the holding spot under its own power, (2) shuts down its engines once it reaches the holding spot; and (3) restarts its engines, finishes taxiing, and takes off once the one-hour wait is over. In the third scenario, the aircraft is towed to the holding spot for the one-hour wait, and once the wait is over, restarts its engines and proceeds to taxi out and takeoff. APA asked whether there was any difference as far as how flight time is calculated for these three scenarios.

Section 1.1 states that flight time "commences when an aircraft moves under its own power for the purposes of flight and ends when the aircraft comes to rest after landing." The FAA has previously found that "the time spent towing the airplane prior to the moment it first

moves under its own power for the purpose of flight is not flight time.”²² However, once the airplane moves under its own power with the intention to eventually take off, that movement is part of flight time even if the airplane shuts down its engines at some point during this process.²³ Thus, the FAA concluded that if, before takeoff, an airplane taxis to a de-icing station on its own power, the de-icing procedures are part of flight time even if the airplane’s engines are shut down during the de-icing process.²⁴

Applying the above discussion to APA’s scenarios, in the first two scenarios an airplane taxis to a holding spot under its own power with the intention of eventually taking off on a flight. In those two scenarios, the time spent taxiing to the holding spot and the time spent at the holding spot would be considered flight time. As the FAA’s previous interpretations point out, the fact that the airplane shuts down its engines at the holding spot is irrelevant for flight time purposes, as the airplane has moved under its own power with the intention of eventually taking off. In APA’s third scenario, the airplane is towed to the holding spot and does not arrive to that spot on its own power. In that scenario, the time spent towing the airplane and the time that the airplane spends at the holding spot would not be flight time because that time occurs prior to when the aircraft first moves under its own power.

iii. *Repositioning from Customs to a Domestic Gate*

Alaska Air asked whether time spent repositioning a plane from customs to a domestic gate would constitute flight time. For purposes of this question, we will assume that everyone, including the flightcrew, exits the plane at the customs gate in order to go through customs and passport control.

²² Letter to James W. Johnson from Donald Byrne, Assistant Chief Counsel (June 22, 2000) (quoting Memorandum to AGL-7, from Dewey R. Roark, Jr., Acting Associate General Counsel, Regulations and Codification Division (Oct. 18, 1972)).

²³ See Johnson Letter.

²⁴ *Id.*

As discussed above, flight time “commences when an aircraft moves under its own power for the purposes of flight and ends when the aircraft comes to rest after landing.”²⁵ An empty plane that is parked at a customs gate has come to a rest. As such, the flight time from the previous flight segment flown by that airplane is no longer running, as the plane has come to a rest after landing. When the airplane is subsequently moved from customs to a domestic gate, that movement would not be for purposes of flight because the purpose of the movement would be to move the plane to another gate. Accordingly, in Alaska Air’s scenario, moving an airplane from customs to a domestic gate after a flight would not constitute flight time. However, we note that, as discussed above, this movement would be part of a flightcrew member’s FDP.

G. Flight Duty Period: Unaugmented Operations

i. *Adjusting FDP start time*

A number of commenters also asked whether FDP start time of a flightcrew member could be delayed by notifying that flightcrew member of the delay before beginning his/her FDP.

In the preamble to the final flight, duty, and rest rule, the FAA stated that “FDP limits are determined by scheduled reporting time and not by actual reporting time.”²⁶ The scheduled reporting time for an FDP is created once that FDP has been assigned to a flightcrew member. In order to change this scheduled reporting time, the flightcrew member would have to be shifted into either long-call or short-call reserve for the pertinent FDP.

If long-call reserve is used to change the FDP start time, the flightcrew member would have to be provided proper notification of the change to the previously-scheduled FDP. Pursuant to the definition of long-call reserve in § 117.3, a flightcrew member on long-call reserve must be notified of the change to FDP start time before he or she begins the rest period specified in

²⁵ See § 1.1 (definition of flight time).

²⁶ 77 FR at 358.

§ 117.25. In addition, if the FDP infringes on the window of circadian low (WOCL), § 117.21(d) requires that the flightcrew member receive a 12-hour notice of the change to the FDP start time.

If short-call reserve is used to change the FDP start time, the flightcrew member would have to be placed on short-call reserve at the time that his FDP was originally scheduled to begin. In that scenario, instead of beginning an FDP at the originally-scheduled start time, the flightcrew member would simply begin his reserve availability period (RAP) pursuant to § 117.21. The FAA emphasizes that if an FDP start time is not changed pursuant to the long-call or short-call reserve provisions of § 117.21, then the FDP begins at the time that it was originally scheduled to begin.²⁷

ii. *Adjusting the Number of Flight Segments*

A number of commenters asked whether a diversion on an unaugmented flight counts as a flight segment in Table B that would change a flightcrew member's maximum FDP limit. American Eagle (AE) asked whether cancelling previously-scheduled flight segments after an FDP has begun would affect the applicable FDP limit. Horizon asked whether a flight that is aborted after taxi out but before takeoff counts as a flight segment. Horizon also asked whether, in that situation, the taxi-out time would count as FDP and/or flight time.

The unaugmented FDP limits in Table B are determined using two pieces of information: (1) the time that the FDP is scheduled to begin, and (2) the number of flight segments that will be flown during the FDP. Once an FDP begins, the scheduled time of start cannot be changed, as that FDP has already started.²⁸ However, a certificate holder can change the number of flight

²⁷ See *id.* (stating that an FDP begins to run at the time that it is scheduled to begin even if the flightcrew member arrives late).

²⁸ As discussed above, in order to change a previously-scheduled FDP, a certificate holder must comply with the long-call-reserve notice requirements.

segments in an FDP after that FDP has started by either assigning the flightcrew members additional flight segments or cancelling previously-scheduled flight segments. A change in the number of flight segments assigned to a flightcrew member would change the pertinent FDP limit in Table B.

Thus, a certificate holder could potentially decrease or increase the applicable FDP limit by assigning additional flight segments or cancelling previously-assigned flight segments. For example, consider a 3-segment unaugmented FDP that begins at 1100. Pursuant to Table B, the FDP limit applicable to this FDP is 13 hours. However, if the certificate holder cancels one of the flight segments after the FDP begins, then the pertinent FDP limit would increase to 14 hours, as that is the limit that applies to a 2-segment unaugmented FDP that starts between 0700 and 1159.

The FAA cautions that changing the number of flight segments may not always change the pertinent FDP limit. For example, a flightcrew member could be assigned to an unaugmented FDP consisting of four flight segments that begins at 0800. The applicable FDP limit for that FDP would be 13 hours. If a certificate holder subsequently cancels one of the four segments, the applicable FDP limit would still be 13 hours because Table B assigns the same FDP limit to three and four-segment FDPs that are scheduled to start between 0700 and 1159.

Turning to diversions, the portion of the final rule preamble that discusses flight segments makes no mention of a diversion counting as a separate flight segment.²⁹ Accordingly, because there was no intent to treat diversions as flight segments, a diversion does not constitute a new flight segment for purposes of part 117. However, we emphasize that, while a diversion may not count as a flight segment, the time spent on diversion would still count for purposes of the FDP and flight time limits. This is because the flight-time limit applies to all time that is spent

²⁹ See 77 FR at 356-57.

piloting an aircraft and the FDP limit applies to all time between when a pilot first reports for duty with the intention of flying a plane and when the pilot completes his/her final flight segment.

With regard to cancelled flights, if a flight is cancelled before takeoff, then it does not count as a segment for Table B purposes. This is because a flight segment consists of a takeoff and a landing, and the lack of a takeoff/landing means that there is no flight segment. However, the taxi out time for the cancelled flight segment would still constitute FDP time because the taxi out would have taken place after the flightcrew member reported for duty with the intention of conducting a flight.³⁰ If the aircraft moved under its own power for the taxi out, then the taxi out would also count as flight time because the aircraft would have moved under its own power for purposes of flight.³¹

H. Split Duty

i. *Extending the 14-hour Split Duty Limit*

A4A asked whether the maximum 14-hour split duty limit could be extended. In response, the FAA notes that § 117.15(f) explicitly states that the combined time of the FDP and the split-duty rest opportunity may not exceed 14 hours. Section § 117.15 does not indicate that there are any exceptions to this 14-hour limit. Thus, if the combined split duty rest opportunity and FDP time of a flightcrew member exceeds 14 hours, then the amount of split duty rest that caused the exceedance would not count as split duty. Instead, this time would simply count as part of the flightcrew member's FDP, and it would be subject to the FDP extensions specified in § 117.19.

ii. *Actual Split Duty Rest Exceeding Scheduled Rest*

³⁰ See § 117.3.

³¹ See § 1.1 (definition of flight time).

An individual commenter asked about a situation in which the actual split duty rest exceeds the scheduled split duty rest. The individual commenter asked whether in that situation it would be the actual or scheduled rest that would be considered split-duty rest under § 117.15.

Subsection 117.15(d) states that the actual split-duty rest opportunity may not be less than the scheduled split-duty rest opportunity. However, § 117.15 does not prohibit actual split-duty rest from exceeding the scheduled split-duty rest. If the actual split-duty rest period exceeds the scheduled rest period, then the actual rest provided to the flightcrew member would be considered split-duty as long as that rest period is within the 14-hour limit specified in § 117.15(f).

iii. *Time Zone on Which Split Duty Rest is Based*

Horizon and RAA asked whether the time zone used for § 117.15(a) is determined using base/acclimated or local time.

Subsection 117.15(a) states that the split-duty rest opportunity must be “provided between the hours of 22:00 and 05:00 *local time*.” (emphasis added). Thus, in order to determine compliance with § 117.15(a), the certificate holder must use local time at the location where the split-duty rest is being provided regardless of whether the flightcrew member is acclimated to the theater that encompasses that location.

I. Flight Duty Period: Augmented Operations

i. *Three-Flight-Segment Limit*

A4A and ALPA asked whether the three-flight-segment limit on augmented operations can be extended for diversions. ALPA also asked whether this limit could be extended if the diversion is for a fuel stop made necessary by winds or other operational issues.

Subsection 117.17(d) prohibits an augmented FDP from exceeding three flight segments. However, as discussed above, a diversion is not a flight segment. Accordingly, a diversion would not count toward the 3-segment limit that applies to augmented operations.

ii. Mixed Operations

APA and ALPA asked whether augmentation could be used to increase the limits on an FDP that is already in progress. The FAA will assume that the FDP in question began as an unaugmented FDP.

In the preamble to the final flight, duty, and rest rule, the FAA explained that “if an FDP contains both an augmented and an unaugmented flight, that FDP is subject to the unaugmented FDP-limits set out in Table B and the unaugmented flight-time limits set out in Table A.”³² Accordingly, an unaugmented flightcrew member’s FDP limit cannot be increased by augmenting the flightcrew.

iii. Time Each Augmented Flightcrew Member Spends at the Controls

ALPA asked whether there is any restriction on the amount of time that each flightcrew member on an augmented flightcrew can spend at the controls of the aircraft. Subsection 117.17(c) states that the pilot flying the aircraft during landing must be provided with a two-consecutive-hour in-flight rest opportunity in the second half of his/her FDP. This subsection also states that the pilot performing monitoring duties during landing must be provided with a 90-consecutive-minute in-flight rest opportunity. Apart from these required rest opportunities, there is no restriction as to the amount of time that a pilot can spend at the controls of an aircraft during an operation that meets the pertinent FDP, flight time, and cumulative limits.

iv. Broken Rest Facility

³² 77 FR at 368.

ALPA asked a number of questions about how to treat a rest facility that is broken. First, ALPA asked whether an aircraft with a Class 3 rest facility can continue to operate under the Class 3 augmented FDP limits if the designated rest seat is inoperative. Second, ALPA asked whether an aircraft with a Class 2 rest facility with a non-functional privacy curtain would be subject to the Class 2 or Class 3 augmented FDP limits.

In order to qualify as a Class 1, 2, or 3 rest facility, a rest facility must meet the specific definition for the pertinent class of rest facility set out in § 117.3. The definitions of rest facility in § 117.3 presume that a rest facility is fully functional. Thus, if a required part of a rest facility stops functioning, the certificate holder would need to use the minimum-equipment-list (MEL) provisions of § 121.628 in order to prevent a downgrade of that rest facility. If the non-functional part of the rest facility does not meet the pertinent MEL requirements, then that part cannot be used to meet the rest-facility standards set out in § 117.3.

Turning to ALPA's questions, § 117.3 defines a Class 3 rest facility as "a seat in an aircraft cabin or flight deck that reclines at least 40 degrees and provides leg and foot support." If a seat is inoperative and cannot recline at least 40 degrees, then, if it does not satisfy the MEL provisions of § 121.628, that seat would not meet the requirements for a Class 3 rest facility. Similarly, § 117.3 states that a Class 2 rest facility must, among other things, be "separated from passengers by a minimum of a curtain to provide darkness and some sound mitigation." If a rest facility does not have a functional privacy curtain (or something similar) then, if it does not satisfy the MEL provisions of § 121.628, that rest facility would not meet the requirements for a Class 2 rest facility. That rest facility may, however, meet the requirements for a Class 3 rest facility.

J. Flight Duty Period Extensions

i. Determining Whether Pre or Post-Takeoff FDP Extension Applies

SWAPA asked whether the final check for a pre-takeoff FDP extension is done prior to takeoff. SWAPA provided an example in which after taxiing but before takeoff a flightcrew member realizes that he/she will exceed the limit of Table B or C by over two hours. SWAPA asked whether the flightcrew member in that example must return to the gate instead of taking off.

ALPA provided a scenario in which an FDP is scheduled near the FDP limit and the destination airport is forecast to be influenced by a typhoon. In that scenario, the certificate holder elects, before takeoff, to operate the flight as originally scheduled while simultaneously planning with a high degree of confidence for a diversion that would exceed the pertinent FDP limit. ALPA asked whether the certificate holder in this situation would be allowed to use the post-takeoff FDP extension.

Section 117.19 provides for two ways to extend a flightcrew member's FDP: (1) a pre-takeoff FDP extension, and (2) a post-takeoff FDP extension. The post-takeoff FDP extension applies to an FDP in which a situation arises after takeoff that would cause a flightcrew member to exceed the pertinent FDP limit. This type of extension is more generous than a pre-takeoff FDP extension because once an airplane is in the air, "the certificate holder and pilot in command have very little discretion concerning FDPs and flight time limits," as they cannot change the flightcrew while the plane is in the air.³³

For situations that are known before takeoff, the more stringent pre-takeoff FDP extensions can be utilized. That is because the certificate holder and pilot in command have more options for dealing with unexpected situations that arise while the plane is still on the ground. Thus, the distinction between pre- and post-takeoff FDP extensions comes from

³³ 77 FR at 371.

determining whether the flightcrew member and certificate holder had a reasonable expectation before takeoff that the flight segment would be completed within the pertinent FDP limit.

In SWAPA's example a flightcrew member realizes after taxi out but before takeoff that he will exceed the pertinent FDP limit by over two hours. In order for this flightcrew member to extend his FDP, he would need to use the pre-takeoff FDP extension because the plane was not airborne at the time that the flightcrew member realized that he would exceed the pertinent FDP limit. Since the pre-takeoff FDP extension is limited to two hours, the flightcrew member in SWAPA's example would be unable to commence a segment that exceeds his FDP limit by over two hours.

Turning to ALPA's example, the certificate holder has a high degree of confidence, before takeoff, that the destination airport will be hit by a typhoon. As discussed above, in order to utilize the post-takeoff FDP extension, the flightcrew and certificate holder have to have a reasonable expectation, prior to takeoff, that they will complete the flight segment within the pertinent FDP limit. Because the certificate holder in this example has a high degree of confidence that the destination airport will be hit by a typhoon, that certificate holder does not have a reasonable expectation that the flight segment will be completed as scheduled. Accordingly, the certificate holder would need to utilize a pre-takeoff FDP extension in order for the flightcrew in this example to exceed the pertinent FDP limits.

ii. *Diversions and FDP Extensions*

ALPA posed the following scenario. Unforeseen operational circumstances arise after takeoff that require a diversion to an alternate airport without an exceedance of the pertinent FDP limit. Once at the alternate airport, completion of the FDP to the intended destination will require an FDP extension. ALPA asked whether the post-takeoff FDP extension would apply to

this scenario. SWAPA posed an alternative scenario in which the flightcrew members' FDP is extended in-flight by over two hours during the diversion to an alternate airport. In this alternate scenario, SWAPA asked whether the flightcrew would have to immediately enter a rest period upon reaching the alternate airport.

As discussed above, a post-takeoff FDP extension can be taken in response to a situation that arises after takeoff. However, under § 117.19(b)(1), the post-takeoff FDP extension only encompasses the time "necessary to safely land the aircraft at the next destination airport or alternate airport, as appropriate." Thus, the post-takeoff FDP extension terminates once the airplane has landed.

Applying the above discussion to SWAPA's example, a situation arises mid-flight that requires a diversion. The diversion results in a flightcrew member exceeding his FDP limit by over two hours. This exceedance is valid under the post-takeoff FDP extension because that extension permits a flightcrew member to finish the flight during which unexpected circumstances arose. However, the extension terminates once the flight lands at the destination or alternate airport. As such, the flightcrew member in SWAPA's example would have to terminate his FDP once he lands at the alternate airport because at that time he would have exceeded the pertinent FDP limit by over two hours and the post-takeoff FDP extension would cease applying once the plane has landed.

Turning to ALPA's example, a flight is diverted but the diversion does not result in exceedance of the pertinent FDP limit. Because the flightcrew member's FDP does not need to be extended during the diversion, there is no need to utilize the post-takeoff FDP extension. Once the plane lands at the alternate airport, the PIC and certificate holder could utilize the pre-takeoff FDP extension to begin a new flight segment and fly the plane from the alternate airport

to the destination airport. However, because the pre-takeoff FDP extension is limited to two hours, the certificate holder would be able to use this extension only if the new flight segment could be completed within the FDP-limit+two-hours timeframe.

iii. Exceeding the Cumulative Limits

ALPA posed another scenario in which a flightcrew member's FDP was extended using a post-takeoff FDP extension. ALPA asked whether the post-takeoff FDP extension would extend the flightcrew member's cumulative limits for the duration of the flight or for the entire cumulative period in which the flight took place.

Under § 117.19(b)(3), a post-takeoff FDP extension allows a flightcrew member to exceed the cumulative FDP limits. However, as discussed above, a post-takeoff FDP extension is limited in that it expires once the airplane lands. Once the flight on which the post-takeoff extension was used has been completed, the flightcrew member would again be bound by the cumulative FDP limitations. Thus, the post-takeoff FDP extension allows a flightcrew member to exceed the cumulative FDP limits only to the extent necessary to complete the flight on which the extension is utilized.

iv. PIC Concurrence in FDP Extension

ALPA asked whether the PIC needed to concur if the PIC does not need an FDP extension but another flightcrew member needs an FDP extension in order to finish the assigned schedule. ALPA also asked whether the PIC could concur on the condition that only one hour of the two-hour FDP extension is utilized. A4A asked whether carriers could use existing procedures for acknowledging joint responsibility between pilots and carriers for extensions that exceed 30 minutes.

Under § 117.19(a)(1) the “pilot in command and the certificate holder” must both concur in order to utilize an FDP extension. Thus, § 117.19(a)(1) requires PIC concurrence for all FDP extensions taken pursuant to § 117.19, even if the PIC is not the flightcrew member who is using the extension. If the PIC believes that the flightcrew is too fatigued for a two-hour FDP extension, the PIC could concur to a shorter FDP extension that he/she believes could safely be carried out by the flightcrew. We also note that, pursuant to § 117.5, each flightcrew member would also have to certify that he/she would not be too fatigued to operate the aircraft during the extension.

A record of PIC concurrence can take any reasonable form as long as there is evidence that the PIC concurred with the extension. For example, the PIC could note his/her concurrence with an FDP extension on a flight release or in an ACARS message.

v. Using Multiple Extensions

A4A, Alaska Air, and AE posed a scenario in which a flightcrew that has already used their over-30-minute FDP extension discovers, after takeoff, that they will need to again extend more than 30 minutes. The commenters asked whether the flightcrew in this scenario would need to divert in order to comply with the pertinent FDP limits.

Under § 117.19(a)(2) and (b)(2), an FDP extension of greater than 30 minutes can only be taken once before a flightcrew member is provided with 30 hours of rest pursuant to § 117.25(b). Thus, the flightcrew and the certificate holder in the above example would be in violation of part 117 if the flightcrew exceeds the pertinent FDP limits. It is irrelevant that the exceedance in this example was caused by unexpected circumstances because, at the time of the exceedance, the flightcrew members had each already used up their one over-30-minutes FDP extension. Accordingly, once a flightcrew member uses up their FDP extension, the FAA

strongly recommends that the certificate holder: (1) adds buffers to that crewmember's schedule to account for possible unexpected events; and (2) provides the crewmember with a 30-hour rest period as soon as possible in order to reset the FDP extension.

K. Reserve

i. *Airport Reserve*

APA asked whether the reserve period has to be physically located on airport property in order to be classified as airport/standby reserve. Horizon, Alaska Air, and RAA asked whether the time a pilot spends in airport reserve is considered FDP if that pilot does not pilot a flight during the reserve period.

Section 117.3 defines airport/standby reserve as a “duty period during which a flightcrew member is required by a certificate holder *to be at an airport* for a possible assignment.” (emphasis added). In order to “be at an airport,” a flightcrew member would have to be physically located on airport property.

Turning to Horizon, Alaska Air, and RAA's question, § 117.21(b) states that “[f]or airport/standby reserve, all time spent in a reserve status is part of the flightcrew member's flight duty period.” Thus, all time that is spent on airport/standby reserve is part of a flightcrew member's FDP regardless of what happens during the airport/standby reserve.

ii. *Short-Call Reserve*

1. *Determining What FDP Limit Applies for Each FDP + Reserve Limit*

ALPA and RAA asked at what time does a flightcrew member enter FDP Table B or C in order to determine the FDP + RAP limit. AE asked whether the RAP is associated with each specific crewmember.

The short-call reserve regulations in § 117.21 limit the total number of hours that a flightcrew member on short call reserve may spend in a RAP and an FDP. For an augmented operation, under § 117.21(c)(4), the combined number of hours spent in a RAP and an FDP may not exceed the pertinent FDP limit in Table C plus four hours. For an unaugmented operation, under § 117.21(c)(3), the combined number of hours spent in a RAP and FDP may not exceed the smaller of: (1) pertinent FDP limit in Table B plus four hours; or (2) 16 hours.³⁴

The RAP and RAP + FDP limits, as well as the other limits in § 117.21, apply to each flightcrew member individually. The pertinent FDP limit for the RAP + FDP regulations in § 117.21 is determined using the time at which the FDP begins. The examples below help illustrate how the RAP + FDP limit works.

For the first example, an acclimated flightcrew member begins a RAP at 0600. That flightcrew member is then assigned to an unaugmented FDP that begins at 1200 and consists of two flight segments. According to Table B, the FDP limit for a two-segment FDP that begins at 1200 is 13 hours. The applicable 13-hour FDP limit plus 4 hours equals 17 hours. Because this is greater than 16 hours, under § 117.21(c)(3), the pertinent RAP + FDP limit for this unaugmented operation is 16 hours. Given that the flightcrew member in this example began his RAP at 0600, he will have 6 hours of RAP time by the time his FDP will start at 1200. As a result, to stay within the 16-hour RAP + FDP limit, this flightcrew member's FDP cannot exceed 10 hours without an extension, as his RAP will use up 6 hours of the 16-hour RAP + FDP limit.

For the second example, an acclimated flightcrew member begins a RAP at 1100. That flightcrew member is then assigned to an unaugmented FDP consisting of five flight segments that begin at 1500. According to Table B, the FDP limit for a five-segment FDP that begins at 1500 is 11.5 hours. The applicable 11.5-hour FDP limit plus 4 hours equals 15.5 hours. Because

³⁴ This is subject to the FDP extensions specified in § 117.19.

this is smaller than 16 hours, under § 117.21(c)(3), the pertinent FDP + RAP limit for this unaugmented operation is 15.5 hours. Since the flightcrew member in this example began his RAP at 1100, he will have 4 hours of RAP time by the time his FDP will start at 1500. Consequently, this flightcrew member can take the full 11.5-hour FDP as the 11.5-hour FDP plus the 4 hours of RAP will not exceed the 15.5-hour RAP + FDP limit.

2. Rest Period Before Being Assigned A RAP

RAA asked whether § 117.21 allows a RAP to be assigned upon completion of a multi-day trip when the flightcrew member still has not reached the FDP limits specified in Table B. To illustrate its question, RAA provided the following scenario. A reserve pilot is assigned a three-day trip. On Day 3, he begins an FDP at 0700, and flies one flight segment until 1430. Upon completion of the one flight segment, the flightcrew member arrives back on base and the carrier assigns him 3 additional flight segments. RAA stated that the revised schedule would not exceed the pertinent FDP or flight time limitations, and it would also not exceed any cumulative limitations. RAA asked whether this schedule would be permissible under § 117.21.

Subsection 117.25(e) prohibits a flightcrew member from beginning a RAP unless that flightcrew member receives 10 hours of rest with an 8-hour sleep opportunity immediately before the RAP. Thus, a flightcrew member cannot begin a RAP immediately after ending an FDP because that flightcrew member would not have received 10 hours of rest immediately before beginning the RAP.

However, as discussed above, the number of flight segments in an FDP can be changed after an FDP begins. Thus, in RAA's example a certificate holder could utilize a flightcrew member's remaining allowable FDP time by adding three more flight segments to the flightcrew member's FDP. However, the FAA emphasizes that: (1) the addition of flight segments to an

FDP will require a recalculation of the pertinent FDP limit in Table B using the updated number of flight segments; and (2) the flightcrew member will have to reaffirm his or her fitness for duty before beginning each flight segment.

3. Early Termination of a RAP

APA asked whether a pilot could be released from a RAP early without serving the entire permitted RAP period. APA also asked whether there is a requirement for a pilot in these circumstances to receive a physiological night's rest. RAA provided an example in which a pilot is assigned a RAP of 0700 to 2100. At 0800, the air carrier contacts the pilot and notifies him that his RAP has ended. The carrier then notifies the pilot that he is being given 10 hours of rest, and that he will begin a new RAP at 1800. RAA asks whether the air carrier's actions in this scenario are permissible under part 117.

The regulations in § 117.21 do not prohibit a certificate holder from releasing a flightcrew member from a RAP early. Thus, a flightcrew member completes a RAP once he or she has been released from that RAP by the certificate holder. However, once the flightcrew member is released from a RAP, § 117.25(e) requires that the flightcrew member be provided with 10 hours of rest that include 8 uninterrupted hours of sleep opportunity before the flightcrew member begins a new RAP. Section 117.25 does not require that this rest period be provided during a physiological night. Thus, RAA's example in which a certificate holder terminates a RAP early and then provides the flightcrew member with 10 hours of rest would be permissible under § 117.21 and § 117.25 because the certificate holder in that example would provide a legal rest period between two RAPs.

4. Additional Questions

APA provided a scenario in which a pilot is assigned to a RAP. After 3 hours of being on-call during the RAP, the pilot is contacted to report for an FDP of 10 hours, all of which is in compliance with the pertinent provisions of part 117. APA asked how much of this time would count toward the cumulative FDP limitation of 60 hours in a 168-hour period. APA also asked whether this answer would change if the FDP was assigned during airport reserve instead of short-call reserve.

Short-call reserve consists of: (1) a RAP, and (2) an FDP if the FDP is assigned during the reserve. The RAP is not part of an FDP, and as such, the time spent on an FDP is the only aspect of short-call reserve that is counted toward the cumulative FDP limits. Thus, the 10 hours that the pilot in APA's example spent on an FDP would count toward the cumulative FDP limits while the 3-hours that pilot spent on a RAP would not count toward those limits.

This situation would change if the pilot was to be assigned to airport/standby reserve instead of short-call reserve. Under § 117.21(b), the entire time that is spent in airport/standby reserve is considered to be FDP. Thus, if the pilot in APA's example was to be assigned to airport/standby reserve, the entire 13 hours that he spends on reserve would be counted toward the cumulative FDP limits, as well as the daily FDP limits.

iii. *Long-Call Reserve*

ALPA asked a number of questions about long-call reserve. First, ALPA asked whether, for long-call reserve that operates into the WOCL, the regulations require 12 hours of notice before beginning the FDP or 12 hours of rest. Second, ALPA also asked whether the 12-hour notice is required for an FDP that starts during the WOCL. Third, ALPA asked whether the WOCL is determined using local time or last-acclimated time. Finally, ALPA asked whether this same 12-hour-notice requirement applied to short-call reserve.

For long-call reserve, § 117.21(d) requires that flightcrew members assigned to an FDP “that will begin before and operate into the flightcrew member’s window of circadian low . . . must receive a 12 hour notice of report time from the certificate holder.” Because this regulatory text specifies a “notice of report time” and does not set out any rest requirements, § 117.21(d) only requires a 12-hour notice and not a 12-hour rest period for long-call reserve that operates into the WOCL.

In addition, the 12-hour notice requirement is only applicable to FDPs that “begin before and operate into” the WOCL. Thus, this requirement would not apply to an FDP that begins during the WOCL, as that FDP would not begin before the WOCL. The time zone from the flightcrew member’s last-acclimated theater is used to determine the WOCL period. This is because part 117 explicitly states when local time is to be used instead of last-acclimated time,³⁵ and § 117.21(d) does not instruct the certificate holder to use local time. Finally, the 12-hour notice requirement does not apply to short-call reserve because the requirements of § 117.21(d) apply only to long-call reserve.

L. Cumulative Limitations

A4A and ALPA asked whether the flight time and FDP cumulative limits were hard limits or whether they could be extended under certain circumstances. ALPA provided the following example. The return segment of a trans-oceanic flight is scheduled within all FDP and flight-time limits. Due to unforeseen circumstances, the flight holds for an extended period and then diverts to an alternate airport. In order to begin a new flight segment from the alternate airport and complete the original schedule, one of the flightcrew members would have to exceed one of the cumulative flight time or FDP limits. ALPA asked whether the flightcrew member would be allowed to exceed the cumulative FDP limitations in this case.

³⁵ See, e.g., § 117.15(a).

The cumulative FDP and flight time limits of part 117 are set out in § 117.23. While these are generally hard limits, they can be extended in certain circumstances. For example, a post-takeoff FDP extension taken under § 117.19(b)(3) would be permitted to exceed the cumulative limits of § 117.23 and the flight-time limits of § 117.11 while a pre-takeoff FDP extension would not be permitted to exceed those limits.³⁶

In ALPA's example a flightcrew member who is at an alternate airport seeks to begin a new flight segment that would exceed the cumulative FDP limits. Because that flightcrew member knows before takeoff that he will exceed the pertinent limits, he cannot utilize the post-takeoff FDP extension. Since the pre-takeoff FDP extension does not allow a flightcrew member to exceed the cumulative FDP limits, the flightcrew member in ALPA's example would not be allowed to begin a new flight segment from the alternate airport.

M. Rest Period

i. *Sleep Opportunity*

1. *Definition of Sleep Opportunity*

APA asked the FAA to define "uninterrupted sleep opportunity." APA also asked whether the sleep opportunity has to take place at a specific location, such as the flightcrew member's home.

Subsection 117.25(e) requires a certificate holder to provide a flightcrew member with 10 hours of rest that includes an 8-hour uninterrupted sleep opportunity immediately before the flightcrew member begins a reserve or FDP. Subsection 117.25(f) requires the flightcrew member to notify the certificate holder if he or she determines that his/her rest period will not provide an 8-hour uninterrupted sleep opportunity.

³⁶ See § 117.19(a)(3).

A sleep opportunity generally commences once a flightcrew member is at a location where the flightcrew member can reasonably be expected to go to sleep and not have that sleep interrupted. The sleep opportunity does not need to take place at the flightcrew member's home, but it must take place at a location where the flightcrew member can reasonably expect to obtain 8 hours of uninterrupted sleep. In addition, as the FAA pointed out in the preamble to final rule, specific sleep situations "are difficult to capture in a regulatory standard."³⁷ That is why § 117.25(f) requires the flightcrew member to notify the certificate holder if the flightcrew member determines that he or she cannot get the requisite amount of uninterrupted sleep.

2. Interruptions to the Sleep Opportunity That Are Not Caused by Carrier

A4A, APA, and AE asked whether an interruption not from the air carrier, such as a hotel fire alarm, would interrupt the 8-hour sleep opportunity. A4A and AE asked whether the flightcrew member is required to inform the carrier if a sleep opportunity has been interrupted.

Subsection 117.25(f) requires a flightcrew member to notify the air carrier if the flightcrew member determines that his/her rest period will not provide 8 hours of uninterrupted sleep. This section provides the flightcrew member with discretion to determine whether his or her sleep has been interrupted. However, if the flightcrew member determines that his/her sleep has been interrupted, then the flightcrew member must notify the air carrier of the interruption. For this determination, it is irrelevant whether the interruption to the flightcrew member's sleep was caused by the air carrier.

Taking the fire alarm example, if the fire alarm sounds for only a few seconds, some flightcrew members may have no problem getting back to sleep, and they may determine that their sleep was not interrupted. Conversely, other flightcrew members may find it difficult to get back to sleep even if their sleep was interrupted for only a short period of time. These flightcrew

³⁷ 77 FR at 383.

members may determine that their sleep opportunity was interrupted, at which point they would have to notify the carrier of the interruption.

ii. *Requirement to Perform a Task During a Rest Period*

A4A and ALPA asked whether carriers could require a pilot to check a calendar, text, or e-mail during a rest period. AE asked whether a pilot could check the schedule/calendar voluntarily during a rest period.

During a rest period, a crewmember must be free from all restraint by the certificate holder.³⁸ If a crewmember is required to do something by the certificate holder, then that crewmember is not free from all restraint, and that crewmember is not on a valid rest period. Accordingly, a certificate holder cannot require a flightcrew member to perform any tasks during a rest period, including tasks such as checking the schedule/calendar, checking a text message, or checking an e-mail message.

However, if a flightcrew member performs a task of his/her own volition without being required to perform the task by the certificate holder, then that task is not a restraint imposed by the certificate holder. Thus, it is permissible for a flightcrew member to voluntarily decide to check the schedule/calendar during his or her rest period. We emphasize, however, that a flightcrew member's decision to perform a task during a rest period must be entirely voluntary.

iii. *One-Phone Call Rule*

A number of commenters asked whether the required 8-hour sleep opportunity eliminates the one-phone-call rule or places additional restrictions on when the phone call can be made. ALPA asked whether a flightcrew member is required to notify the certificate holder if the certificate holder's phone call prevents the flightcrew member from receiving an 8-hour sleep opportunity.

³⁸ Letter to Glenn Jimenez from Rebecca MacPherson (June 9, 2011).

The FAA has a “one phone call” policy that “generally allows a certificate holder to initiate one phone call during [a] crewmember’s rest period.”³⁹ If the crewmember voluntarily chooses to answer this phone call, then the FAA does not view the call as disruptive and breaking the rest period.⁴⁰ The sleep-opportunity requirements of § 117.25 do not eliminate this policy. However, the FAA cautions that a flightcrew member may have difficulty getting back to sleep after being woken up by a certificate holder’s phone call. In that situation, a flightcrew member may notify the certificate holder, pursuant to § 117.25(f), that his or her sleep opportunity has been interrupted. Thus, a certificate holder runs the risk of interrupting a flightcrew member’s sleep opportunity if the certificate holder calls a flightcrew member during the flightcrew member’s rest period.

iv. Point of Reference for the 30-Hour Rest Period

An individual commenter asked whether the point of reference for the 168-hour period specified in § 117.25(b) was the beginning of an FDP or the end of an FDP.

Subsection 117.25(b) originally stated that “[b]efore beginning any reserve or flight duty period a flightcrew member must be given at least 30 consecutive hours free from all duty in any 168 consecutive hour period.” In May 2012, the FAA issued a correction, changing the regulatory text of this subsection to require 30 hours free from all duty “within the past 168 consecutive hour period.”⁴¹ The FAA’s correction explained that this change was made “to clarify that the ‘168 consecutive hour period’ is the period that precedes the beginning of the flight duty period.”⁴² Thus, the point of reference for the 168-hour period specified in § 117.25(b) is the beginning of an FDP.

³⁹ *Id.*

⁴⁰ *Id.*

⁴¹ 77 FR 28763, 28764 (May 16, 2012).

⁴² *Id.* at 28763.

v. Prospective Identification of a Rest Period

APA asked whether the 30-hour rest period in § 117.25(b) has to be prospectively identified. More specifically, APA asked whether a rest period that is scheduled for less than 30 hours can be extended to 30 hours to satisfy the requirements of § 117.25(b).

A rest period must be prospective in nature, which means that a flightcrew member must be told in advance that he or she will be on a rest period for a specified duration. This is so that a flightcrew member has an opportunity to plan out his or her rest period in order to maximize the sleep opportunities available during that rest period.

In this case § 117.25(b) requires that a flightcrew member be provided with a 30-consecutive-hour rest period in the 168-hour period immediately preceding an FDP. Because a flightcrew member would need to plan ahead in order to maximize the multiple sleep opportunities available during this 30-hour rest period, the flightcrew member must be told before the rest period begins that he/she will be receiving 30 hours of rest in order for that rest to satisfy § 117.25(b). The FAA notes that this approach is consistent with a 1991 interpretation in which the FAA stated that a pertinent rest period had to be identified in advance as a 24-hour rest period in order for that rest period to satisfy a regulation requiring 24 hours of rest.⁴³

vi. Assigning an FDP

A4A and Alaska Air asked whether a rest period that is longer than the regulatory minimum could be terminated early if the resulting rest satisfied the minimum regulatory requirements. ALPA asked whether an air carrier could contact a flightcrew member when the flightcrew member is off duty but not on a rest period to give a flight assignment. If so, ALPA questioned whether the carrier must provide at least 10 hours of rest prior to the flight

⁴³ Letter to B. Stephen Fortenberry from Donald P. Byrne (June 24, 1991).

assignment. ALPA also asked whether a flightcrew member could voluntarily elect to “pick up a trip” from open time if he or she will have the requisite rest prior to the report time for that trip.

As discussed above, the start of a previously-scheduled FDP can only be changed by utilizing the reserve provisions of § 117.21. As such, a certificate holder that wishes to bump up the time of a previously-scheduled FDP would have to provide the flightcrew member with the pertinent long-call-reserve notice of the FDP change. Alternatively, if a certificate holder anticipates that it may need to call in a flightcrew member for an FDP, then that certificate holder should provide the flightcrew member with the required 10-hour rest period and then place the flightcrew member on short-call reserve.

These circumstances change if a flightcrew member decides, on his/her own initiative, to pick up a trip from open time, as the regulations do not prohibit this practice as long as the flightcrew member has received the required rest. However, the FAA cautions flightcrew members that § 117.5(a) requires a flightcrew member to “report for any flight duty period rested and prepared to perform his or her assigned duties.” The preamble to the final rule explains that this provision was added to the regulations to, among other things, “discourage flightcrew-member practices such as picking up extra hours.”⁴⁴ Thus, while a flightcrew member is free to voluntarily pick up extra flight hours from open time, the flightcrew member may be in violation of § 117.5(a) if this activity results in the flightcrew member becoming unduly fatigued.

Turning to ALPA’s other question, if a flightcrew member is not on a rest period, the certificate holder may contact the flightcrew member to schedule a flight assignment.⁴⁵ However, pursuant to § 117.25(b) and (e), the certificate holder would then need to provide that flightcrew member with the requisite rest period prior to beginning the FDP. The certificate

⁴⁴ 77 FR at 348.

⁴⁵ This answer assumes that the flightcrew member is not on short-call or airport/standby reserve at the time of the contact.

holder would also have to follow the FDP notification requirements of long-call reserve, as this type of contact and FDP assignment would qualify as long-call reserve pursuant to the definition of that term in § 117.3.

vii. *Requirements of § 117.25(d)*

A4A and AE asked whether § 117.25(d) requires 60 degrees of travel in one direction and 168 consecutive hours away from the flightcrew member's home base together to trigger the 56 consecutive hours of rest requirement. ALPA asked whether the rest requirement of § 117.25(d) would trigger if a flightcrew member never enters a new theater. ALPA also provided an example in which a flightcrew member flies a series of two 144-hour time-away-from-base trips which are separated by a 10-hour rest period at home base. ALPA asked whether this situation would trigger the 56-hour rest requirement of § 117.25(d).

Subsection 117.25(d) requires that a flightcrew member be given a minimum of 56 consecutive hours of rest upon return to home base if that flightcrew member has been away from home base for more than 168 consecutive hours as part of an FDP or series of FDPs that required that flightcrew member to travel more than 60 degrees longitude.⁴⁶ Thus, in order to trigger the 56-hour rest requirement of § 117.25(d), a flightcrew member must satisfy both of the following requirements: (1) the flightcrew member has to be away from home base for over 168 consecutive hours; and (2) the time away from home base must take place during FDP(s) that require the flightcrew member to travel over 60 degrees longitude.

The requirement to travel over 60 degrees longitude refers to travel in a single direction, as a flightcrew member who travels 30 degrees in one direction and then 30 degrees back would wind up in the same place where he started. Because this requirement does not refer to theaters,

⁴⁶ See 77 FR at 383 (explaining § 117.25(d)). The FAA intends to issue a correction clarifying the regulatory language in § 117.25(d).

it is irrelevant whether a flightcrew member changes theaters during his/her FDP(s) – all that matters is whether the flightcrew member has traveled more than 60 degrees longitude in one direction away from home base.

Turning to ALPA’s example, in that example, a flightcrew member goes on two trips each of which requires him to spend 144 hours away from home base and has a rest period at home base between the trips. Because each trip does not exceed 168 hours away from home base, each of these trips is insufficient to trigger the rest requirement of § 117.25(d). In addition, it is important to note that a flightcrew member must be away from home base for more than 168 “consecutive” hours in order to trigger the rest requirement in § 117.25(d). Because the two trips in ALPA’s example were separated by a rest period at home base, the time away from home for these two trips cannot be combined for § 117.25(d) purposes, as that time away from home was not consecutive. Thus, ALPA’s example would not trigger the rest requirements of § 117.25(d), as the flightcrew member in that example would not spend over 168 consecutive hours away from home base. It would, however trigger the 30-hour consecutive-rest requirement of § 117.25(b) once the flightcrew member reached 168 hours.

viii. *Deadheading*

The National Air Carrier Association (NACA) asked how the compensatory rest for deadheading is calculated if the deadhead has multiple legs with a sleep/rest opportunity between deadhead segments. RAA and AE provided the following scenario. A flightcrew member reports for duty at 0430 and operates a single flight that blocks in at 0800. At 1100 he starts to deadhead to another city to fly the next day and the series of deadhead flights arrives at 1530. RAA and AE asked how much rest this flightcrew member would need. RAA also asked how

much rest this flightcrew member would need if this entire assignment had consisted solely of deadhead transportation.

Subsection 117.25(g) states that “[i]f a flightcrew member engaged in deadhead transportation exceeds the applicable flight duty period in Table B of this part, the flightcrew member must be given a rest period equal to the length of the deadhead transportation” but not less than the 10-hour rest period required by § 117.25(e). Because Table B is used to calculate FDPs, the total length of the deadhead is determined in a similar manner as the total length of an FDP. More specifically, flight segments that are not separated by a “required intervening rest period”⁴⁷ would be considered part of the same deadhead. As discussed above, a “required intervening rest period” refers to a rest period specified by § 117.25. Thus, two deadhead segments that are separated by a five-hour rest period would be considered a single deadhead period because five hours is not a required intervening rest period. Conversely, two deadhead segments separated by 10 hours of rest with an 8-hour sleep opportunity would constitute two separate deadhead periods, as they would be separated by a required intervening rest period.

Turning to RAA and AE’s scenario, a flightcrew member reports for a one-segment FDP at 0430 and flies a single flight segment that concludes at 0800. The FAA will assume that this flightcrew member is acclimated. Because the flightcrew member concludes his one flight segment at 0800, his FDP terminates at that time. Then, at 1100, the flightcrew member begins a series of deadhead flights that terminate at 1530. This deadhead assignment consists of 4.5 hours (the time from 1100 to 1530). While RAA and AE have not specified how many flight segments make up this deadhead assignment, the 4.5 hours of this assignment would be well within the bounds of any of the FDP limits in Table B. Because this deadhead assignment has not exceeded

⁴⁷ See § 117.3 (FDP definition).

the pertinent FDP limits of Table B, § 117.25(g) would not require a compensatory rest period in this case.

If the entire assignment in RAA and AE's scenario consisted of deadhead transportation, then the total amount of deadhead transportation, which would take place from 0430 to 1530, would be 11 hours. This would exceed the pertinent limits of Table B, as the highest FDP limit for an FDP that begins at 0430 is 10 hours. Accordingly, § 117.25(g) would require a compensatory rest period equal to the length of the deadhead transportation before the flightcrew member begins a new FDP. In this case, the length of the compensatory rest period would be 11 hours.

N. Consecutive Nighttime Operations

i. *Applicability to Augmented Operations*

A4A asked whether the consecutive-night-provisions of § 117.27 apply to augmented operations.

Section 117.27 requires that a flightcrew member be provided with a two-hour mid-duty rest break during each consecutive FDP that infringes on the WOCL in order for that flightcrew member to be scheduled for more than three consecutive nighttime FDPs. The preamble to the final rule rejected a commenter's suggestion to exempt augmented operations from this provision.⁴⁸ The preamble explained this decision by pointing out that augmented operations need the mitigation provided by nighttime mid-duty breaks to the same extent as unaugmented operations.⁴⁹ Accordingly, the consecutive-night provisions of § 117.27 apply to augmented operations that infringe on the WOCL.

ii. *Applicability to FDPs That Begin During the WOCL*

⁴⁸ 77 FR at 376.

⁴⁹ *Id.*

A4A, Jeppesen, and Alaska Air asked whether an FDP that begins during the WOCL infringes on the WOCL for purposes of § 117.27.

As discussed above, § 117.27 prohibits a flightcrew member from accepting and a certificate holder from scheduling five consecutive FDPs “that infringe on the window of circadian low” if the flightcrew member assigned to these FDPs does not receive mid-duty rest periods that are specified in § 117.27. In the preamble to the final rule, the FAA explained that “[t]he consecutive-night limit is intended to apply to FDPs that infringe on the WOCL because operations conducted during the WOCL significantly increase cumulative fatigue.”⁵⁰ Accordingly, an FDP “infringe[s] on the window of circadian low” for the purposes of § 117.27 if any portion of that FDP takes place during the WOCL.

Thus, an operation that begins during the WOCL would “infringe on the window of circadian low” and be subject to § 117.27 because a portion of that operation would be conducted during the WOCL. An operation that remains entirely free of the WOCL would not “infringe on the window of circadian low” for the purposes of § 117.27 because no portion of that operation would be conducted during the WOCL.

iii. How Often the Mid-Duty Break Must be Provided

ALPA asked whether the two-hour mid duty rest break must be given on the day a pilot first reports for duty if he or she is scheduled for five days of flight that infringe on the WOCL.

Section 117.27 requires that, in order to exceed three consecutive nighttime FDPs, the two-hour mid-duty rest break be given “during each of the consecutive nighttime duty periods” that infringe on the WOCL. Accordingly, if a pilot is scheduled for five consecutive FDPs that infringe on the WOCL, that pilot must be provided with a two-hour mid-duty break during each of those FDPs. This would include the first FDP in the series that infringes on the WOCL.

⁵⁰ *Id.* at 376.

iv. Whether Reserve Triggers § 117.27

SWAPA asked whether a RAP that infringes on the WOCL would trigger the requirements of § 117.27. Horizon and RAA asked whether a pilot can be scheduled for more than 3 consecutive airport reserve periods that infringe on the WOCL.

Section 117.27 only applies to “flight duty periods that infringe on the window of circadian low.” Because a reserve availability period is not a flight duty period, a RAP does not trigger the requirements of § 117.27. However, if a flightcrew member on short-call reserve is assigned an FDP at least a portion of which takes place during the WOCL, that FDP would infringe on the WOCL for purposes of § 117.27.

Turning to airport/standby reserve, § 117.21(a) states that “[f]or airport/standby reserve, all time spent in a reserve status is part of the flightcrew member’s flight duty period.” Because time spent in airport/standby reserve is considered to be part of an FDP, consecutive airport reserve periods that infringe on the WOCL would trigger the requirements of § 117.27.

O. Applicability to Flight Attendants

Alaska Air asked whether flight attendants operating under part 117 must comply with the fatigue education and awareness training program provisions of § 117.9. Alaska Air also asked whether these flight attendants must declare their fitness for duty pursuant to the provisions of § 117.5.

If a flight attendant operates under part 117, that flight attendant must comply with the provisions of part 117 that apply to flightcrew members. Flightcrew members are required to declare their fitness for duty pursuant to § 117.5(d) and go through fatigue education and awareness training pursuant to § 117.9. Accordingly, these requirements would also extend to flight attendants operating under part 117.

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