

systems and the appropriate normal and emergency procedures;

(ii) Meteorology, including various types of meteorological information and forecasts, interpretation of weather data (including forecasting of en route and terminal temperatures and other weather conditions), frontal systems, wind conditions, and use of actual and prognostic weather charts for various altitudes;

(iii) The NOTAM system;

(iv) Navigational aids and publications;

(v) Joint dispatcher-pilot responsibilities;

(vi) Characteristics of appropriate airports;

(vii) Prevailing weather phenomena and the available sources of weather information;

(viii) Air traffic control and instrument approach procedures; and

(ix) Approved dispatcher resource management (DRM) initial training.

(2) For each airplane—

(i) A general description of the airplane emphasizing operating and performance characteristics, navigation equipment, instrument approach and communication equipment, emergency equipment and procedures, and other subjects having a bearing on dispatcher duties and responsibilities;

(ii) Flight operation procedures including procedures specified in §121.419(a)(2)(vi);

(iii) Weight and balance computations;

(iv) Basic airplane performance dispatch requirements and procedures;

(v) Flight planning including track selection, flight time analysis, and fuel requirements; and

(vi) Emergency procedures.

(3) Emergency procedures must be emphasized, including the alerting of proper governmental, company, and private agencies during emergencies to give maximum help to an airplane in distress.

(b) Initial and transition ground training for aircraft dispatchers must include a competence check given by an appropriate supervisor or ground instructor that demonstrates knowledge and ability with the subjects set forth in paragraph (a) of this section.

(c) Initial ground training for aircraft dispatchers must consist of at least the following programmed hours of instruction in the subjects specified in paragraph (a) of this section and in §121.415(a) unless reduced under §121.405:

(1) Group I airplanes—

(i) Reciprocating powered, 30 hours; and

(ii) Turbopropeller powered, 40 hours.

(2) Group II airplanes, 40 hours.

[Doc. No. 9509, 35 FR 90, Jan. 3, 1970, as amended by Amdt. 121-250, 60 FR 65949, Dec. 20, 1995]

#### § 121.423 Pilot: Extended Envelope Training.

(a) Each certificate holder must include in its approved training program, the extended envelope training set forth in this section with respect to each airplane type for each pilot. The extended envelope training required by this section must be performed in a Level C or higher full flight simulator, approved by the Administrator in accordance with §121.407 of this part.

(b) Extended envelope training must include the following maneuvers and procedures:

(1) Manually controlled slow flight;

(2) Manually controlled loss of reliable airspeed;

(3) Manually controlled instrument departure and arrival;

(4) Upset recovery maneuvers; and

(5) Recovery from bounced landing.

(c) Extended envelope training must include instructor-guided hands on experience of recovery from full stall and stick pusher activation, if equipped.

(d) Recurrent training: Within 24 calendar months preceding service as a pilot, each person must satisfactorily complete the extended envelope training described in paragraphs (b)(1) through (4) and (c) of this section. Within 36 calendar months preceding service as a pilot, each person must satisfactorily complete the extended envelope training described in paragraph (b)(5) of this section.

(e) Deviation from use of Level C or higher full flight simulator:

(1) A certificate holder may submit a request to the Administrator for approval of a deviation from the requirements of paragraph (a) of this section

## § 121.424

## 14 CFR Ch. I (1–14 Edition)

to conduct the extended envelope training using an alternative method to meet the learning objectives of this section.

(2) A request for deviation from paragraph (a) of this section must include the following information:

(i) A simulator availability assessment, including hours by specific simulator and location of the simulator, and a simulator shortfall analysis that includes the training that cannot be completed in a Level C or higher full flight simulator; and

(ii) Alternative methods for achieving the learning objectives of this section.

(3) A certificate holder may request an extension of a deviation issued under this section.

(4) Deviations or extensions to deviations will be issued for a period not to exceed 12 months.

(f) Compliance with this section is required no later than March 12, 2019. For the recurrent training required in paragraph (d) of this section, each pilot qualified to serve as second in command or pilot in command in operations under this part on March 12, 2019 must complete the recurrent extended envelope training within 12 calendar months after March 12, 2019.

[Doc. No. FAA–2008–0677, 78 FR 67839, Nov. 12, 2013]

EFFECTIVE DATE NOTE: By Amdt. 121–366, 78 FR 67839, Nov. 12, 2013, §121.423 was added, effective Mar. 12, 2014.

### § 121.424 Pilots: Initial, transition, and upgrade flight training.

(a) Initial, transition, and upgrade training for pilots must include flight training and practice in the maneuvers and procedures set forth in the certificate holder's approved low-altitude windshear flight training program and in appendix E to this part, as applicable.

(b) The maneuvers and procedures required by paragraph (a) of this section must be performed inflight except—

(1) That windshear maneuvers and procedures must be performed in a simulator in which the maneuvers and procedures are specifically authorized to be accomplished; and

(2) To the extent that certain other maneuvers and procedures may be per-

formed in an airplane simulator, an appropriate training device, or a static airplane as permitted in appendix E to this part.

(c) Except as permitted in paragraph (d) of this section, the initial flight training required by paragraph (a) of this section must include at least the following programmed hours of inflight training and practice unless reduced under §121.405;

(1) Group I airplanes—

(i) *Reciprocating powered*. Pilot in command, 10 hours; second in command, 6 hours; and

(ii) *Turbopropeller powered*. Pilot in command, 15 hours; second in command, 7 hours.

(2) *Group II airplanes*. Pilot in command, 20 hours; second in command, 10 hours.

(d) If the certificate holder's approved training program includes a course of training utilizing an airplane simulator under §121.409 (c) and (d) of this part, each pilot must successfully complete—

(1) With respect to §121.409(c) of this part—

(i) Training and practice in the simulator in at least all of the maneuvers and procedures set forth in appendix E to this part for initial flight training that are capable of being performed in an airplane simulator without a visual system; and

(ii) A flight check in the simulator or the airplane to the level of proficiency of a pilot in command or second in command, as applicable, in at least the maneuvers and procedures set forth in appendix F to this part that are capable of being performed in an airplane simulator without a visual system.

(2) With respect to §121.409(d) of this part, training and practice in at least the maneuvers and procedures set forth in the certificate holder's approved low-altitude windshear flight training program that are capable of being performed in an airplane simulator in which the maneuvers and procedures are specifically authorized.

[Doc. No. 9509, 35 FR 90, Jan. 3, 1970, as amended by Amdt. 121–199, 53 FR 37697, Sept. 27, 1988]

EFFECTIVE DATE NOTE: By Amdt. 121–366, 78 FR 67840, Nov. 12, 2013, §121.424 was amended by revising paragraph (a); revising paragraph