

§ 121.422 Aircraft dispatchers: Initial and transition ground training.

(a) Initial and transition ground training for aircraft dispatchers must include instruction in at least the following:

- (1) General subjects—
 - (i) Use of communications systems including the characteristics of those 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]

§ 121.424 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 performed 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—

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(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]

§ 121.425 Flight engineers: Initial and transition flight training.

(a) Initial and transition flight training for flight engineers must include at least the following:

(1) Training and practice in procedures related to the carrying out of flight engineer duties and functions. This training and practice may be accomplished either inflight, in an airplane simulator, or in a training device.

(2) A flight check that includes—

(i) Preflight inspection;

(ii) Inflight performance of assigned duties accomplished from the flight engineer station during taxi, runup, take-off, climb, cruise, descent, approach, and landing;

(iii) Accomplishment of other functions, such as fuel management and preparation of fuel consumption records, and normal and emergency or alternate operation of all airplane flight systems, performed either inflight, in an airplane simulator, or in a training device.

Flight engineers possessing a commercial pilot certificate with an instrument, category and class rating, or pilots already qualified as second in command and reverting to flight engineer, may complete the entire flight check in an approved airplane simulator.

(b) Except as permitted in paragraph (c) of this section, the initial flight training required by paragraph (a) of this section must include at least the same number of programmed hours of flight training and practice that are specified for a second in command pilot under § 121.424(c) unless reduced under § 121.405.

(c) If the certificate holder's approved training program includes a course of training utilizing an airplane simulator or other training device under § 121.409(c), each flight engineer must successfully complete in the simulator or other training device—

(1) Training and practice in at least all of the assigned duties, procedures, and functions required by paragraph (a) of this section; and

(2) A flight check to a flight engineer level of proficiency in the assigned duties, procedures, and functions.

[Doc. No. 9509, 35 FR 90, Jan. 3, 1970, as amended by Amdt. 121–144, 43 FR 22647, May 25, 1978]

§ 121.426 Flight navigators: Initial and transition flight training.

(a) Initial and transition flight training for flight navigators must include flight training and a flight check that are adequate to insure his proficiency in the performance of his assigned duties.

(b) The flight training and checks specified in paragraph (a) of this section must be performed—