

## Title 14—AERONAUTICS AND SPACE

### Chapter I—Federal Aviation Administration, Department of Transportation

[Docket No. 10748; Amdt. No. 121-80]

#### PART 121—CERTIFICATION AND OPERATIONS: DOMESTIC, FLAG, AND SUPPLEMENTAL AIR CARRIERS AND COMMERCIAL OPERATORS OF LARGE AIRCRAFT

##### Pictorial Displays for Recurrent Training

This amendment to Part 121 of the Federal Aviation Regulations permits the use of pictorial displays for visual aircraft preflight inspection in recurrent training for pilots and flight engineers. This amendment is also applicable to air travel club operations governed by Part 123, and to air taxi operations using large aircraft, as provided in § 135.2.

This amendment is based on a notice of proposed rule making, Notice 70-49, published in the FEDERAL REGISTER on December 25, 1970 (35 F.R. 19640). Notice 70-49 was issued in response to a petition for rule making submitted by Delta Airlines. Six public comments were received, and only one commentator opposed the proposals made in the notice, while three concurred in general but submitted several recommendations, and two concurred with the notice as proposed. A discussion of the comments follows.

Two commentators stated that it is unnecessary to require the portrayal of abnormal conditions as proposed in § 121.427(d)(2)(ii). They contend that aircraft used in current preflight inspections are mechanically normal and that supplementary instruction material currently in use emphasizes the normal rather than the abnormal.

While the FAA believes that training should generally emphasize normal conditions, we also believe that it is important for pilots and flight engineers to be exposed to, and be aware of, abnormal conditions with respect to preflight inspection items. The use of pictorial displays is valuable in this regard, and provides an effective alternative to making physical changes to an airplane and thus giving it an abnormal configuration.

Another comment recommended that consideration be given to amending Appendix E to Part 121 to require training only on those visual inspection items which are appropriate to the pilot's du-

ties. In addition, it was recommended that Appendix A to Part 61 and Appendix F to Part 121 be amended to permit waiver authority in cases where the certificate holder's operating procedures

specifically assign visual inspection duties to another crewmember or other authorized personnel.

While the FAA believes that these recommendations merit further agency examination for possible future rule making, they are considered outside the scope of Notice 70-49 and thus are not adopted herein.

One commentator objected strongly to the entire concept of pictorial displays for use in conducting the preflight inspection, because due to the nature of the inspection, pictures cannot realistically portray all that is required in a preflight inspection. This commentator stated that the preflight inspection involves, among other things, checking of maintenance logs to determine if items in need of repair have been repaired, a functional test of certain equipment, an in-depth examination of items which have a relatively high probability of failure or damage, and an inspection of the overall appearance of the aircraft. The commentator contended that pictorial displays to check these aspects of the preflight inspection are ineffective because: no evaluation could be made of whether a flight crewmember could locate components or if he would inspect them on an actual preflight inspection; pictures may be too restrictive with regard to the field of items they project, which may lead the flight crewmember to be misled as to the relation of one component to its surrounding components; and use of pictures eliminates the use of feel or motion which may be helpful to the flight crewmember in making the inspection in a sequence best suited for him. Finally, the commentator argues that in taking this action the FAA is acting contrary to its declared philosophy in the area of increased use of simulation equipment, namely that the simulator is an effective training tool because it can realistically portray the operating environment of an airplane. The commentator contends that realism is impossible when pictorial displays are used in connection with the preflight inspection.

In response to this commentator, it should be noted that this amendment affects only the recurrent training and proficiency check situations. Thus, those flight crewmembers affected will have been previously instructed and checked with regard to actual (or simulated) pre-

flight inspections, and will have been involved in day-to-day operations in the airplane. Therefore, they will be familiar with proper procedures for conducting the preflight inspection. We do not agree with the commentator's view that the nature of the preflight inspection is such that it is not suited to pictorial display, even with regard to evaluation of the flight crewmember's performance. Also, we believe that the portrayal of abnormal conditions is an important capability of the pictorial display, which cannot be duplicated as easily and effectively in an airplane or a simulator.

Interested persons have been given an opportunity to participate in the making of this amendment and due consideration has been given to all relevant matter presented.

In consideration of the foregoing, Part 121 of the Federal Aviation Regulations is amended, effective November 4, 1971, as follows:

1. By adding a new sentence to paragraph (d)(2)(ii) of § 121.427 to read as follows:

##### § 121.427 Recurrent training.

- (d) \* \* \*
- (2) \* \* \*
- (ii) \* \* \* The preflight inspection may be conducted in an airplane, or by using an approved pictorial means that realistically portrays the location and detail of preflight inspection items and provides for the portrayal of abnormal conditions.

2. By amending the flush paragraph after section I(b)(2) of Appendix F to Part 121 to read as follows:

##### APPENDIX F

##### PROFICIENCY CHECK REQUIREMENTS

- I \* \* \*
- (b) \* \* \*
- (2) \* \* \*

Except for flight checks required by § 121.424 (d)(2), an approved pictorial means that realistically portrays the location and detail of preflight inspection items and provides for the portrayal of abnormal conditions may be substituted for the preflight inspection. If a flight engineer is a required flight crewmember for the particular type airplane, the visual inspection may be waived under § 121.441(d).

(Secs. 313(a), 601, 604, Federal Aviation Act of 1958, 49 U.S.C. 1354(a), 1421, 1424; sec. 6(c), Department of Transportation Act, 49 U.S.C. 1655(c))

Issued in Washington, D.C., on September 27, 1971.

J. H. SHAFFER,  
Administrator.

(As published in the Federal Register /36 F.R. 19361/ on October 5, 1971)