U.S. Department
of Transportation
Federal Aviation Administration

Advisory Circular

Subject: Manufacturers Reporting Failures, Malfunctions, or Defects

Date: 08/12/2010

Initiated by: AIR–200

AC No: 21–9B

1. Purpose. This advisory circular (AC) provides information about Title 14, Code of Federal Regulations (14 CFR) part 21, Certification Procedures for Products, Articles and Parts (part 21). The AC covers § 21.3, Reporting of failures, malfunctions, and defects. This AC is not mandatory and does not constitute a regulation. This AC describes an acceptable means, but not the only means, to comply with the requirements to assist manufacturers of aeronautical products and articles in reporting to the Federal Aviation Administration (FAA) any defect in any product or article they manufacture. However, if you use the means described in the AC, you must follow it in all important respects.

2. Audience. This AC affects manufacturers of aeronautical products and articles.

3. Effective Date. This AC is effective April 16, 2011.

4. Explanation of Changes. This revision—

a. Updates all references to 14 CFR part 21, Certification Procedures for Products, Articles, and Parts, dated October 16, 2009.

b. Updates the formatting to match the current AC formatting policy.

c. Modifies language to correspond to information in the new part 21 rule.

5. Cancellation. This AC cancels, as of its effective date, AC 21-9A, Manufacturers Reporting Failures, Malfunctions, or Defects, dated May 26, 1982.

6. Related Publications.

a. 14 CFR part 21, Certification procedures for products, articles, and parts.

b. 14 CFR § 91.1415, CAMP: Mechanical reliability reports.

c. 14 CFR part 121, Operating requirements: Domestic, flag, and supplemental operations.

d. 14 CFR § 125.409, Service difficulty reports.

e. 14 CFR part 135, Operating requirements: Commuter and on demand operations and rules governing persons on board such aircraft.

f. 14 CFR § 145.221, Service difficulty reports.

7. Reporting Requirements.

a. Section 21.3 details the requirements for reporting failures, malfunctions, and defects of products and articles. These requirements apply to a holder of a type certificate (TC), amended type certificate, supplemental type certificate, parts manufacturer approval, or technical standard order authorization, or the licensee of a TC. These entities should notify the FAA of—

(1) Any failure, malfunction, or defect in the products or articles they manufacture that have resulted in any of the occurrences specified in § 21.3(c). Examples of such occurrences include fires, accumulation of toxic gases, propeller structural failure, flammable fluid leakage, brake system failure, and flight control system malfunction.

(2) Any defect in any product or article that has left their quality system and that could result in any one of the occurrences specified in § 21.3(c).

b. Compliance with § 21.3 will provide the earliest possible notification to the FAA of a hazardous condition and will ensure appropriate corrective action by the manufacturer.

c. The method and manner of reporting should be in accordance with § 21.3(e).

d. In cases where the manufacturer becomes aware of a defect during the normal manufacturing cycle of a product or article, for example, under its documented quality system, the manufacturer does not need to notify the FAA if the product or article has not left its quality system, Manufacturers should review their quality system to ensure that the limits of the system are clearly defined.

8. Reporting Procedures. Each manufacturer should contact the nearest aircraft certification office in the region in which the person required to make the report is located within 24 hours after it has been determined that the failure, malfunction, or defect required to be reported has occurred per § 21.3(e)(1) to—

a. Ensure an understanding of the rules.

b. Establish the most expeditious means of conveying the required information in a manner and form acceptable to the FAA.

c. Determine the person(s) to be contacted.

d. Establish a means of keeping the appropriate FAA office informed of progress and providing additional information on those cases where only preliminary information has been reported.

9. Applicability to Foreign Manufacturers. The reporting rules do not apply to foreign manufacturers whose products or articles have been approved under the applicable import certification provisions of part 21 (see § 21.29, Issue of type certificate: import products). The FAA relies on foreign countries' and jurisdictions' civil aviation authorities (as provided under their bilateral agreements with the United States) to stay informed of hazardous conditions occurring in these products or articles.

10. Exceptions to Reporting Under part 21. Section 21.3(d) details those conditions under which reports are not required. These include the following:

a. Improper maintenance/usage. The requirements under § 21.3(a) do not apply if the holder determines that the failure, malfunction, or defect was caused by improper maintenance or improper usage as noted in § 21.3(d)(1)(i). The following examples illustrate how to apply this exception:

(1) If an article failed and resulted in one of the occurrences noted in § 21.3(c) and it is found that the failure is due to a worn part caused by improper maintenance, the failure need not be reported. For example, a safe in-flight shutdown of an engine caused by improper maintenance.

(2) If an article failed because of design or a quality system deficiency, the holder should report the item. For example, a "B" nut that cracked due to a hidden defect when torqued in accordance with design or manufacture's instructions should be reported.

b. Foreign-manufactured products or parts. Section 21.3(d)(2) removes the need to report as required by § 21.3(a) when the products or articles are—

(1) Manufactured by a foreign manufacturer under a U.S. TC issued under § 21.29, or an approval under § 21.621; or

(2) Exported to the United States under § 21.502.

c. Engine shutdown during flight. Engine TC holders are not required to report engine shutdown under § 21.3(a) if the engine TC holder knows the failure was reported by another person under parts 91, 121, 125, 135 or 145, or report it under the accident reporting provisions of 49 CFR part 830 of the National Transportation Safety Board regulations (reference § 21.3(d)(1)(ii) and (iii)). In cases where the shutdown occurs during flight resulting in damage to the engine or airplane structure, operators must report engine shutdown under parts 91, 121,125,135, or 145.

11. How to Obtain This AC You can find this AC at http://www.faa.gov/regulations_policies/advisory_circulars/.

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