the power transmitted from the nonselected antenna by at least 20 db.

(f) Mode S Address: Interrogate the Mode S transponder and verify that it replies only to its assigned address. Use the correct address and at least two incorrect addresses. The interrogations should be made at a nominal rate of 50 interrogations per second.

(g) Mode S Formats: Interrogate the Mode S transponder and verify that it replies only in the correct format. Use the surveillance formats UP=4 and P. Verify that the altitude reported in the replies to UP=4 are the same as that reported in a valid ATCRBS Mode C reply. Verify that the identity reported in the replies to UP=5 are the same as that reported in a valid ATCRBS Mode 3/A reply. If the transponder is so equipped, use the communication formats UF=20, 21, and 24.

(h) Mode S All-Call Interrogations: Interrogate the Mode S transponder with the Mode S-only all-call format UF=11, and the ATCRBS/Mode S all-call formats (1.6 microsecond P pulse) and verify that the correct address and capability are reported in the replies (downlink format DF=11).

(i) ATCRBS-Only All-Call Interrogation: Interrogate the Mode S transponder with the ATCRBS-only all-call interrogation (0.8 microsecond P pulse) and verify that no reply is generated.

(j) Squitter: Verify that the Mode S transponder generates a correct squitter approximately once per second.

(k) Records: Comply with the provisions of § 43.9 of this chapter as to content, form, and disposition of the records.


PART 45—IDENTIFICATION AND REGISTRATION MARKING

Subpart A—General

Sec.
45.1 Applicability.

Subpart B—Marking of Products and Articles

45.10 Marking.
45.11 Marking of products.
45.13 Identification data.
45.15 Marking requirements for PMA articles, TSO articles, and Critical parts.
45.16 Marking of life-limited parts.

Subpart C—Nationality and Registration Marks

45.21 General.
§ 45.11 Marking of products.

(a) Aircraft. A manufacturer of aircraft covered under §21.182 of this chapter must mark each aircraft by attaching a fireproof identification plate that—

(1) Includes the information specified in §45.13 using an approved method of fireproof marking;

(2) Must be secured in such a manner that it will not likely be defaced or removed during normal service, or lost or destroyed in an accident; and

(3) Except as provided in paragraphs (d) through (h) of this section, must be either adjacent to and aft of the rear-most entrance door or on the fuselage surface near the tail surfaces.

(b) Aircraft engines. A manufacturer of an aircraft engine produced under a type certificate or production certificate must mark each engine by attaching a fireproof identification plate. Such plate—

(1) Must include the information specified in §45.13 using an approved method of fireproof marking;

(2) Must be affixed to the engine at an accessible location; and

(3) Must be secured in such a manner that it will not likely be defaced or removed during normal service, or lost or destroyed in an accident.

(c) Propellers and propeller blades and hubs. Each person who produces a propeller, propeller blade, or propeller hub under a type certificate or production certificate must mark each engine by attaching a fireproof identification plate. The marking must—

(1) Be placed on a non-critical surface;

(2) Contain the information specified in §45.13;

(3) Not likely be defaced or removed during normal service; and

(4) Not likely be lost or destroyed in an accident.

(d) Manned free balloons. A manufacturer of manned free balloons must mark each balloon by attaching the identification plate described in paragraph (a) of this section. The plate must be secured to the balloon envelope and must be located, if practicable, where it is legible to the operator when the balloon is inflated. In addition, the basket and heater assembly must be permanently and legibly marked with the manufacturer’s name, part number (or equivalent), and serial number (or equivalent).

(e) Aircraft manufactured before March 7, 1988. The owner or operator of an aircraft manufactured before March 7, 1988 must mark the aircraft by attaching the identification plate required by paragraph (a) of this section. The plate must be secured at an accessible exterior or interior location near an entrance, if the model designation and builder’s serial number are also displayed on the exterior of the aircraft fuselage. The model designation and builder’s serial number must be—

(1) Legible to a person on the ground,

(2) Located either adjacent to and aft of the rear-most entrance door or on the fuselage near the tail surfaces, and

(3) Displayed in such a manner that they are not likely to be defaced or removed during normal service.

(f) For powered parachutes and weight-shift-control aircraft, the identification plate required by paragraph (a) of this section must be secured to the exterior of the aircraft fuselage so that it is legible to a person on the ground.

(g) The identification plate described in paragraph (a) of this section may be secured to the aircraft at an accessible location near an entrance for—

(1) Aircraft produced for—

(i) Operations under part 121 of this chapter,

(ii) Commuter operations (as defined in §110.2 of this chapter), or

(iii) Export.

(2) Aircraft operating under part 121 of this chapter and under an FAA-approved continuous airworthiness maintenance program; or

(3) Aircraft operating in commuter air carrier operations (as defined in §110.2 of this chapter) under an FAA-approved continuous airworthiness maintenance program.