

Aircraft: _____

Equipment: _____

**Radio Antenna Installations
7/30/09**

In order to ensure proper regulatory compliance this checklist should be completed for each radio equipment installation and submitted as an attachment to the Field Approval Package.

- 1. FAR 23 Aircraft
- 2. § APPLICABLE FEDERAL AVIATION REGULATIONS §

- 21.305 Approval of Materials, Parts, Processes and Appliances
- 23.251 Vibration and Buffeting
- 23.301 Loads
- 23.629 Flutter
- 23.1301 Function and Installation
- 23.1309 Equipment, Systems, and Installation
- 23.1431 Electronic Equipment

Radio antenna installations, when made the same as installations by the airframe manufacturer or other installations, which are already approved, may be accepted without further investigation. When installations are not the same as ones already approved, the following points should be checked to determine that they are satisfactory.

3. CHECKLIST

Please initial as indicated and provide requested data. You can reference information contained on other documents such as STC, Block 8 of FAA Form 337, or other attachments.

a. Approval of Materials, Parts Processes and Appliances

Are all parts, processes and/or appliances previously approved by FAA Technical Standard Order (TSO, Supplemental Type Certificate (STC) Original Type Design (TC) or Parts Manufacturing Approval (PMA)? (§21.305)

NOTE: If no previous approval exists; the parts, processes and/or appliances may not be eligible for Field Approval.

Yes _____ No _____

Explain: _____

b. Structural Requirements:

- (1) Is the installation structurally adequate? (§§ 23.301, 23.1301 and 23.1431)

NOTE: The information contained in AC 43.13-2 for the installation of radio antennas may be used for guidance in this evaluation. **Engineering evaluated data must be used** in evaluating installations involving the cutting of primary structure, particularly where the pressurized portion of the aircraft is affected. Manufacturers' maintenance or repair manuals may be of some

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assistance in evaluating the significance of the structure affected. Once it is established that the point of installation is satisfactory, the effect of airloads and possible vibration of the antenna itself should be considered. If the antenna is of the stub or mast type, this can usually be evaluated by grasping the antenna and tugging on it to ascertain that the installation is reasonably rigid. Vibration characteristics can be ascertained by observation during engine operation on the ground and a flight check at speeds up to Vne.

Yes _____ No _____

Explain: _____

(2) Will the installation affect the flutter and vibration characteristics of the aircraft? (§§ 23.251 and 23.629)

NOTE: The regional Engineering Service Representative should be contacted for assistance in this evaluation, particularly for those installations involving the fin, rudder, or top of the fuselage just forward of the fin.

Yes _____ No _____

Explain: _____

c. Hazards to the Aircraft or its Occupants:

(1) Is the antenna mounted so as not to obstruct instrument pitot and static source areas? (§§ 23.1309, 23.1323, 23.1325, 23.1327, 23.1329 and 23.1331)

Yes _____ No _____

Explain: _____

(2) Is the attachment of the antenna adequate to prevent its dislodgment with possible damage to airplane surfaces? (§ 23.1309)

Yes _____ No _____

Explain: _____

(3) Is the antenna installed so that it does not adversely affect other structure (either primary or secondary) or cause interference with any controls, emergency exits, or necessary access provisions? (§ 23.1309)

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Yes _____ No _____

Explain: _____

d. Operating Aspects:

Have the necessary operational tests been performed to assure that the equipment will not adversely affect the operation of other communication or navigation systems? (§§ 23.1301 and 23.1309)

Yes _____ No _____

Explain: _____

e. Detail Design Standards:

None.

I certify the alteration described above has been made in accordance with the requirements of the applicable regulations and that the information contained herein is true and correct to the best of my knowledge.

Date: _____

Signature: _____ Certificate# _____