

Aircraft: \_\_\_\_\_

Equipment: \_\_\_\_\_

**Instrument Installations - Adding Instruments**

*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. **Part 23 Aircraft**

2. § APPLICABLE FEDERAL AVIATION REGULATIONS §

- 21.305 Approval of Materials, Parts, Processes and Appliances
- 23.301 Loads

**Instruments and Markings**

- 23.1301 Functional and Installation Requirements - Equipment
- 23.1321 Arrangement and Visibility of Instrument Installations

**Instrument Panel Vibration Characteristics**

- 23.1327 Magnetic Direction Indicator
- 23.1337 Instrument Lines

**Fuel Quantity Indicator and/or Cylinder Head Temperature Indicating System for Air-Cooled Engines**

- 23.1543 Instrument Markings
- 23.1547 Magnetic Direction indicator
- 23.1555 Accessory and Auxiliary Controls

Added instrument installations which are the same as those made by the airframe manufacturer or other installations which are already approved, may be accepted without further investigation. On other installations, the following points should be checked to determine that the installation is 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: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Aircraft: \_\_\_\_\_

Equipment: \_\_\_\_\_

b. Structural Requirements:

- (1) If holes are added to instrument panel, is the structural integrity of the panel or its supporting structure impaired? (§ 23.301)

NOTE: This may normally be determined by a visual check. If the panel or its supporting structure is an integral part of the airplane structure, caution should be used in the evaluation.

Yes \_\_\_\_\_ No \_\_\_\_\_

Explain: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

c. Hazards to the Aircraft or its Occupants

- (1) If powerplant instruments are added, are their lines, which carry inflammable fluids and gases under pressure, provided with restricted orifices or other safety devices at the source of pressure to prevent excessive escape of fluid or gas in case of line failure? (§ 23.1337)

Yes \_\_\_\_\_ No \_\_\_\_\_

Explain: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

d. Operating Aspects

- (1) Are added flight, navigation and powerplant instruments in-stalled in such a manner that they are easily visible for use by the pilot? (§ 23.1321)

Yes \_\_\_\_\_ No \_\_\_\_\_

Explain: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

- (2) Are added identical powerplant instruments on multiengine aircraft so located as to prevent any confusion as to the engines to which they relate? (§ 23.1321)

Yes \_\_\_\_\_ No \_\_\_\_\_

Explain: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

- (3) Is the added magnetic compass installed ' in the aircraft so that its accuracy is not affected excessively by vibration and transient magnetic fields? (§ 23.1327)

Aircraft: \_\_\_\_\_

Equipment: \_\_\_\_\_

Yes \_\_\_\_\_ No \_\_\_\_\_

Explain: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(4) Is the added magnetic compass compensated for deviation error not exceeding plus or minus 10 degrees on any heading in level flight? (§ 23.1327)

Yes \_\_\_\_\_ No \_\_\_\_\_

Explain: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(5) If a magnetic compass is added, is a placard installed with the compass deviation error recorded? (§§ 23.1327 and 23.1547)

Yes \_\_\_\_\_ No \_\_\_\_\_

Explain: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

e. Detail Design Standards

(1) Are the instrument panel vibration characteristics such as not to impair the accuracy of added instruments? (§ 23.1321)

Yes \_\_\_\_\_ No \_\_\_\_\_

Explain: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(2) Are the applicable instrument connector tubing, flexible lines, electrical conductors, and cables to the added instruments, considered satisfactory to perform their intended function and are their installations satisfactory? (§§ 23.1301, 23.1321, and 23.1337)

Yes \_\_\_\_\_ No \_\_\_\_\_

Explain: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(3) Are instruments properly range marked or placarded? (§§ 23.1543 and 23.1583)

Aircraft: \_\_\_\_\_

Equipment: \_\_\_\_\_

Yes \_\_\_\_\_

No \_\_\_\_\_

Explain: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

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# \_\_\_\_\_