

Aircraft: _____

Equipment: _____

Instrument Installations - Relocating 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
- 23.993 Fuel System Lines, Fittings, and Accessories
- 23.1301 Functional and Installation Requirements
- 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

23.1547 Magnetic Direction Indicator

Relocated 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 accepted 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

(1) 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)

Yes _____ No _____

Explain: _____

b. Structural Requirements:

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

Aircraft: _____

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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 relocated, 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 relocated flight, navigation and powerplant instruments installed in such a manner that they are easily visible for use by the pilot? (§ 23.1321)

Yes _____ No _____

Explain: _____

(2) Are relocated 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 relocated magnetic compass installed so that its accuracy is not affected excessively by vibration and transient magnetic fields? (§ 23.1327)

Aircraft: _____

Equipment: _____

Yes _____ No _____

Explain: _____

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

Yes _____ No _____

Explain: _____

- (5) If the magnetic compass is relocated, 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 relocated instruments? (§ 23.1321)

Yes _____ No _____

Explain: _____

- (2) If powerplant instruments are relocated, are their lines installed and supported to prevent excessive vibration and to withstand loads due to accelerated flight conditions? (§ 23.993)

Yes _____ No _____

Explain: _____

- (3) If powerplant instruments are relocated, do instrument lines incorporate provisions for flexibility when the lines are connected to components of the

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airplane and relative motion could exist between airframe and instruments? (§ 23.993)

Yes _____ No _____

Explain: _____

(4) If powerplant instruments are relocated, is the use of flexible hose avoided in locations where exposure to excessive temperatures might adversely affect the hose during operation or shutdown? (§ 23.993)

Yes _____ No _____

Explain: _____

(5) If a fuel quantity indicator sight gauge is relocated, is it installed and guarded in a manner to preclude the possibility of breakage or damage? (§ 23.1337)

Yes _____ No _____

Explain: _____

(6) If a relocated fuel sight gauge forms a trap in which water can collect and freeze, is a means provided to permit drainage on the ground? (§ 23.1337)

Yes _____ No _____

Explain: _____

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

Yes _____ No _____

Explain: _____

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Equipment: _____

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# _____