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RE: Measuring and Test Equipment Calibration

Dear Carol,

It has recently come to our attention that confusion exists regarding the calibration of measuring and test equipment (MTE). The uncertainty stems from a number of local FAA inspectors who contend that repair stations calibrating their own equipment may only use criteria and procedures developed by the manufacturer of the equipment.

That position is not supported by 14 CFR § 145.211, as it does not limit a repair station to using only procedures developed by the manufacturer; that rule provides, in relevant part, that:

(c) A certificated repair station must prepare and keep current a quality control manual in a format acceptable to the FAA that includes the following:

(1) A description of the system and procedures used for—

...

(viii) Calibrating measuring and test equipment used in maintaining articles, including the intervals at which the equipment will be calibrated;

...

*(Emphasis added)*

RE: Measuring and Test Equipment Calibration

For many years, the industry has relied upon products that draw together information and techniques from the government industry data exchange program (GIDEP) and other sources to provide specific calibration information (examples include: Cybermetrics – CalPro; TechCom Systems - Calibration Procedures; PQ Systems – GagePack; Prime Technologies – ProCalV5 Calibration Software; CMMS – Calibration Management Software; etc.)<sup>1</sup>.

The use of such information satisfies the requirements of 14 CFR § 145.109(b), which states that:

A certificated repair station must ensure all test and inspection equipment and tools used to make airworthiness determinations on articles are calibrated to a standard acceptable to the FAA.

The practice is also in line with Advisory Circular (AC) 145-9, paragraph 4-12(h) which follows the regulation by providing:

**Gage Calibration Techniques.** If the repair station calibrates its own equipment, a series of gage calibration techniques should be developed. These techniques should describe exactly how the tool or equipment is calibrated, including the standard used, test points, accuracy required, and records. The techniques could be those recommended by the manufacturer or an industry standard acceptable to the FAA. The technique may include provisions to safeguard the equipment from adjustments that would invalidate results (tamper proofing). (*Emphasis added*)

Similarly, Order 8900.1, Vol.6, Ch.9, Sec.6, paragraph 6-1756(C) instructs to:

**Verify Use of Manufacture's Requirements and Equivalency.** Review the part of the RSM/QCM describing the system and procedures used for ensuring the equipment and tools used to maintain articles are those recommended by the article's manufacturer or an equivalent acceptable to the FAA. (*Emphasis added*)

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<sup>1</sup> According to one of these sources, of almost 4000 end users approximately 200 are in the aviation industry.

Ms. Carol E. Giles  
December 13, 2010  
Page 3

RE: Measuring and Test Equipment Calibration

To remedy the current uncertainty within the industry, ARSA asks for a response from the FAA that reinforces its guidance in AC 145-9 and Order 8900.1. Specifically, a reply to this letter stating that the techniques and procedures used for calibrating MTE include *both* industry standards and those provided by the manufacturer of the equipment.

We appreciate your assistance with this matter.

Sincerely,



Craig L. Fabian  
Vice President Regulatory Affairs and  
Assistant General Counsel