



U.S. Department
of Transportation
**Federal Aviation
Administration**

Transport Airplane Directorate
**Los Angeles Aircraft
Certification Office**
3960 Paramount Boulevard
Lakewood, California 90712-4137

DEC - 1 2000

J.P. Instruments
Mr. Joseph Polizzotto
3402-1 West MacArthur
Santa Ana, California 92704

Dear Mr. Polizzotto:

J.P. Instruments, Fuel Flowmeters;
Technical Standard Order C44b

Your application dated November 29, 2000, requesting the issuance of a Technical Standard Order (TSO) authorization in accordance with the procedural requirements of 14 Code of Federal Regulations (14 CFR) Part 21, Subpart O, has been reviewed. Based upon your data and statement of conformance certifying your article(s) has met the requirements of 14 CFR Part 21, Subpart O, and the minimum performance standards of TSO C44b (Ref. 14 § 21.305, authorization is hereby granted for the following.

<u>MODEL NO.</u>	<u>DESCRIPTION</u>
FS-450	450000() Fuel Flowmeter

The technical data submitted with your application have been accepted to fulfill the requirements for your TSO authorization and will be retained in our files. For your information the conditions and tests required for TSO authorization are minimum performance standards. The article(s) may be installed on or within a specific type or class of aircraft only if further evaluation by the user/installer documents an acceptable installation that is approved by the Administrator.

The quality control procedures contained in your quality control manual, currently on file at the Los Angeles Manufacturing Inspection District Office, and your statement that those procedures will be applied to the manufacture of the subject articles at the above address, are considered adequate in accordance with 14 CFR § 21.143.

Effective this date, your authorization to use TSO procedures is extended to include the subject article(s). You may identify this article(s) with the applicable TSO markings as required by TSO C44b.

Purpose - Aviation Safety Professionalism - Technical Excellence Pride - Highest Quality

2) Scope	Regulation	Method of Compliance
	Types: Type I Type II	Type II – Counter type instrument that indicates both fuel consumed and quantity remaining.
3) General Requirements	3.1.1 materials	
	3.1.2 Workmanship	
	3.2 Identification	
	3.3 Environmental	See section 5, 6, 7
	3.3.1 Temperature	Instrument Location: Power Plant Compartment PASSED
	3.3.2 Humidity:	PASSED
	3.3.3 Vibration	Power Plant Mounted: PASSED
	3.3.4 Altitude	PASSED
	3.4 Radio Interference	PASSED Additional testing see section 6.0
	3.5 Magnetic Effect	PASSED
	4.0 Detail Req.	
	4.1.1 Indicating Method	Type II instrument with a counter to indicate both fuel consumed and quantity remaining.
	4.2 Dial Markings	
	4.2.1 Finish	PASSED
	4.2.2 Numerals	PASSED
	4.2.3 Graduations	PASSED
	4.2.4 Counters	PASSED
	4.2.5 Visibility	PASSED
	4.3 Flow Direction	PASSED
	4.4 fuel Characteristics	All transmitters are specifically designed to operate with all aviation fuel
	4.5 Power Variations	PASSED
	4.8 Safety Provision	PASSED
	5.0 to 5.5	PASSED
6.0 Individual performance req. Additional testing: DO-160D. Section 21, Emission of Radio Frequency Energy	Tested to Category "M". This category may be suitable for equipment and associated interconnecting wiring located in the electronic bay of an aircraft. Section 21.3 Conducted RF Emission a). Passed category M b). Passed category M Section 21.4 Radiated RF Emission Passed category M	
6.1 Scale Error	PASSED	
6.2 Dielectric		
6.2.1 Insulation res.	Not Applicable	
6.2.2 Overpotential	Not Applicable	
6.2.2.1 Hermetically sealed	Not Applicable	
6.3 Leak test	PASSED	
7.1 Low and High temperature	PASSED	
7.2 Extreme Temperature Exposure	PASSED	
7.3 Magnetic Effect	PASSED	
7.4 Humidity	PASSED	
7.5 Vibration	PASSED	
7.5.1 Resonance:		
7.5.2 Cycling:	PASSED	
7.6 Locked rotor	PASSED	