

Federal Aviation Agency



AC NO : AC 135.155-1
AIR TAXI OPERATORS
AND COMMERCIAL OPERATORS
OF SMALL AIRCRAFT

EFFECTIVE :
2/16/65

SUBJECT : ALTERNATE STATIC SOURCE FOR ALTIMETERS AND AIRSPEED AND VERTICAL SPEED INDICATORS

1. **PURPOSE.** This circular sets forth an acceptable means of compliance with provisions in FAR 135.155(e) and FAR 23.1301 dealing with alternate static sources.
2. **ACCEPTABLE MEANS OF COMPLIANCE.** An alternate static source installation is acceptable under §§ 135.155(e) and 23.1301 if:
 - a. It is connected above the lowest point in the primary static system.
 - b. A static source selector valve is installed; is accessible to the pilot in flight; and is placarded to indicate primary and alternate positions.
 - c. A pressure test is conducted (on the ground) to demonstrate the integrity of the alternate static pressure system.
 - d. A correlation flight check is conducted, in atmospheric conditions conducive to smooth flight, as follows:
 - (1) For altimeter correlation, fly at normal cruise speed at 1000-foot altitude increments up to the airplane's service ceiling, or to 13,000 feet, whichever is lower. At each altitude increment record the altitude indication when the selector valve is in the "primary" position. Then select the "alternate" source and, after the airspeed indication has stabilized, record this altitude indication also.
 - (2) For airspeed correlation, fly the airplane (altitude is optional) in the climb, cruise, and approach configurations. For each configuration record the indicated airspeed when the selector valve is in the "primary" and in the "alternate" position.

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- e. The information recorded in para. 2.d. above is made available to the pilot by means of a placard on the airplane, unless the altimeter correlation recorded in para. 2.d.(1) is within 2 percent. Examples of typical placards are:

Airspeed			Altitude	
	Prim.	Alt.	Prim.	Alt.
Climb	100	110	1000	1030
Cruise	165	175	2000	2050
Approach	90	100	3000	3070
			4000	4090
			5000	5120
			etc. to service ceiling	

3. ALTERATION APPROVAL.

- a. Field installation alterations may be accomplished by personnel authorized by FAR 43, section 43.3, when:
- (1) The installation data or kit have had previous engineering approval.
 - (2) The installation is accomplished in accordance with paragraphs 2.a. and 2.b. of this circular.
- b. When an installation has not received previous data or kit approval or has not been performed in accordance with paragraphs 2.a. and 2.b. of this circular, the local General Aviation District Office should be contacted for necessary guidance.

4. PREVIOUS APPROVALS. This advisory circular does not affect the approval status of alternate static pressure systems approved before its effective date, since it describes only one acceptable means of compliance.


 George S. Moore
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