



Requirements for Calibrating, Adjusting and Sealing LP-Gas Meters

(Revised 6/7/2019)

1. These are the LP-Gas (propane) tolerances that have been established by NIST (National Institute of Standards and Technology).

<u>Normal (fast) test</u> (1) Acceptance tolerance 0.6% (2) Maintenance tolerance 1.0%	<u>Repeatability</u> (1) Tests at same flow rate 0.4%
<u>Special (slow) test</u> (1) Acceptance tolerance 1.0% (2) Maintenance tolerance 1.0%	<u>Determining which tolerance to apply</u> (1) Apply acceptance tolerance to new meters that have never been calibrated and sealed by the OPS. (2) Apply acceptance tolerance to existing meters that have been repaired or adjusted within the past 30 days. (3) Apply maintenance tolerance to existing meters that were not repaired or adjusted within the past 30 days.
<u>Automatic Temperature Compensator</u> <i>(Tolerance between compensator engaged and disengaged)</i> (1) Mechanical ATC 1.0% (2) Electronic ATC 0.5%	

2. Any meter whose initial calibration is outside the acceptable tolerance as established by NIST must be adjusted to **as close to zero as possible**. Any meter that cannot be adjusted to the NIST tolerance on the negative side will be immediately placed out of service. Any meter that cannot be adjusted to the NIST tolerance on the positive side will be placed out of service only at the meter owner's request.
3. Only employees of companies authorized by OPS (the Division of Oil and Public Safety) may adjust and seal LP-Gas truck and retail meters in Colorado.
4. Only employees who have individually been authorized by OPS may adjust, seal and place into service LP-Gas truck and retail meters in Colorado.
5. Meter owners/operators **may not** adjust and seal their own meters. LP-Gas Meters may only be adjusted, sealed and placed in service by registered service agency employees approved by OPS.
6. Only NIST Handbook 105-4-compliant volumetric provers may be used to calibrate LP-Gas meters. Using a prover large enough to accommodate the maximum flow rate of the meter. In general, use at least a 100-gallon prover to calibrate a truck meter and at least a 25-gallon prover to calibrate a retail meter.
7. All provers must be calibrated by a NIST-certified state metrology laboratory. All provers must be recalibrated every 24 months or sooner, if the prover has sustained damage or if there is reason to question its accuracy.
 - a. In Colorado, the state metrology laboratory is located at the following address.
 Colorado Department of Agriculture
 Measurement Standards Section
 3125 Wyandot Street
 Denver, CO 80211-3859
 Phone: 303-477-4220
 (Certification from another state's metrology laboratory is also acceptable.)
 - b. Copies of certificates must be sent to OPS every 24 months.

8. Proper calibration of an LP-Gas meter includes the following:
 - a. Normal (fast) test as found, with compensator engaged. **If there is no compensator, omit this test.** If within tolerance, then -
 - i. Normal (fast) test with compensator disengaged. If within tolerance, then-
 - Special (slow) test with compensator disengaged.
9. Each company authorized to calibrate, adjust and seal LP-Gas meters shall apply to renew its authorization every 12 months using the form provided by OPS.
10. Each individual authorized to calibrate, adjust and seal LP-Gas meters shall apply to renew his/her authorization every 36 months using the form provided by OPS.
11. No company or individual whose authorization to calibrate, adjust and seal LP-Gas meters has lapsed or been rescinded by OPS may seal LP-Gas meters.
12. Seals shall be lead and wire seals at least 3/8" in diameter.
13. The seal press shall identify the company and the identifying number of the individual technician who calibrated and sealed the meter.
14. Each company authorized to calibrate, adjust and seal LP-Gas meters in Colorado shall provide to OPS a legible copy of its identifying company seal.
15. OPS may rescind a company's or an individual's authorization to adjust and seal LP-Gas meters if any of the following occur.
 - a. Follow-up inspections by OPS indicate multiple instances when the actual calibration is outside of NIST tolerance.
 - b. Follow-up inspections by OPS indicate unusual circumstances, such as all adjustments showing a negative amount.
 - c. Information on a company's or individual's application is found to be false.
 - d. Failure of a company to submit placed in service and calibration reports to OPS within the mandatory 7 days from date of inspection.
 - e. Failure of a company to have its provers calibrated every 24 months and provide a copy of the certificate from a NIST-certified state metrology laboratory to OPS.
16. Each company whose employees calibrate, adjust and seal LP-Gas meters will provide to OPS reports of new or remanufactured meters placed in service, repaired meters returned to service and in-service meters calibrated and sealed. These reports shall be on the forms required by OPS and shall be submitted to OPS within 7 days of the activity date.
17. An individual authorized by OPS to seal LP-Gas meters shall return to his/her employer the company seal at such time as his/her employment with that company ceases.
18. Allowing private companies to adjust and seal LP-Gas meters does not in any way compromise or replace the State's calibration program. OPS inspectors will continue to calibrate, adjust and seal all Colorado LP-Gas meters as scheduled, regardless of whether a private company has already performed this function. Only OPS inspectors may use the official OPS lead seal. Private technicians will use their company's identifying seal.

I have read and understood the foregoing requirements, and I agree to abide by them.

Name: _____ Title: _____
 Signature: _____ Date: _____