

State of California
Department of Food and Agriculture
Division of Measurement Standards

Certificate Number: 5419-05
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California Type Evaluation Program
Certificate of Approval
For Weighing and Measuring Devices

For:

Compressed Natural Gas (CNG)
Retail Motor Fuel Dispenser, Electronic Computing
Model: ANGI Series II Dispenser
Capacity: Maximum Total Price: \$9999.99
Maximum Total Volume: 9999 999*
Maximum Unit Price: \$9.999

Accuracy Class: 2.0

Submitted by:

ANGI International, LLC
15 Plumb Street
Milton, WI 53563
Tel: (608) 868-4626, ext 237
Fax: (608) 868-2723
Contact: Dan Hicks

Standard Features and Options

Flow range 3.0 to 75 lb/min
Price computing capability
Micro Motion Model CNG 050 sensor [0.5" (13 mm) max diameter tube inlet]
Micro Motion Model 1000 series transmitter

* Gasoline gallon equivalent or gasoline liter equivalent

This device was evaluated under the California Type Evaluation Program (CTEP) and was found to comply with the applicable technical requirements of California Code of Regulations for "Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.

Effective Date: January 10, 2005



Mike Cleary, Director

ANGI International, LLC
Compressed Natural Gas, Retail Motor Fuel Dispenser
Model: ANGI Series II Dispenser

Application: For use as a stationary dispenser in retail motor fuel service stations for measuring compressed natural gas (CNG) as an automotive fuel and may be used with approved and compatible equipment.

Identification: The required information is located on the side frame of the dispenser, just below the nozzle receptacle hanger.

Sealing: Calibration/configuration is controlled through the position of the #1 (of 8) dip switch mounted on the electronic interface board located inside the lower part of the dispenser cabinet in an explosion proof housing. The DOWN position of SW1 #1 is for normal dispenser operation and the UP position of SW1 #1 is for calibration/ configuration. The explosion proof housing is secured with a wire security seal threaded through drilled head bolts attaching the cover to the explosion proof housing. The dispenser will not operate with the #1 dip switch in the UP position.

In addition, the transmitter is secured by threading a wire security seal through the drilled head cap screw, securing the end cap clamp to the main terminal access cover, and another drilled head cap screw securing the other end cap clamp at the opposite end of the main transmitter enclosure.

The CNG 050 sensor has no adjustable components that require the use of a security seal.

Operation: A key pad used for accessing accumulated totals and mass for inspection purposes is located inside the upper cabinet next to the display. To display mass after each delivery, place the dispenser handle in the stop position and use the keypad as follows:

Press and hold <9> for three seconds.

Press <3> until the Price Per Unit window displays "SPU 2".

Press <DISPLAY RESET>.

Press <3> to display hose 1, or press <6> to display hose 2.

The mass value dispensed will be displayed in the GALLONS window.

After the mass reading is noted, before the next test, press and hold <9 > for three seconds .

Press <3> until the Price Per Unit window displays "SPU 0" (SPU 0 resets dispenser to normal running mode).

Press <DISPLAY RESET>.

Press <3> for hose 1, or press <6> for hose 2.

To view the non-resettable totals, place the dispenser handle in the stop position and use the keypad as follows:

Press <2> for total volume on tier 1 pricing or press <5> for total volume on tier 2 pricing.

Press <3> for hose 1 or press <6> for hose 2.

Read the total value in the Gallons window.

If the value expands beyond seven digits, the upper additional digits will be displayed in the TOTAL SALE window.

When completed with viewing totals, press <DISPLAY RESET> to return to the normal running mode.

Test Conditions: The Model ANGI Series II dispenser was submitted interfaced with a stand alone card reader at a field location. The emphasis of the evaluation was on device design, performance, interaction with the card reader, receipt format, and permanence. Initial tests were conducted at several flow rates ranging from 3 lb/min to 60 lb/min as well as varying pressure ranges and delivery amounts. A follow-up test of the electronics was completed after approximately 45 days. Product throughput requirements were waived based on previous testing of the sensor.

Results of the evaluation indicate the devices comply with applicable requirements.

Type Evaluation Criteria Used: Title 4, California Code of Regulations, 2004 Edition

Tested By: R. Norman Ingram (CA)