



NATIONAL TYPE EVALUATION PROGRAM

# Certificate of Conformance

for Weighing and Measuring Devices

**For:**

Meter Indicating Volume  
Retail Dispenser for Diesel Exhaust Fluid (DEF)  
Model: D XXXX  
Generic Name: BlueFueler  
Capacity: Total Sale \$9999.99  
          Total Volume 999.999  
          Total Unit Price \$9.999  
Flow Rate: 2-10 GPM

**Submitted By:**

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**Standard Features and Options**

**Standard Features**

- 210 Electronics (money and volume display)
- 531 Electronics (Volume only)
- LCD Display
- Programmable Units of Measure
- Remote Console Interface
- Remote Price Setting
- Electronic Meter Calibration
- Prepay, Postpay and Stand Alone Transactions
- Non-resettable Electronic Totalizer

**Options**

- Preset Volume at the Pump
- Preset Money at the Pump
- Programmable Pulsar Output
- Card Reader

This device was evaluated under the National Type Evaluation Program and was found to comply with the applicable technical requirements of "NIST Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.

Randy Jennings  
Chairman, NCWM, Inc.

Judith Cardin  
Chairman, National Type Evaluation Program Committee  
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**Application:** For use in dispensing Diesel Exhaust Fluid (also known as AUS-32). These devices may only be used in environments which will keep the product in a measurable state (the manufacturer has not incorporated any means to ensure the product will remain in a measurable state).

Note: Diesel Exhaust Fluid (DEF) is a highly corrosive mixture of Urea and water. DEF is not an engine fuel. It should not be mixed with diesel fuel or other motor fuels. Mixing DEF with diesel fuel or other motor fuels may result in the contamination of product and/or damage to test equipment. A dedicated Stainless steel prover should be used to verify the accuracy of the device.

**Identification:** The identification badge is located inside the cabinet on the base of the compartment.

**Model designation Chart**

Position Number	Description	Selections
	Series	D = Dispenser Series
1	Computer Type	1 = 531 Electronics (Volume Only) 2 = 210 Electronics (Money and Volume)
2 & 3	Flow Rate	05 = 5 GPM Nominal Flow Rate 10 = 10 GPM Nominal Flow Rate
4	Hydraulic Type	S = Suction R = Remote

**Additional information can be obtained by the DIN (Dispenser Identification Number) as indicated below:**

1	Unit of Measure	G = Gallons L = Liters I = Imperial Gallons
2	Pulse Output Board	N = None P = Pulse Output Board
3	Payment System	N = None C = Bennett Credit D = Bennett Debit/Credit L = Local Preset (Preset at the Pump) P = Local Preset and Printer (Preset and Printer are at the Pump) V = Verifone Secure Pump Pay
4	Hose Options	N = None Supplied (Must be supplied by owner) H = Hose and Nozzle Supplied
5	Additional Options	N = none
6-25	Non-metrological Features	

**Sealing:** This device utilizes category 1 sealing. It has an event counter for calibration parameters and one for configuration parameters. The meter (Tuthill TS 06C Certificate of Conformance Number 99-210A8) must also be sealed.

To access the audit trail, the pump handle must be off. Using the magnet supplied with each dispenser by the manufacturer, touch and hold on the glass at a spot ½ inch below the lower right hand digit of the gallons display until the audit trail shows then remove the magnet. The display will automatically cycle through the electronic totalizer and audit trail counters (audit trail information is described as below). It will then return to a normal operation mode after 30 seconds. If the handle is raised the device will return to the normal operating mode.

210 computer (money & gallons) will show: "Audit trail" then "ECALCh 00000X" (X is the number of calibration changes), then "UnitCh 00000Y" (Y is the number of changes to configuration parameters such as from gallons to liters to imperial gallons).

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**Sealing continued:**

531 computer (gallons only) will show "Audit," then "ECALCh," "00000X" (X is the number of calibration changes), "UnitCh," then "00000Y" (Y is the number of changes to configuration parameters such as from gallons to liters to imperial gallons).

The Tuthill TS 06 (Certificate of Conformance Number 99-210A8) may be sealed by threading a wire security seal through two drilled head screws that secure the access plate to the meter casing.



Audit Trail for Calibration Parameters for 210 electronics (1 calibration change)

**Operation:** This device must be used in an environment which will keep the product in a measurable state. It may be used as a stand-alone device or with an approved and compatible console. The suction type device does not have an air eliminator but does have an effective means to prevent the passage of vapor and air through the meter. Prior to air entering the meter the device will stop functioning and a "Service Tote" light will illuminate.

**Test Conditions:** The emphasis of the evaluation was on the operation, design, agreement of indicated and recorded values, as well as the performance of the device.

A model D110R dispenser was tested using Diesel Exhaust Fluid (DEF) as the test liquid. Five gallon test drafts were performed at the following flow rates: five tests were performed at 10 GPM, three tests were performed at 6 GPM and five tests were performed at 3 GPM. After 40 days the tests were repeated using the same criteria, the throughput requirement was waved due to previous testing of the meter (Tuthill TS06C Certificate of Conformance Number 99-210A8).

A model D210S dispenser was also tested using DEF as the test liquid. Five drafts were performed at the following flow rates: five tests were performed at 7 GPM, three tests were performed at 3 GPM and five tests were performed at 2 GPM. After 55 days the tests were repeated using the same criteria, the throughput requirement was waved due to previous testing of the meter (Tuthill TS06C Certificate of Conformance Number 99-210A8).

Acceptance tolerance of 3 cubic inches and a repeatability requirement of 40% of the absolute value of the maintenance tolerance were applied as provided for in NIST Handbook 44 Tolerances and other Technical Requirements for Weighing and Measuring Devices 2009.

**Evaluated By:** Michael Frailer

**Type Evaluation Criteria Used:** NIST, Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices, 2009. NCWM, Publication 14: Measuring Devices, 2009.

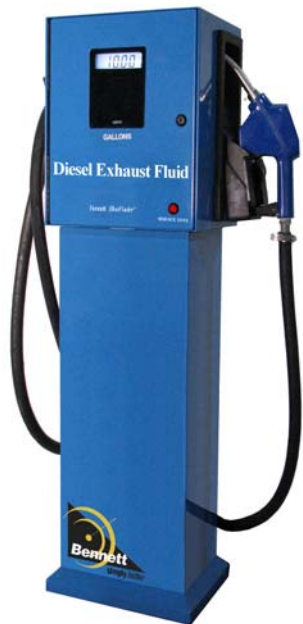
**Conclusion:** The results of the evaluation and information provided by the manufacturer indicate the device complies with applicable requirements.



**Bennett Pump Company**  
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**Information Reviewed By:** J. Truex (NCWM)

**Example of Device:**



Front of a model D105s



Back (with panel removed)

