

Meter or Computer Jump

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 [NIST Handbook 44 Sec. 3.30., S.1.6. & Training Course #302](#)

Background

During routine inspections of liquid measuring devices at service stations, inspectors find on occasion (or in some cases repeatedly) that the pump will record money and product values on the dispenser indicator when activated, but prior to delivering any fuel. This is referred to as "meter jump" or "computer jump." The device is required by law to start on zero. What is the correct procedure for handling this problem?

NIST Training Course #302 (replaces Module #8), which was developed to train inspectors, has the following information concerning computer jump for electronic devices manufactured prior to January 1, 2006.

“During your test, remove nozzle from the boot and switch the dispenser on. When switched on, the dispenser's indicating elements should automatically reset to zero, with no values visible during the resetting process. Before the discharge nozzle is operated, quantity and total sale price indicators should read zero. However, you may observe what is known as "computer jump", that is, the indicators jumping ahead and showing product registration when the dispenser is pressurized, even though no fuel has actually been delivered. This condition is not abnormal when the dispenser has been out of use for a matter of hours.”

Computer or meter jump can be attributed to one of several causes:

- a deteriorated or substandard discharge hose that "gives" when the pump is pressurized, requiring a small amount of fuel to pass through the dispenser control valve and the meter before pressure is equalized;
- malfunctioning check or relief valves which allow pressure to bleed back to the pump side;
- a malfunctioning anti drain valve; or
- the effects of temperature change on the volume of fuel in the system, especially in the discharge hose.

Procedure

If computer jump is observed, shut off the dispenser, re-zero the computer and re-initialize the system looking for zero indication. If the computer jumps on the second try, the device is not operating properly. Inform the operator of this condition, even if the dispenser performs within tolerances, since NIST HB 44, LMD code Sec. 3.30, S.2.5. requires that a retail motor fuel device start at zero with each transaction.

When investigating a consumer complaint concerning computer jump and finding either no jump at all or none upon restart, inform station personnel (and document in notes section of test report) that they cannot charge a customer for any initial “jump” value.

A very small amount of computer jump occurs every time the pump is pressurized and digital devices are set to suppress this, up to .009 gallons for electronic devices manufactured prior to January 1, 2006.

On devices manufactured on or after January 1, 2006, no computer/meter jump is allowed. The device must start on zero.

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